Abstract. The population health is a complex indicator of social well-being and the basis for the quality of life. The level of population health in some countries of Western and Eastern Europe and its impact on the quality of life is the subject of our comparative study. Interrelations between health and socio-economic characteristics and quality of life indicators (education, employment, poverty, current health expenditure, life expectancy at birth, etc.) are identified on the basis of correlation analysis. The dynamics of health over the past decade taking into account specifics of different European countries are studied. Based on undertaken correlation analysis, a comparative model of population life quality for 10 European countries is offered, namely; Belgium, Great Britain, Germany, France, Switzerland (the Western European countries); and Bulgaria, Poland, Russia, Romania, Slovakia (the Eastern European countries).

The authors conclude that the Western European model is characterized by steady growth of the Human Development Index (HDI), life expectancy, the level of education and employment of population in economic activity, small growth of current expenditures on health care, contradictory dynamics of health self-assessment. The Eastern European model is characterized by steady increase of HDI, life expectancy and self-esteem of population, with a steady reduction in education inequality.

Keywords: Quality of Life; Population Health; Health; Well-Being; Poverty; Human Development Index (HDI); Level of Education; Employment; Western Europe; Eastern Europe

Acknowledgements and Funding: The authors received no direct funding for this research.

Contribution: The authors contributed equally to this work.

DOI: https://doi.org/10.21003/ea.V180-21
Поточні витрати на охорону здоров'я, очікувана тривалість життя при народженні. Авторами вивчається динаміка здоров'я за останнє десятиліття з урахуванням особливостей деяких країн Європи. На основі проведеного авторського порівняльного аналізу зі встановленням кореляційних зв'язків запропоновано порівняльну модель стану якості життя населення деяких країн Західної та Східної Європи. Авторами зроблено висновок про те, що Західноєвропейський моделі властиві стійкі зростання індексу людського розвитку (ІЛР), очікуваної тривалості життя при народженні, рівня освіти і зайнятості населення в економічній діяльності, незначне зростання поточних витрат на охорону здоров'я, суперечливі динаміки самооцінок свого здоров'я населенням. Східноєвропейська модель характеризується стійким зростанням ІЛР, очікуваної тривалості життя при народженні та самооцінки свого здоров'я населенням при стійкому зниженні нерівності в освіті.

Ключові слова: якість життя; здоров'я; добробут; бідність; рівень освіти; зайнятість; індекс людського розвитку (ІЛР); Західна Європа; Східна Європа.

Килимова Л. В.
кандидат соціологічних наук, доцент,
кафедра філософії і соціології, факультет економіки і менеджменту,
Юго-Западний державний університет, Курск, Російська Федерація

Лысикова О. В.
доктор соціологічних наук, професор, кафедра економіки труда і промислових комплексів,
Інститут соціально-промисlovого управління,
Саратовський державний технічний університет ім. Гагарина Ю. А.,
Саратов, Російська Федерація

Здоров'я як фундаментальна основа якості життя населення

Анотація.
Качество жизни представляет собой категорию, включающую социально-экономические, политические, культурные и экологические условия осуществления жизнедеятельности населения. Здоровье населения является комплексным показателем социального благополучия и основой качества жизни.

В статье проанализированы подходы к разностороннему исследованию данной категории: выявлению ее индикаторов, анализу влияния уровня здравоохраня на качество жизни населения. Особое место занимает авторское сравнительное исследование уровня здоровья населения некоторых стран Западной и Восточной Европы.

В статье на основе корреляционного анализа выявляются взаимосвязи уровня здоровья с социально-экономическими характеристиками и показателями качества жизни, такими как: образование, занятость, бедность, текущие расходы на здравоохранение, ожидаемая продолжительность жизни при рождении и т.д. Авторами изучается динамика здоровья за последнее десятилетие с учетом особенностей некоторых стран Европы. На основе проведенного авторского сравнительного анализа с установлением корреляционных связей предложена сравнительная модель состояния качества жизни населения некоторых стран Западной и Восточной Европы.

Авторами сделан вывод о том, что западноевропейской модели свойственны устойчивый рост индекса человеческого развития (ИЧР), ожидаемой продолжительности жизни при рождении, уровня образования и занятости населения в экономической деятельности, незначительный рост текущих расходов на здравоохранение, противоречивая динамика самооценок своего здоровья населением. Восточноевропейская модель характеризуется устойчивым ростом ИЧР, ожидаемой продолжительности жизни при рождении и самооценки своего здоровья населением при устойчивом снижении неравенства в образовании.

Ключевьє слова: качество жизни; здоровьє; благосостояние; бедность; уровень образования; занятость; индекс человеческого развития (ИЧР).

1. Introduction

The development of modern society is characterized by changes covering various spheres of human activity. In addition to progressive changes in society, there are changes which have contradictory and sometimes negative impact on life quality of a person and his/her development. In such circumstances, it is necessary to prevent a sharp decline in population quality of life, in particular, a decrease in population level of health. In this regard, it is necessary to monitor and analyse the state of population health and indicators of its quality of life in order to develop mechanisms and directions of public administration in the context of contradictory changes of the society.

The quality of life is an integral category, which includes a number of subjective and objective indicators of socio-economic, spiritual, political and environmental conditions of people’s life. The needs of modern people are so great that their satisfaction can be facilitated by working and living standards, service, education, health care, as well as political rights and freedoms. Health is the basis of quality of life, as it is a comprehensive indicator of social well-being. Researches on this problem are actively carried out by international organizations and are devoted to the state of quality of...
life in different countries. The quality of life allows estimating how successfully society is developing. In addition to assessing economic indicators involved in determining the quality of life, characteristics that are the basis for the development of well-being should be studied.

Improvement of health care is one of the most relevant modern tasks. Many Governments oblige medical (health care) organizations to conduct patient surveys to determine the level of their satisfaction with provided services. Such surveys are a feedback mechanism between health care organizations and the society. The results are used to monitor the quality of medical services and compare effectiveness of medical doctors and departments (Etkind et al., 2015; Jamtvedt et al., 2003).

2. Brief Literature Review
Quality of life has been a research subject for sociologists for a long time. Scientific works by L. A. Belyaeva (2018), A. B. Berendeyeva (2006), B. V. Boytsov et al. (2004), E. V. Davydova and A. A. Davydov (1993), V. V. Drobysheva and B. I. Gerasimov (2004), G. M. Zarakovsky (2009) are devoted to the analysis and classification of indicators of quality of life which systemically reflect sociological approach to this category.

A. I. Tatarkin and E. V. Vasilyeva (2015), N. A. Kulikova (2010), V. P. Chichkanov et al. (2015) study managing mechanism of population quality of life.

N. V. Gubina (2008), A. A. Zachesov (2015), L. I. Mikhaylova (2010), A. V. Mukhachova (2012), A. I. Subbeto (2015) study the influence of quality of life on various spheres of human activity.

The impact of population health on its quality of life is studied, to name a few, by I. B. Nazarova (2014) and V. M. Nilov (2012). A. Michalska-Zyla and V. P. Stolbov (2018), P. Dolan and R. Metcalfe (2012) analyse quality of life and resources of social capital. C. Hunt et al. (2019) developed indicators of quality of life of elderly people. C. Beletsioti and D. Niakas (2019) studied changes in the quality of life associated with adult health before and after the financial crisis. Age trends in health-related quality of life were studied by J. L. Angel et al. (2014), F. Xu et al. (2018), T. Grahusovac Juretić (2020), V. Reckers-Droog et al. (2019), M. Karimi (2019), Th. G. Poder et al. (2019) and others.

K. P. Kell and E. Y. Rula (2019), D. W. Brown et al. (2001) describe positive impact of physical training on health and improvement of quality of life among elderly people. C. Jenkinson et al. (1993), J. E. Ware et al. (1994), J. Orley and W. Kuyken (1994), I. McDowell (2006), A. Bottomley et al. (2019) and many others. Focus on measuring of health and quality of life of the population, in particular development of evaluation scales and questionnaires.

However, researches of health-related problems influencing quality of life are carried out locally (regionally) in particular on elderly people. The dynamic of health-related problems has not been sufficiently developed in the international context.

3. Purpose

The study of the quality of life is related to the analysis of social inequality which includes objective characteristics of accessible services and the state of the society, as well as subjective assessments of living conditions made by the population. Applied socio-economic approach reveals the essence of quality of life through a set of indicators of man’s life activity, ensuring satisfaction of his needs. These include health, employment, education, environmental sustainability, safety, income, socio-economic sustainability, mobility and communication, etc. The quality of life increases with quantity and quality of benefits a person consumes. Not only personal growth, which improves social situation, ensuring realization of person’s potential but also quantitative and qualitative growth criteria for the development of the society as a whole depends on its level. From the point of view of A. I. Subbeto (2015), material prosperity and its growth are means providing life satisfaction and facilitating realization of social roles in the society. One of the main indicators of quality of life is person’s and nation’s health. Only healthy population can achieve its goals, fully realize itself and feel the integrity of life. Poor health has negative impact not only on the quality of life of a person, reduces his or her life expectancy but also impedes economic and social development of the State at the social level. «Quality of life belongs to the
category of social systemic quality and can be exposed as social quality of life» (Subbeto, 2015). Consequently, improving health and life expectancy is a goal not only of a person but also of social well-being and success of a country.

Subjective quality of life criteria are the standard for people. Its identification occurs when assessing their health, well-being, life satisfaction and happiness (Dissart & Deller, 2000). This subjective approach in combination with social and economic criteria, measures the quality of life. This integral indicator reflects the participation in one’s life forming (Kahneman & Deaton, 2010) and the desire to improve it if possible (Sen, 2001). Thus, the quality of life reflects overall sustainable development through objective and subjective economic, social and environmental criteria.

Eurostat, RLMS-HSE, and UN databases from 2009 to 2018 are used as an empirical basis of our study, allowing evaluating health and quality of life of population through individual components. This paper describes the authors’ comparative analysis of health and quality of life in ten European countries such as Belgium, Great Britain, Germany, France, Switzerland (belonging to the Western European countries); Bulgaria, Poland, Russia, Romania, Slovakia (belonging to the Eastern European countries). It is necessary to pay attention to population’s health self-assessment in studying health status of some countries in Western and Eastern Europe. Self-esteem shows an objective somatic status of the respondent, being an important indicator reflecting improvement or deterioration of health as compared to the norm. Average values were calculated in comparing self-esteem of the population’s health of these countries in the period under analysis (Eurostat, 2009-2018). More than a quarter of the population in the UK, Switzerland, Belgium and Romania rated their health as «very good» (35.16%, 33.09%, 28.47% and 26.52%, respectively).

About half of the population of Bulgaria, Germany, and Switzerland rated their health as «good» (47.77%; 47.63% and 47.2%, respectively). Thus, the level of health, based on self-esteem, is higher in Switzerland than in the other analysed countries. Russian monitoring data of economic situation and health of population were used in calculating of average value of self-esteem by the Russian population (RLMS-HSE, 1994-2018).

Figure 1 shows the state of positive health assessment by the population of analysed countries for 2009 and 2018. Health self-esteem has not changed significantly in other countries. Negative dynamics of «good» self-esteem is mostly present in Russia (5%), Poland (4.8%) and Slovakia (3.3%). In Switzerland, the number of respondents saying that their health is good increased by 4.7%. Dynamics «very good» show a positive change in the assessment of their health by the population of Great Britain (6.6%) and France (3.1%), while in Switzerland the number of respondents rating their health «very good» decreased by 4.5%. Current expenditures on health care (% of GDP)

![Figure 1: Self-esteem of population’s health in Western and Eastern Europe](image)

Source: Compiled by the authors on the basis of UN data (1990-2018) and RLMS-HSE data (1994-2018)
did not increase significantly in Western Europe during this period. The largest increase can be noted in Switzerland (1.5%). In Eastern Europe only Bulgaria (1.1%), Russia (0.3%) and Poland (0.1%) somewhat increased their current expenditures on health care (UN, 2019). Thus, despite the development of health care system, the state of population’s health does not give positive dynamics over a 10-year period in Europe.

Analysing population’s self-esteem dynamics, the highest number of people rating their health as «very good» and «good» was in 2018 in Switzerland (80.7%), Belgium (74.8%), and Great Britain (73.1%). Despite relatively high cumulative meanings of the criterion, leading countries of Western Europe experienced a decline in self-esteem as «very good» and «good», in particular, in Switzerland (-0.2) and France (-2). What is more, health self-assessment of the British population fell to an even greater extent (-5.2).

The health research is focused on solving social tension in the society. Population with diseases is partially or completely excluded from the active part of socio-economic structure and cannot count not only on improving of well-being but also on quality life.

German version of WHOQOL-BREF questionnaire assess the overall quality of life among the patients with diabetes in Austria and indirectly assess complications associated with this disease (Al-Taie et al., 2019). Studying quality of life of elderly in Romania, I. Caciula et al. (2019) notes that this indicator is connected with healthier lifestyle (lower level of alcohol consumption and smoking), good physical and mental health, reduction ofloneliness and lack of violence. However, despite high level of loneliness, depression, anxiety and abuse, older Romanians who receive public social support had quality of life comparable to the European working population. Loneliness affects the quality of life of this category of Romanians more than other factors.

Patients’ quality of life brings together their self-esteem of social, emotional and physical well-being. In its turn, diagnostic and clinical indicators can be used by medical professionals to develop rehabilitation programmes for patients. Periodic health fluctuations can result from long-term conditions with occasional display of symptoms or cyclically during effective treatment. These facts can affect person’s quality of life (Sanghera & Coast, 2019). Quality of life indicator contributes to understanding why patients with the same or similar clinical outcomes have different self-esteem of their well-being and life satisfaction (Guyatt et al., 1993). Researches carried out to study quality of life of patients with diseases show, on the one hand, the decline in mood and deterioration of physical condition which are the strongest predictors of quality of life (Szafiarski et al., 2006). On the other hand, such patients may have an inverse feedback between chronic diseases and quality of life (Fortin et al., 2004). It is therefore important to pay particular attention to health literacy. Health literacy is an extension of self-effectiveness and impacts the quality of life of population with diseases. Unequal levels of health literacy contribute to inequalities in health care (differences in health care quality, factors or clinical needs, expediency of intervention), inability fully or partially improve the health of population (Kickbusch, 2001; Hasnain-Wynia & Wolf, 2010). Health literacy and quality of life are directly dependent and therefore health literacy is associated with improved quality of life, regardless of mood, side effects and socio-economic factors. Regression results show that health literacy is positively associated with quality of life. 1% increase in health literacy is associated with 6.61% (p = 0.004) increase in quality of life. Such model preserves with addition of other independent factors and controls variables (Scrivner et al., 2019).

New factors that affect population health and quality of life appear in digital society. D. Nevado-Peña et al. (2019) come to a conclusion about accurate communication between information and communication technologies (ICT) and quality of life. The conclusion is done according to information available in Flash Eurobarometer 419 and Eurostat data (in total 79 European regions). In assessing such aspects as education, urban safety, noise, air pollution, migration, respondents consider health services, unemployment, education and training to be the most important factors in ensuring quality of life. ICTs act as agents of social well-being. As they help to reduce poverty, improve health and education of population. A «digital citizen» who lives in regions with technological potential is happier and seeks to achieve quality growth that improves his life. ICTs enable to use various sensors, including GPS, capable to monitor emissions of polluting gases from motor vehicles, aimed to protect the environment and health of citizens (Vecchio et al., 2019).

We studied the relationship between health self-assessment and socio-economic indicators for the period from 2009 to 2018 in ten European countries. The correlation analysis has identified the relationship of such health self-assessments as «very good» and «good» with socio-economic indicators not in all countries (Table 1).
In analyzed European countries for 10 years period from 2009 to 2018, the health self-assessment is related to current health care spending and the level of employment. Correlation analysis shows a very high relation between health self-assessment and current health spending. Pearson ratio in Great Britain ($r = 0.8$), Switzerland ($r = 0.9$) and Bulgaria ($r = 0.96$) indicates a very strong inverse proportional dependence: health spending in these countries is declining with the rise in healthy population. In Poland, Pearson coefficient for this indicator is $r = 0.7$ and has strong direct dependence. The reason is that the Polish Government continues finance health care and healthy lifestyle programmes to support the continuity in population health. These characteristics are not correlated in other countries.

We found a strong correlation between self-assessment of public health and employment (UN, 1990-2018) in some countries of Western and Eastern Europe. In Great Britain ($r = -0.7$) and France ($r = -0.7$) Pearson coefficient indicates inverse proportional dependence, while showing direct dependence in Poland ($r = 0.7$) and Romania ($r = 0.9$). In these countries of Eastern Europe, social tensions are possible with an increase in the level of healthy population due to an increase in unemployment. It is possible to avoid such social tensions in the abovementioned Western European countries due to the developed welfare system and advanced social security programmes.

The level of education is an important social indicator of the capacity of each region and the country as a whole. The increase in the level of population health has a beneficial effect on the increase in the level of education in Poland ($r = 0.8$) and Romania ($r = 0.7$). However, we found an inverse proportional dependence of these indicators in the Western European countries, hence, the countries with relatively higher level of education can show lower level of health self-assessment. This is due to more intense and responsible work of people with higher education than those with secondary vocational education. They can be fatigue, overloaded and rate their health as «not good».

The correlation analysis showed direct dependence between life expectancy and health in Poland ($r = 0.9$), Romania ($r = 0.9$) and Great Britain ($r = 0.9$). Basically, this integral indicator depends on good heredity. In Great Britain life expectancy is directly influenced by other factors in addition to health for which we made separate calculations, namely: current health spending ($r = 0.9$), employment ($r = 0.9$), and education ($r = 0.7$).

One of the main indicators of quality of life is Human Development Index (HDI). Many socio-economic indicators influence its level. Level of health is important for the formation of HDI which we prove through analysing the relation between the level of health and HDI. For example, a very high direct dependence has been identified in Poland ($r = 0.9$) and Romania ($r = 0.9$). There is a strong inverse proportional dependence in Great Britain ($r = -0.7$), because due to our calculations on the formation of HDI in the country the level of education ($r = 0.97$), current health spending ($r = 0.96$) and life expectancy at birth ($r = 0.86$) have a greater impact.

Countries in both Western and Eastern Europe are trying to achieve high standard of living for the population. This integrated indicator reflects social changes taking place in the countries and can be an evaluation criterion for social and economic reforms.

### Table 1:
Correlation dependence of health self-assessments «very good» and «good» with socio-economic factors for 2009-2018 in 10 European countries

| Country     | Level of education | Level of education inequality | Employment level | Level of income inequality | Poverty level | HDI | Current health expenditure (% of GDP) | Life expectancy at birth |
|-------------|--------------------|-------------------------------|------------------|---------------------------|--------------|-----|--------------------------------------|--------------------------|
| Belgium     | 0.1                | 0.03                          | 0.2              | 0.2                       | 0.01         | 0.1 | -0.4                                 | 0.1                      |
| Great Britain | -0.6              | -0.6                          | -0.7             | 0.5                       | 0.2          | -0.7 | -0.8                                 | -0.8                     |
| Germany     | 0.3                | 0.2                           | 0.2              | 0.5                       | -0.2         | 0.2  | -0.1                                 | 0.2                      |
| France      | -0.5               | -0.2                          | -0.7             | -0.6                      | -0.2         | 0.2  | -0.5                                 | 0.01                     |
| Switzerland | -0.5               | -0.4                          | -0.5             | -0.4                      | 0.5          | -0.5 | -0.9                                 | -0.5                     |
| Bulgaria    | -0.3               | 0.6                           | -0.4             | -0.2                      | -0.2         | -0.2 | -0.96                                | -0.2                     |
| Poland      | 0.8                | -0.8                          | 0.7              | -0.5                      | -0.6         | 0.9  | 0.7                                  | 0.9                      |
| Russia      | 0.3                | 0.3                           | 0.1              | -0.2                      | 0.2          | 0.4  | -0.3                                 | 0.3                      |
| Romania     | -0.7               | -0.6                          | 0.9              | 0.2                       | 0.6          | 0.9  | 0.1                                  | 0.9                      |
| Slovakja    | 0.5                | -0.4                          | 0.2              | 0.2                       | 0.3          | 0.6  | -0.6                                 | 0.6                      |

Source: Calculated by authors based on the UN data (1990-2018) and RLMS-HSE data (1994-2018)
5. Conclusions and Perspectives of Further Research

The criterion of quality of life reflects sustainability of society development and qualitative improvement of social well-being of the population. The combination of objective and subjective estimates of this criterion allows relating objective standard of living and satisfaction with life as a subjective parameter.

It is possible to present two models of quality of life in Europe comparing health self-assessment and some socio-economic indicators. The Western European model is characterized by a steady increase in HDI, life expectancy at birth, education and employment, a slight increase in current health spending and conflicting dynamics of health self-assessment. In addition to improving the quality of life, this model is characterized by a slight increase in income inequality, poverty and education inequality in some countries (Belgium, Great Britain and Germany).

The Eastern European model is characterized by a steady increase in HDI, life expectancy at birth and self-assessment of population health, with a steady reduction of inequalities in education. There is a slight decline in economic activity in Russia with the simultaneous growth of employment. The level of education is contradictory and current spending on health care is declining in Romania and Slovakia amid the rising poverty level over the research period of time. Income inequality is increasing in Bulgaria, Russia and Romania.

A significant change is positive dynamics of health self-assessment, HDI, and life expectancy at birth. However, there can be subjective life dissatisfaction with objective improvements in quality of life in Europe. It can be related to the social inequalities, such as education, income, poverty which can lead to the increase of social tension in the society.

References

1. Al-Taie, N., Maftei, D., Kautzy-Willer, A., Krebs, M., & Stingl, H. (2019). Assessing the quality of life among patients with diabetes in Austria and the correlation between glycemic control and the quality of life. *Primary Care Diabetes, 14*(2), 133-138. doi: https://doi.org/10.1016/j.pcd.2019.11.003
2. Angel, J. L., Buckley, C. J., & Finch, B. K. (2014). Nativity and self-assessed health among pre-retirement age Hispanics and non-Hispanic whites. *International Migration Review, 35*(3), 784-803.
3. Beletsioti, C., & Niakas, D. (2019). Health-related quality of life in adult population before and after the onset of financial crisis: the case of Athens, Greece. *Quality of Life Research, 28*, 3237-3247. doi: https://doi.org/10.1007/s11136-019-02281-y
4. Belyaeva, L. A. (2018). Quality of life in the subjective estimations of the population: Russia in the European context. *Vestnik RUDN. Seriya: Sociologiya, (Herald of RUDN. Series: Sociology), 18*(4), 680-694 (in Russ.).
5. Berendeeva, A. B. (2006). Subject of study - well-being of the population. *Sociologicheskie issledovaniya (Sociological Studies), 265*(5), 127-133. Retrieved from http://ecsocman.hse.ru/data/734/767/1219/Sotsis_5_06_p127-133.pdf (in Russ.).
6. Bottomley, A., Reijneveld, J. C., Koller, M., Flechtner, H., Tomaszewski, K. A., & Greimel, E. (2019). Current state of quality of life and patient-reported outcomes research. *European Journal of Cancer, 121*, 55-63. doi: https://doi.org/10.1016/j.ejca.2019.06.016
7. Boytsov, B. V., Kryanev, O. V., & Kuznetsov, M. A. (2004). *The quality of life*. Moscow: Moscow Aviation Institute Publishing House (in Russ.).
8. Brown, D. W., Brown, D. R., Heath, G. W., Balluz, L., Giles, W. H., Ford, E. S., & Mokdad, A. H. (2004). Associations with physical activity dose and health-related quality of life. *Medicine & Science in Sports & Exercise, 36*(5), 890-896. doi: https://doi.org/10.1249/01.mss.0000126778.77049.76
9. Caciula, I., Boscaiu, V., & Cooper, C. (2019). Prevalence and correlates of well-being in a cross-sectional survey of older people in Romania attending community day facilities. *The European Journal of Psychiatry, 33*(3), 129-134. doi: https://doi.org/10.1016/j.ejpsy.2019.06.002
10. Chichkanov, V. P., Tatarkin, A. I., & Vasilyeva, E. V. (2015). Map of the choice of mechanism for managing the quality of life of the region’s population. *Regionalnaya Ekonomika: Teoriya i Praktika (Regional Economics: Theory and Practice), 13*(4), 2-14 (in Russ.).
11. Davydova, E. V., & Davydov, A. A. (1993). *Quality of Life Measurement*. Moscow: Institute of Sociology of RAN (in Russ.).
12. Dissart, J. C., & Deller, S. C. (2000). Quality of life in the planning literature. *Journal of Planning Literature, 15*(1), 135-162. doi: https://doi.org/10.1177/08854120022092962
13. Dolan, P., & Metcalfe, R. (2012). Measuring Subjective Wellbeing: Recommendations on Measures for use by National Governments. *Journal of Social Policy, 41*(02), 409-427. doi: https://doi.org/10.1017/S0047279411000833
14. Drobysheva, V. V., & Gerasimov, B. I. (2004). Integral assessment of the quality of life of the population of the region: Monograph. Tambov: Publishing House of the Tambov State Technical University (in Russ.).
15. Elkind, S. N., Daveson, B. A., Kwok, W., Witt, J., Bausewein, C., Higgison, I. J., & Murtagh, F. E. M. (2015). Capture, Transfer, and Feedback of Patient-Centered Outcomes Data in Palliative Care Populations: Does It Make a Difference? A Systematic Review. *Journal of Pain and Symptom Management, 49*(3), 61-624. doi: https://doi.org/10.1016/j.jpainsymman.2014.07.010
16. Eurostat (2009-2018). *Self-perceived health by sex, age and labour status*. Retrieved from https://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do
17. Fortin, M., Lapointe, L., Hudon, C., vanasse, A., netu, A. L., & Maltais, D. (2004). multimorbidity and quality of life in primary care: a systematic review. health and quality of life outcomes, 2. 51. doi: https://doi.org/10.1186/1477-7525-2-51
18. grahamov juretić, T., letica-crepujila, M., stevanović, A., ružić, K., rončević-gržeta, I., & Došen, A. (2020). the effects of psychosocial day care program on clinical symptoms and quality of life of persons with depression: a prospective study. the european journal of psychiatry, 34(1), 27-35. doi: https://doi.org/10.1016/j.ejpsy.2019.11.001
19. gubina, N. V. (2008). influence of the quality of life of the population on the social tone of a single-industry city. Vlast (The Power), 7, 18-26 (in Russ.).
20. guyatt, g. h., feeny, d. H., & Patrick, D. L. (1993). measuring health-related quality of life. Annals of Internal Medicine, 118, 622-629. doi: https://doi.org/10.7326/0003-4819-118-8-199304150-00009
21. hasan-in wynia, R., & wolf, M. S. (2010). promoting health care equity: is health literacy a missing link? Health Services Research, 45(4), 897-903. doi: https://doi.org/10.1111/j.1475-6773.2010.01134.x
22. hunt, C., zhahid, S., ennis, N., michalak, A., masanic, C., vaidyanath, C., bhlerao, sh., cusimano m. d., & Baker, A. (2019). quality of life measures in older adults after traumatic brain injury: a systematic review. Quality of Life Research, 28, 3137-3151. doi: https://doi.org/10.1007/s11136-019-02297-4
23. Jamtvedt, G., Young J. M., Kristoffersen, D. T., Thomson O’Brien, M. A., & Oxman, A. D. (2003). audit and feedback: effects on professional practice and health care outcomes. Cochrane Systematic Review, 3, CD000259. doi: https://doi.org/10.1002/14651858.CD000259
24. Jenkinson, C., coulter, A., & Wright, L. (1993). Short form 36 (SF-36) health survey questionnaire: normative data for adults of working age. British Medical Journal, 306, 1437-1440. doi: https://doi.org/10.1136/bmj.306.6890.1437
25. kahneNaman, D., & Deaton, A. (2010). High income improves evaluation of life but not emotional well-being. Proceedings of the National Academy of Sciences of the United States of America (PNAS), 107(38), 16489-16493. doi: https://doi.org/10.1073/pnas.1011492107
26. Karimi, M., Brazier, J., & Paisley, S. (2020). Effect of Reflection and Deliberation on Health State Values: A Mixed-Methods Study. Value health, 22(11), 1311-1317. doi: https://doi.org/10.1016/j.jval.2019.07.013
27. kell, K. P., & Rula, É. Y. (2019). Increasing exercise frequency is associated with health and quality-of-life benefits for older adults. Quality of Life Research, 28(12), 3267-3272. doi: https://doi.org/10.1007/s11136-019-02264-z
28. Kickbusch, I. S. (2001). Health literacy: addressing the health and education divide. Health Promotion International, 16, 289-297. doi: https://doi.org/10.1093/heapro/16.3.289
29. kulikova, N. A. (2010). Improving the quality of life of the population as a function of the social state. Moscow University Economics Bulletin. Sociocultural Policy and Social Science, 18(4), 33-45 (in Russ.).
30. McDowell, I. (2006). Measuring Health: A Guide to Rating Scales and Questionnaires. doi: https://doi.org/10.1093/acprof:oso/9780195165678.001.0001
31. Michalska-Zyla A., & Stolbov, V. P. (2018). the interdependence of quality of life and resources of social capital. Sotsioligicheskie issledovaniya (Sociological Studies), 7, 71-80. doi: https://doi.org/10.31857/S013216250000187-8 (in Russ.)
32. Mikhaylova, L. I. (2010). Social well-being and perception of the future by Russians. Sotsiologicheskie issledovaniya (Sociological Studies), 3, 45-49. Retrieved from https://www.isras.ru/files/File/Socis/2010-3/Mihailova.pdf (in Russ.)
33. Mukhachova, A. V. (2012). the quality of life of the population as a scientific category: theoretical approaches to the definition. Bulletin of Kemerovo State University, 52(4), 1, 303-307 (in Russ.).
34. Nazarova, I. B. (2014). Health and quality of life of Russians. Sotsioligicheskie issledovaniya (Sociological Studies), 4(9), 139-145 (in Russ.).
35. Nevado-Peña, D., López-Ruiz, V.-R., & Szaflarski, J. P. (2006). Quality of life in medication-resistant epilepsy: the effects of patient’s age, age at seizure onset, and disease duration. Epilepsy & Behavior, 9, 106480. doi: https://doi.org/10.1016/j.yebeh.2019.10.034
36. nilov, V. M. (2012). Social changes and public health: some results and prospects of research. Sotsioligicheskie Issledovaniya (Sociological Studies), 8, 112-116 (in Russ.).
37. Poder, Th. G., carrier, N., & Kouakou, Ch. R. C. (2020). Quebec Health-Related Quality-of-Life Population Norms Using the EQ-5D-5L: Decomposition by Sociodemographic Data and Health Problems. Value in Health, 23(2), 251-259. doi: https://doi.org/10.1016/j.jval.2019.08.008
38. reckers-droog, V., exel, J., & Brouwer, W. (2019). Equity Weights for Priority Setting in Healthcare: Severity, Age, or Both? Value health, 22(12), 1441-1449. doi: https://doi.org/10.1016/j.jval.2019.07.012
39. RLMS-HSE (1994-2018). Russian longitudinal monitoring survey of the national research university higher school of Economics. Retrieved from http://www.hse.ru/rlms (in Russ.)
40. Sanghera, S., & Coast, J. (2019). Measuring quality-adjusted life-years when health fluctuates. Value in Health, 23(3), 343-350. doi: https://doi.org/10.1016/j.jval.2019.09.2753
41. Scrivner, B., Szaflarski, M., Baker, E. H., & Szaflarski, J. P. (2019). Health literacy and quality of life in patients with treatment-resistant epilepsy. Epilepsy & Behavior, 99, 106480. doi: https://doi.org/10.1016/j.yebeh.2019.10.06480
42. Sen, A. (2001). Development as Freedom. Oxford: Oxford University Press. Retrieved from https://econpapers.repec.org/bookchap/oxpbooks/9780192893307.htm
43. Subbeto, A. I. (2015). Social quality of life: category and foundations of the theory. Ekonomika Kachestva (Economics of Quality), 9, 2-16 (in Russ.).
44. Szaflarski, M., Meckler, J. M., Privitera, M. D., & Szaflarski, J. P. (2006). quality of life in medication-resistant epilepsy: the effects of patient’s age, age at seizure onset, and disease duration. Epilepsy & Behavior, 8(3), 547-551. doi: https://doi.org/10.1016/j.yebeh.2006.01.001
45. Tatarkin, A. I., & Vasilyeva, E. V. (2015). Life quality of the Ural region’s population: tendencies and mechanism of management. Transbaikal State University Journal, 123(8), 154-168. Retrieved from https://cyberleninka.ru/article/n/kachestvo-zhizni-naseleniya-uralskogo-regiona-tendentsii-i-mehanizm-upravleniya/viewer (in Russ.)
46. the WHOQOL group (1994). the development of the world health organization quality of life assessment instrument (the WHOQOL). In J. Orley & W. Kuyken (Eds.), Quality of Life Assessment: International Perspectives (pp. 41-57). Springer, Berlin, Heidelberg. doi: https://doi.org/10.1007/978-3-642-79123-9_4
47. UN (1990-2018). Human Development Data (1990-2018). Retrieved from https://hdr.undp.org/en/data
48. Vecchio, P. D., Secundo, G., Maruccia, Y., & Passiante, G. (2019). A system dynamic approach for the smart mobility of people: Implications in the age of big data. *Technological Forecasting and Social Change*, 149, 119771. doi: https://doi.org/10.1016/j.techfore.2019.119771

49. Ware, J. E., Kosinski, M., & Keller, S. D. (1994). *SF-36 Physical and Mental Health Summary Scales: A User’s Manual*. Boston, Mass.: The Health Institute, New England Medical Center.

50. Xu, F., Cohen, S. A., Lofgren, I. E., Greene, G. W., Delmonico, M. J., & Greaney, M. L. (2018). Relationship between Diet Quality, Physical Activity and Health-Related Quality of Life in Older Adults: Findings from 2007-2014 National Health and Nutrition Examination Survey. *The Journal of Nutrition, Health & Aging*, 22(9), 1072-1079. doi: https://doi.org/10.1007/s12603-018-1050-4

51. Zachesov, A. A. (2015). The problems of comfort of living in a big city. *Problemy Razvitiya Territorii (The Territory Development Problems)*, 76(2), 73-86 (in Russ.).

52. Zarakovsky, G. M. (2009). *The quality of life of the population of Russia: psychological components*. Moscow: Smysl (in Russ.).