EVALUATION OF SURVIVAL PROSPECTS IN THE ECONOMICALLY ACTIVE AGE GROUPS: A GENDER PERSPECTIVE IN RUSSIA

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Abstract

The main factor of growth in lifespan are the installation of self-preservation behavior (SPB) and it has not yet sufficiently understood. However, most of the literature prevailing view of the increasing role of the population of developed countries attitudes on the values of health transitions (the theory of healthy, suicidal behavior). The problem is in qualifying the terms of formation of the reproductive and SPB attitudes for boys and girls in the process of socialization.

The aim of the study is to confirm the hypothesis about the dissonance of the formation of SPB in gender, as well as living in different regions and types of settlements.

Methods of research: method of mortality tables, cohort analysis, analysis of demographic statistics, survey of the population.

The authors suggest to evaluate the prospect of survival of men and women in the age of economic activity as an indicator of the formation of SPB in various regions of the Russia. The authors propose that demographic statistics, allowing to construct life tables, should be the basis of analysis the SPB.

Key words: economically active age, lifespan, survival prospects, gender, health transitions, self-preservation behavior, reproductive attitudes

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Introduction

In 2011, the ILO published a study on the methodology of estimates and projections of the behavior and characteristics of the economically active population from 1990 to 2010. Some trends and factors requiring clarification at the national level have been identified.

The expected lifespan of the population is considered as one of the most important demographic indicators of the level of socio-economic development of the country, especially its human component. The universally recognized goal of nation-states in the world community, according to the recommendations of the International Conference on Population and Development in 1994, was to achieve by 2015 a lifespan at birth exceeding 75 years (MDGs, 2010).

American researchers separately studied the mortality rate of the cohort of people in the intermediate Q-phase on Swedish residents and came to the conclusion that mortality significantly decreased, allowing to increase and life expectancy (Engelman, 2017)

Unfortunately, according to this indicator, Russia lags behind the most developed countries. The main reason for the low lifespan in Russia is premature mortality, which is manifested in the high mortality rate of the working-age population. A specific feature of mortality in Russia is the extremely high gender differences in lifespan. We should admit that significant gender differences in life expectancy were also noted by Brazilian scientists, who also identified the race / color factor and urbanization that affect mortality (de Oliveira, 2016).

As noted by Russian researchers, the scale of the «gender gap» has been formed long ago. Subsequently, by 2003, the variance in lifespan in men increased to 12.3, but it was somewhat reduced in women - up to 7. From the second half of the 2000s, the picture began to change for the better. The gap between men and women in this indicator began to decline slowly from 2006.

In 2015, Russia was hit by an absolute record of the average lifespan in the entire history of the country, including Soviet times - the average lifespan in Russia has reached 71.4 years (for men - 65.9 years, for women - 76.7). In 2016, the average lifespan in Russia increased by another 8.5 months, reaching a mark of 72.1 years. In women, lifespan exceeded 77.3 years, and for men the lifespan approached the mark of 67 years.

Today, at the highest level, it is recognized that the growth in lifespan in the country is constrained by the high level of premature mortality of men and the almost complete absence of modern medical care in rural areas (out of 130,000 rural settlements on the territory of Russia, only 45,000 have some form of medical care, the rest simply do not have them).

1 Theoretical and methodological grounds for the study of survival prospects

1.1. Gender gap in lifespan

Let us dwell on the reasons for the «gender gap» in the expected lifespan of men and women in Russia. There are two approaches mainly used to explain this phenomenon: medical and behavioral. First one - the theories of health transition or theories of epidemiological transition, second one - theories of self-preservation behavior.

To begin with, we will examine the studies related to the peculiarities of the epidemiological transition in Russia. Usually the situation in Russia from this point is interpreted as a manifestation of the incompleteness of the epidemiological transition caused by the overtaking nature of Soviet modernization, or even as a «reverse epidemiological transition» or as an incomplete sanitary transition (Vishnevskii, 2015).

Efforts undertaken by the state in the field of health care and demography did not address the problem of premature death in working and teenage years, suicides, murders and other manifestations of violent deaths and injuries, including self-aggression of the individual. High losses from mortality rates of teenagers, from occupational diseases, traumatism and elementary neglect of their health by the population remain high. The tendency of sprawl of HIV infection in industrial regions of Russia is dangerous. By 2017, Sverdlovsk and Kemerovo regions have become recognized leaders in this regard.

If mortality rates largely depend on the age and sex structure of the population, then the differences in the structure of mortality in the regions of the Russia can be explain by the broader set of factors that are, in fact, eco-biological, socio-economic, political, cultural, medical determinants of the epidemiological transition. According to the criterion of mortality rates, all regions of Russia can be divided into several groups:

1. Regions in which mortality from underlying causes differs from all-Russian indicators is insignificant (no more than 30% in one direction or another).

2. Regions in which the deviation of mortality from external causes exceeds the average Russian indicator by more than 30% (total 34 regions). At the same time, the mortality from external causes exceeds the average Russian level by more than 50% in few regions and has the lowest rates - in Moscow and Caucasion regions.

3. Regions in which the deviation of mortality from infectious and parasitic diseases exceeds the average Russian indicator by more than 30% (57 regions). This indicator is the most heterogeneous. It exceeds the average level in Russia by more than 2 times in several regions and has the reverse picture in some.

4. Regions with an «archaic» structure of mortality. So, in the Republic of Tyva, the infant mortality rate is almost twice as high as the Russian average, the mortality rate from infectious and parasitic diseases exceeds the all-Russian by 140.4%, from external causes by 116.4%, while mortality from neoplasms and BSK less than Russian indicators by 50.6 and 50.3%, respectively.

As we see, there is a high correlation of these indicators with the gender coefficient of survival.

1.2. Self-preservation behavior and lifespan

The second approach links the expected lifespan with the behavioral characteristics of different categories of the population, it is the self-preservation behavior. Traditionally, self-preservation behavior was understood as purposeful actions of a person for self-preservation throughout life, for preserving and strengthening health (Decatanzaro, 1991). In modern studies, the understanding of the essence of self-preservation behavior is associated with the socio-psychological characteristics of individuals, conditioned by the conditions of the habitat (Plotnikova, 2009).

Thus, self-preservation behavior is understood by a set of knowledge, motives, beliefs, a system of actions and relationships that organize and direct the volitional efforts of the individual to maintain health, a healthy lifestyle during the full life cycle, and to prolong creative longevity. Taking into account the ongoing discussion, we proposed the following definition of self-preservation behavior (SPB): SPB is a system of reactions, actions and attitudes aimed at achieving a safe, healthy and full-fledged existence at all stages of a person's life (Kuzmin, 1997) M.A. Miller believes that individual strategies for SPB in modern conditions are determined by a combination of three vectors of its implementation - a healthy lifestyle, medical activity and the ecologization of the conditions of their own vital activity (Miller, 2009).

The concept of «healthy lifestyle» assumes that the individual in his daily life performs certain actions or adheres to certain rules that contribute to the preservation and strengthening of his health. The main «classical» (but not the only) components of a healthy lifestyle are smoking cessation, strictly dosed alcohol consumption, regular physical activity, balanced diets and dietary regimens. According to the World Health Organization (WHO), tobacco consumption «provides» 6% of deaths in the world, alcohol consumption - 1.5%, inactivity - 3.9%.

Scientists from several European countries for several years observed the lifestyle and consumption of alcohol from different gender groups, differing in the level of education. It turned out, social inequalities in alcohol use differ by gender according to alcohol measure used and differ also across groups of countries (Bloomfield, 2006).

According to WHO, the health status of the population by about 50-55% depends on the lifestyle, that is, on the behavioral factor, and this is the largest indicator among all the identified factors.

One should agree with the opinion of L.E. Darskii, that self-preservation for the sake of selfpreservation and maintaining health does not exist (Darskii, 1992). The main thing is to focus on the way of life and the realization of life values. Consequently, the SPB provides for the existence of a certain system of actions and relations mediating maintaining the orientation of the individual's behavior towards the achievement of a safe healthy and full-fledged existence of both the individual and the family (Borisov, 2005). In turn, the family as a special kind of social institution, carries for the person not only the benefits but also a certain kind of antiviolence that limit the realization of its rights and needs. The attitude is changing not only to life, but also to death in the first place (the «mortal transition» of L. Ruzicka, J. Vallen, R. Lee). There is a certain classification of «fears» as regulators of SPB (especially in adolescence). The most important regulator of the SPB is the «self-protection personality» attitude. This attitude changes historically under the influence of socio-cultural and mental factors (Kuzmin, 1997) The success of maintaining the healthy attitude in many ways predetermines suicidal behavior both at the personal and group levels. At present, the facts of its strong dependence on modern information culture and Internet resources of a destructive nature oriented on manipulation of consciousness in the sphere of understanding the meaning of life (for example, believers with a high degree of religious affiliation) and an emotionally sensual sense of the full value of existence and being.

2. Results of the study

2.1. Gender index of survival

For the analysis, the authors calculated the gender survival index for the regions of the Russian Federation. For this purpose, the table of probability of survival of men and women in economically active age was originally constructed according to the ILO classification - from 17 to 72 years. The gender coefficient of survival was calculated as the ratio of the survival rate of men to the probability of survival of women by individual regions of the Russian Federation. The smaller the gap in the expected lifespan of men and women, the higher the survival ratio.

The values of the gender coefficient of survival for the subjects of the Russian Federation were formalized in the form of a histogram, by which the standard deviation is identified.

The standard deviation shows that the gender index of survival is above the average range in the following subjects of the Russian Federation: Moscow and North-Caucasian FD (the Republic of Dagestan, the Republic of Ingushetia, Karachaevo-Cherkessia, the Chechen Republic, almost at the average level - Kabardino-Balkaria and North Ossetia), St. Petersburg and Chukotka AO. In these regions, the «gap» in the expected lifespan of men and women is significantly lower than the average for Russia.

Below the average range, the coefficient was found in the Republic of Tyva, the Jewish Autonomous Region, the Republic of Karelia, and the Amur Region.

The standard deviation showed that, first of all, the «gaps» in the expected lifespan of men and women correlate with the indicators of the standard of living. Thus, Moscow and St. Petersburg are leading both in terms of living standards and lifespan, including for men.

The second factor, which, in our opinion, influenced the importance of the gender coefficient is the traditional way of life, which is clearly manifested in the North Caucasus Federal District.

Another vector of implementing self-preservation behavior - medical activity - involves the use of the individual capabilities of the health system and is associated with the frequency of seeking medical help, the regularity of consumption of medical services, the implementation of medical advice, medical literacy.

According to medical statistics, 3 million Russian citizens miss work on sick days every day and another 20-25 million are at work in a pre- or post-painful state, due to established in organizations discriminatory practices associated with missing work on sickness (Nazarova,

2007). Finally, the individual, setting himself health-saving goals, has the opportunity to achieve them through the ecologization of the conditions of his life. This direction of realization of self-preserving behavior is understood as the actions of the individual (within the limits of available limitations - material, territorial, social, etc.), aimed at forming an «environment around» an enabling environment in the labor and non-labor spheres of activity. At the same time, a favorable environment is determined by three main components - natural, technogenic and social conditions of the individual's vital activity.

In the end, it is possible to single out positive self-preservation behavior aimed at preserving and strengthening health, and negative - aimed at preserving the necessary notion of oneself, including the way through suicide. Borisov V.A., describing the causes of death in Russia at the end of the last decade of the twentieth century, noted their «behavioral» nature (Borisov, 2005). Thus, 80% of all deaths in men and 82% in women - account for only three classes of death from 19. These are diseases of the circulatory system, neoplasms, accidents, poisoning and trauma. Moreover, the mortality of men from these causes exceeds the death rate of women, especially for external reasons.

According to specialists' calculations, the difference in the average lifespan of men and women due to the biological factor is 1.9-2.1 years. The rest is the result of sociocultural factors, which, after gender equalization by the period of puberty, have a decisive influence on differences in lifespan and health status. So, W. Cockerham, analyzing the phenomenon of a deep gap in the lifespan between men and women in Russia as a consequence «the crisis in health», emphasizes the overall gender conditioning of this gap in societies: this difference under the influence of purely biological factors is not so significant (Cockerham, 2012). At the same time, in stable societies with a high standard of living, this gap is not so great.

The importance of the influence of the social structure on health and life expectancy was also noted in Minagava's works, as main factors called GDP, economic freedom, corruption, terrorism, etc (Minagava, 2013).

Differences in social roles and status in the society of women and men affect their response to changes as a result of external circumstances. Thus, the researchers explain the gender differences in mortality and diseases, including the varying degree of influence of macroeconomic stress on women and men due to differences in their social roles. In conditions of socioeconomic changes, the inability to fulfill the role of family breadwinner has affected the mortality rate of men. Statistical data also show a number of social factors that affect the reduction of gender differences in mortality: the level of education, the place of residence, and the nature of work.

2.2. The impact of gender behaviors on self-preservation behavior

Gender stereotypes, on the basis of which behavioral practices are formed, exert an effective influence on the behavior of men and women in the field of self-preservation behavior. The special style of life of Russian men is mainly connected with the use of alcohol (first of all, middle-aged men belonging to the working class), risky behavior, etc., including international research. Russia is among the countries with the highest prevalence of smoking among men in the world, although the proportion of women smokers is increasing; men are exposed to injuries, commit suicide more often, etc. Specific behavioral attitudes of men include attitudes toward avoiding medical care, and minimal care for one's health.

One of the most striking differences between men and women is manifested in the intentions to act in case of unusually bad health. In general, this model was reproduced at the level of practical actions. So, women are much more likely to use in the case of health problems a whole range of channels of possible assistance (advice of relatives, going to the doctor). There are differences in the way information is obtained, on the basis of which men and women have built health strategies. A model of refusing to use information about maintaining health, referring to a doctor only in case of urgent need can be called «purely male». «Pure female» - a model that is characterized by focused and careful tracking of literature and ways of acting, places of treatment about health, one's own or others. According to the study, the female model of health behavior is more flexible in changing conditions. They are twice as likely as men to disagree that the constant care of one's health is a manifestation of selfishness.

Formation of attitudes and stereotypes in relation to their own health in men and women was influenced by various factors. Men were most affected by the behavior of others, and the least family traditions and medical information from the media. Among the most significant factors of behavioral attitudes of women, first of all, they call deterioration of their health and fear of a possible disease, followed by education, upbringing and information received from doctors. Ways of action the views of men and women on maintaining their health have both similarities and differences. Women more often adhere to diets, avoid bad habits, are much more likely to visit a doctor for the prevention of diseases and regularly take medication. It is a paradoxical fact that, despite the behavior clearly in favor of a healthier lifestyle, women are much more likely than men to be dissatisfied with the efforts undertaken. At the same time, men more than twice as often believe that they are doing enough to maintain their health.

Thus, the female model of behavior in relation to one's health is characterized by greater flexibility, pragmatism, both at the level of attitudes, stereotypes, and at the level of action in real

situations. The male model is more susceptible to the actions of attitudes and stereotypes, which form a kind of code of norms, prescribing not to take care of one's health.

At the same time, researchers emphasize the importance and priority of socio-economic conditions, the general social context of the life of the population in the variations of health of men and women. According to research data, the influence of behavioral factors is very moderate, the role of factors associated with the social structure is more pronounced.

Studies of the relationship between the social class and health show that death and disease are socially structured and vary in accordance with differences in living standards. In connection with the problem of poverty, two social problems can be identified. One is that the inherited system of gender roles in society preserves the conditions for the reproduction of poverty among women (by stimulating the structural conditions of poverty). The other is formed by the lack of a proper social policy that regulates gender relations in society, which leads to aggravation of gender inequalities: growing problems of poor families and single households, reduced opportunities for professional careers, professional growth of women, and high risk factors in working conditions affecting overmortality of men, etc.

Another important factor that influences gender differences in self-preservation behavior is the type of settlement (city-village or urban-rural). There are certain differences both in the lifespan of the rural and urban population, and in the level, as well as in the structure of the causes of mortality. The Russian village is characterized by a high gender gap in terms of life expectancy and mortality, in particular, the mortality rate of rural men in working age is more than 4 times higher than that of women.

Thus, it should be noted that for rural women of working age, the main causes of death are the shortcomings of medical care: they are dominated as causes of death of the disease of the circulatory system and digestive organs. The basic structure that provides medical care in the countryside is the paramedic stations, the number of which in 1998-2009 has decreased by 14.4%, more than half of them require major repairs and reconstruction. The provision of rural population with doctors by 10 thousand people is 3.5 times, and the average by 1.7 times lower than in the Russian Federation as a whole.

Conclusion

In general, for men whose socialization occurred during the «Soviet period» and the beginning of the «turbulent 90-s» was characterized by a disdainful attitude to their health and conflict with doctors. Positioning in dozens of films of deviant norms of valiant criminal behavior for dozens of years delayed the development in Russia of rational norms of demographic behavior in the conditions of the growing dynamics of the second and third demographic transition. Hence, the

influence of unfavorable socio-economic conditions for the social development of a number or cluster of «bad» in terms of survival indicators of the regions of Russia is associated with the incompleteness of the last phases of the demo- transition. An example of Tyva is obvious: a high mortality rate and low lifespan coincide with traditionally high fertility rates reaching the level of 25 live births per 1000 population. Attitude towards health is set in the environment of indigenous peoples by patriarchal-religious norms against the backdrop of myths about the immortality of selected heroes. In general, the colossal territory of Russia lives and reproduces under the influence not so much of an economic, but a cultural and ethnic factor, which makes one speak about the importance of the concept of «ethnoeconomics». In turn, macroeconomists seldom pay attention to the slowly changing of self-preserving facilities under the influence of the modernization of vital behavior and the phenomenon of healthtransitions. Much more often the fact of modernization in Russia of reproductive and marital motivations is recognized. However, there were also breakthrough tendencies - suddenly in the last two years the frequency of life insurance has sharply increased in Russia. This was a complete surprise against the background of the stagnation of the insurance market.

Recently, the topic of demographic behavior has been, for obvious reasons, superseded by internal and external migration problems, the importance of huge pendulum flows of migrants in megacities and transit illegal movements. Against the backdrop of the tendency of artificial and spontaneous formation of the phenomenon of "mix-population" in Europe and Russia, attention was drawn to the theory of the third and even the "fourth" demographic transition (VAIontsev). It should not be forgotten that in due time the Soviet demographer A.U. Khomra defended the idea that the basic kind of demographic behavior is migration behavior, which ensures the safety of the family and the individual in modern and extreme conditions. This point of view can not be ignored in the current migration situation in Western and Eastern Europe.

In general, the conducted calculations once again confirmed the presence of a serious dissonance in the regulation of gender differentiation of self-preservation behavior in general and in regional aspects. In particular, this manifested itself when examining the motivation for self-preserving behavior of men and women and recommendations for maintaining healthy lifestyle norms

References

Bloomfield, K., Grittner, U., Kramer, S., & Gmel, G. (2006). Social Inequalities In Alcohol Consumption And Alcohol-Related Problems In The Study Countries Of The Eu Concerted Action 'gender, Culture And Alcohol Problems: A Multi-National Study' *Alcohol and Alcoholism, 41*(Supplement 1), 126-136. doi:10.1093/alcalc/agl073 Borisov, V. A. (2005). *Demography*. Moscow, Russia: Nota Bene. Bruno Luciano Carneiro Alves De Oliveira, & Luiz, R. R. (2016). Mortality by skin color/race and urbanity of Brazilian cities. *Ethnicity* & *Health*, 22(4), 372-388. doi:10.1080/13557858.2016.1244625

Cockerham, W. C. (2012). The intersection of life expectancy and gender in a transitional state: the case of Russia. *Sociology of Health & Illness*, *34*(6), 943-957. doi:10.1111/j.1467-9566.2011.01454.x

Darskii, L.E. (1992) Prospects of Russian Population in the Former USSR. *Paper for the International Colloqium "Population of the former USSR in the 21st century"*. Amsterdam, 1992

Decatanzaro, D (1991) Evolutionary limits to self-preservation. *Ethology and sociobiology*. 1991. T. 12, Vol. 1. Pp. 13-28. DOI: 10.1016/0162-3095(91)90010-N

Engelman, M., Seplaki, C. L., & Varadhan, R. (2017). A Quiescent Phase in Human Mortality? Exploring the Ages of Least Vulnerability. *Demography*. doi:10.1007/s13524-017-0569-z

Kuzmin, A. I. (1997). *Theoretical and methodological principles of investigating the selfpreservation function of the family* (Doctoral dissertation, IEUBRAS, 1997) Yekaterinburg, Russia: Institute of economics of Ural branch The Russian Academy of science.

Miller, M. A. (2009). Self-preservation behavior of the population as an element of demographic development. *Actual issues of economic science*, 8(1), 167-171..

Minagawa, Y. (2013). Inequalities in Healthy Life Expectancy in Eastern Europe. *Population and Development Review*, *39*(4), 649-671. doi:10.1111/j.1728-4457.2013.00632.x

Nazarova, I. B. (2007). *Health and self-preservation behavior of the employed population in Russia* (Doctoral dissertation, MSU, 2007). Moscow, Russia: MSU

Plotnikova, Y. (2009). Axiological orientations of students on longevity and features of selfpreservation behavior. *SOTSIOLOGICHESKIE ISSLEDOVANIYA*, *9*, 143-146.

Vishnevskii, A. G. (2015). The time of demographic change. Retrieved from https://public.wikireading.ru/164065

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