

## HEALTH INDICATORS IN AN ESTIMATION OF QUALITY OF A LIFE OF ELDERLY PERSONS

Voroshilova I.I.

*The Sakhalin State University, Yuzhno-Sakhalinsk, Russia*

*e-mail Irina\_1957@bk.ru;*

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The population life quality integral indices are quite possible the life expectancy, the mortality, the morbidity, and also the disability. The modern gerontology achievements are being permitted the aging processes control challenges to be solved, having increased the human active, the full – developed and the full – blown, the employable life, having shortened the decrepitude years' period. So, the process control is quite possible done only after the fact, how the living standard state change dynamics has already been retraced and observed in the specific region. The life expectancy indices dynamics (e.g. the decrease in 1,09 time), the mortality (e.g. the increase in 1,09 time), the disability (e.g. the increase in 2,02 times), having revealed in the Sakhalin region, has been indicated the fact, that the elderly age population life quality is being proceeded to be decreased, especially at the males. For all this, the urban population life quality, the living standard of which, increasingly, is being depended on the economic – socially conditions in the society, has already been worsen more, that at the rural population.

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So, the population health state level is being the most life quality adequate reflection. At the same time, the life conditions every evident changes are quickly being reflected at the health quality [1, 2, 3, 6]. The Russia has already passed on to the new economic model in the given proper management – the market economy (ME), in the end of the XX-th century. In this connection, the change has been taken its place in the society, as the landmarks, well as the perspectives in the life economic prosperity and the social welfare, as the country's whole population, well as its individuals. It goes without saying, the population prosperity and the welfare further change was not quite able to have an impact on its health state level, as the last aspect, in many researches' opinion, to the considerable extend, is being depended on the social and economic factors. Thus, many factors are being caused the health

worsening, and after this, the 10 main risks factors for the population health have been emphasized [9], by the Worldwide Bank report data «It is early to be died...» (2005). Thus, it is quite impossible the health state level to be measured, but it is quite possible to be judged on it by the mortality, morbidity, disability indices and etc. [5]. So, the life expectancy is quite able to be by the health integral index, which is being defined, how the years number, which, in average, would the man has to be lived from the borne generation, under the condition, that the age – specific mortality is being left at that year level, for which the index has been calculated throughout this generation whole life. It was noted, that in the Sakhalin region, the life expectancy was being decreased, the mortality and the morbidity among the population were being increased, especially in the elderly age for the last fifteen years. So, the raised challenge is being needed its solution: the health formation efficient tech-

nologies creation and the implementation at the population. At present, the modern gerontology achievements are being permitted the aging processes control challenges to be solved, having increased the human active, the full – developed and the full – blown, the employable life, having shortened the decrepitude years' period [8]. But, the process control is quite possible done only after the fact, how the living standard state change dynamics has already been retraced and observed in the specific region. Thus, the present report **aim** is the life expectancy, the mortality, and the disability indices dynamics analysis. This aim realization is quite necessary for the further elderly and the old people aging processes control qualitative and the quantitative methods development, as the region stable development paradigm.

#### The Material and the Methods

The indices dynamics on the further elderly and the old people, having lived in the Sakhalin region, for the period from 2000–2005-es, the life expectancy (LE), the mortality, and the disability has been analyzed in the work. So, the obtained statistical data on the Sakhalin region have been served, as the basis for the necessary analysis. The indices calculation has been done by the B.B. Prokhorov and the co –

authors' formula [7]. For all this, the indicator's fixed minimum and the maximum values have been accepted for the index's building. Then, the qualitative variables have already been described by the absolute and the relative frequencies (in the per cents).

#### The Results and the Discussion

The LE index has been decreased from 0,649 down 0,593 for the period from the 2000 up to the 2005 years. For all this, the females' and the males' expectancy life (EL) indices have been made up 0,763 and 0,558 in the 2000 year, but 0,718 and 0,491 in the 2005 year, correspondingly (see, the Table 1). The males should be related to the unsatisfactory group, having judged by the life expectancy (MLE) indices values, as their LE is quite less in 1,4 time, in comparison with the females' life expectancy (FLE) indices. By the scientists' and the scholars' prognoses [7, 9], the LE index decrease, and its further passing into the unsatisfactory group will be able to be resulted in the 20 years to the phenomenon, that the males' life expectancy (MLE) may be decreased down the 50 years in the Far East regions, if the region's socio – economic development further realization is on be by the pessimistic scenario.

**Table 1**

The Life Expectancy (LE), the Mortality, and the Disability Indices of the Sakhalin Region Peoples in the 2000–2005-es

| Years | LE    | FLE   | MLE   | TMI   | MMI   | FMI   | ИИП   | Disability, in %* |
|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|
| 2000  | 0,649 | 0,763 | 0,558 | 4,667 | 1,946 | 2,617 | 0,153 | 47,1              |
| 2001  | 0,628 | 0,740 | 0,535 | 4,973 | 2,038 | 2,617 | 0,210 | 52,8              |
| 2002  | 0,630 | 0,741 | 0,538 | 4,940 | 2,715 | 2,823 | 0,247 | 58,1              |
| 2003  | 0,606 | 0,728 | 0,503 | 5,106 | 2,162 | 2,833 | 0,189 | 52,6              |
| 2004  | 0,608 | 0,733 | 0,505 | 4,877 | 2,031 | 2,735 | 0,257 | 59,2              |
| 2005  | 0,593 | 0,718 | 0,491 | 5,097 | 2,122 | 2,864 | 0,309 | 61,6              |

\* The peoples total number part, having acknowledged by the disabled ones, in %

The life expectancy low indices in the Sakhalin region are quite able to be connected with the fact, that the population is living in the region with the unfavorable social and the economic conditions under the environmental discomfort conditions [3]. However, such evident low LE indices of the region, within one country limits, are being caused the alarm, and they are being aroused the anxiety. It is well – known, that the LE indices are being depended on many factors, but, especially, on the social and the economic ones. Such scientists and the scholars, and the doctors and the physicians, as A.P. Dobroslavin, E.A. Osipov, V.O. Portugalov, F.F. Arisman [10] have indicated this in the end of the XIX-th – in the beginning of the XX-th centuries. Therefore, the LE sharp decrease in the Sakhalin region – this is the life's socio – economic conditions worsening consequence in the region. The following transition to the new economic conditions in the region (e.g. to ME – the market economy) has been resulted in the fact, that the peoples overwhelming majority received the great shock from this, that the state already was not working, as before, having controlled the human life cycle from his birth up to his death. Such social diseases, as the misery and the poverty have intensively been become to be flourished in the society, the consequence of which the mortality is being increased, especially, at the persons with the low – leveled social activity. The elderly people, having been, in their overwhelming majority, the socially inactive ones, with the whole diseases complex, are not quite able, completely, to satisfy their needs, that and it is being resulted in the fact, that many of them do not want to live for a long time. So, we shall note, that they are being increased for the analyzable period of time, having considered the total, the male, and the female mortality indices (e.g. TMI, MMI, FMI). So, the total mortality index

(e.g. TMI) has already been changed from 4,667 up to 5,097, that is, it has been increased for the unit during the period from the 2000 year up to the 2005 year. For all this it has been noted, that the males mortality indices (e.g. MMI) are being exceeded the females mortality indices (e.g. FMI) at the ages from the 65–69 years from 2,3 times up to 2,7 ones, but at the age of the 70 years and the more ones from 1,4 up to 1,5 time for the examined period of time (e.g. see, the Table 1). The mortality indices rise is being connected by them, as with the human organism inner adaptation possibilities, well as with the external factors. As the unfavorable climate and the environmental pollution influences in the towns and its contamination impacts in the cities, well as, in the first place, the elderly people's low – leveled social possibilities are being promoted this, as they are all the pensioners and, on the whole, they are the disabled people, without any possibility sufficiently qualitative medical treatment and the departure beyond the limits of the Sakhalin region, having taken into the consideration the region's isolated and the island position. So, the blood circulation system diseases, the neoplasms and the tumors, the accidents and the casualties, in the less degree, – the respiratory, the digestive organs diseases and the others are the main death and the disability reasons at the more age of the employable population. So, it was revealed, that the 67,7 % males and the 73,9 % females of the elderly age had been died from the blood circulation system diseases in the 2005 year. The 15,8 % males and the 11,8 % females have been died from the neoplasms and the tumors, and the 6,5 % males, and the 4,3 % females have been perished from the accidents and the casualties in the 2005 year. Correspondingly, the 2,8 % males and the 1,9 % females have been died from the respiratory organs diseases, but the 4,2 % males and the 4,3 % females have been

died from the digestive organs diseases. So, the males' mortality has been up from the 70,9 % at the age of the 65–69 years in the 2000 year, and then it has been increased up to 86,2 % in the 2005 year, and it has been exceeded the females' mortality in 2,2 and 2,7 times. So, the males' mortality exceeding is being made up 1,4–1,5 times at the age of 70 and the more years. By the sociologists' optimistic prognoses, it is quite possible mortality change, but at the new prophylactic directions introduction: the non – drinking policy, the cardiovascular diseases prophylaxis and the medical treatment, the struggle against the smoking, the hypertensive disease prophylaxis and the medical treatment, however, all these directions introduction, exactly, in the third age, considerably, would not be increased the mortality change, because it is necessary all these arrangements to be carried out at the more early age. Thus, the disability index (DII) has been increased among the elderly employable age population, as for the period from 2000 up to 2005-es, and it has been risen in 2 times, having judged by the data, which have been presented in the Table 1. At present, the persons are being found at the age of the 65 years older, having been born in the pre – war and the postwar periods, who, first of all, have survived the most severe tests during the war years. All this is having the impact on their health. So, the blood circulation system diseases are the most widespread disability reason among the population, as in the urban, well as in the rural areas. For all this, the disabled people with the cardiovascular diseases, such as the myocardial infarction, the hypertensive disease, the insult, the ischemic disease, annually, are being registered noticeably more in the urban area, than in the rural one. The blood circulation system diseases have been become the main disability reason at the 69 % elderly people in the 2005 year, having acknowledged the

disabled people, for the first time, against the 53,2 % ones – in the rural area. The rather frequent disability reasons have been become the neoplasms and the tumors (e.g. the 8 % townspeople and 7 % at the villagers). The musculoskeletal apparatus system diseases – 11,6 % (e.g. in the city – 5,5 %); the eyes and the annexal apparatus diseases – 6,7 and 4,9 %; the endocrine system – 4,9 and 2,0 %; the respiratory organs – 4,6 and 2,9 %; the all localization traumas and the injuries – 3,7 and 2,6 %, correspondingly, are more frequently disability reasons in the countryside and in the rural area. The disability rise is the population aging direct consequence, its heavy economic conditions and the heavy financial situation, the well – timed and the qualitative medical assistance inaccessibility, the high rates for the medical treatment and for the drugs and the medication. The population's incomes and the earnings have been much less, than the living wage and the subsistence minimum at the 102,2 thousand people (e.g. 19,3 %), in the 2005 year. So, it was revealed, that the elderly people, having had the possibility to be addressed to the medical institutions, and not having addressed, because of their medical services paying impossibility, had been made up – 61,3 %, from them the males – 12,4 % and the females – 48,9 %, in the 2005 year. The elderly age population disability is the result of the multiple worsening and having proceeded to be worsened the whole population's social and economic situation.

### **The Conclusion**

Thus, in the Sakhalin region elderly age population life quality is being proceeded to be decreased and to be declined in the examined period of the 2000–2005-es, having judged by the life expectancy indices dynamics (e.g. the decrease in 1,09 time), the mortality (e.g. the increase in 1,09 time), and the disability (e.g. the

increase in 2,02 times). The males' life quality, especially noticeably, has been declined. For all this, the urban population life quality, the life level of which, to an even much greater degree, is being depended on the social and economic conditions in the society, has been worsened much more, than the rural area. The elderly and the old people needs satisfaction disorder is, usually being resulted in the unwillingness to be lived for a long time and qualitatively, that is constantly needed all the factors detailed processing, having influenced on the health indices, as the social – medical, well as on the climatical – naturally character.

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