ASSESSMENT OF QUALITY OF LIFE OF RETIRED POPULATION

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ABSTRACT

Quality of life (QoL) is a concept that characterizes the material and spiritual comfort of human existence. In the medical sense, the term is associated with health. In Kazakhstan, as in many other countries is happening a process of increasing of the part of population in retirement age. The objective of this study was to assess the QoL of retired population in Kazakhstan.

Current data acquisition was realized by questionnaire respondents by SF-36 questionnaire. The survey covered 203 respondents. The study population was formulated by the method of random selection. Statistical analysis of data was performed using methods of variation statistics.

All indicators of scales SF-36 were above average. General indicators: physical (PH) and mental (MH) well-being were assessed as not large less than average (42.6/43.2). The male population of the retirement age had better scores on all eight SF-36 scales compared to the female population. Indicators of QoL of working population were assessed higher than indicators of nonworking population. Also, it was found that presence of job positively influences to the QoL of retired population.

***Key words**: Quality of life, SF-36 questionnaire, retired population, Kazakhstan.*

INTRODUCTION

Quality of life (QoL) is the general well-being of individuals and societies. The concept of "quality of life" is much wider than standard of living or material living conditions, it also takes into account working conditions, the degree of social integration, health and education, whether people are particularly fragile economically (e.g. unemployed) or physically, etc. Within the field of healthcare, QoL is often regarded in terms of how it is negatively affected, on an individual level, a debilitating weakness that is not life-threatening, life-threatening illness that is not terminal, terminal illness, the predictable, natural decline in the health of an elder, an unforeseen mental/physical decline of a loved one, chronic, end-stage disease processes [1].

Ageing is the accumulation of changes in a person over time. Ageing in humans refers to a multidimensional process of physical, psychological, and social change [2]. As the older population continues to increase in developed countries, maintaining a high level of QoL into the elderly is becoming a growing public health concern and QoL issues have gradually become more important in health care practice and research [3].

In recent decades, in all countries, including Kazakhstan is happening quite prompt process of reduction of the part of children and youth and process of increasing of the part of population in retirement age [4]. At the same time life expectancy improves in Kazakhstan. In 2013 the life expectancy in Kazakhstan increased to 70.45 years. That year, the life expectancy for women was 75.06 years and for men 65.75 years**.** Life expectancy in Kazakhstan had been changing over the past several years, in 2009 it was 68.33 years, and in 2004 it was 66.14 years [5]. In consequence of this process the percentage of chronic diseases and pathologies combinations have been increasing. Consequently, there has appeared a demand to assess the QoL of the population of the retirement age. In this context, **the aim** of our study was to assess the QoL of retired population by SF-36 questionnaire.

MATERIALS AND METHODS

Tool for assessing the QoL was a questionnaire SF-36 "Health Status Survey"[6]. The indicators of QoL on all scales SF-36 were calculated from 203 respondents of the retirement age (retirement age in the Republic of Kazakhstan for men - 63 years for women - 58 years) in Astana, Kazakhstan [7]. The study population was formulated by the method of random selection and provides the representativeness of a sample: basic characteristics of stratified sampling conform to characteristics of general totality. Data acquisition was realized by questionnaire respondents.

The SF-36 consists of eight scaled scores, which are the weighted sums of the questions in their section. Each scale is directly transformed into a 0-100 scale on the assumption that each question carries equal weight. The lower score the more disability. The higher the score, the less disability, a score of zero is equivalent to maximum disability and a score of 100 is equivalent to no disability. Thus, the results are presented in the form of ratings on a scale 8 scales drawn up in such a way that a higher score indicates a higher level of QoL.

The eight sections are36 items of questionnaire were grouped into eight scales: physical functioning (PF), role-physical functioning (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role-emotional (RE) and mental health (MH). Domains are also weighted and summed to calculate physical and mental component summary scores, standardized to a mean of 50 [8]. Statistical analysis of data was performed using methods of variation statistics.

RESULTS

The average age of the respondents was 67.5 ± 5.4 years. The distribution of the sample by gender and the presence of the work is presented in Table 1.

Table I. Distribution of the sample by gender and the presence of the work (n=203)

	Men		Women	
	N	% from sampling	N	% from sampling
Total N	87	42.9	116	57.1
	Working	Nonworking	Working	Nonworking
n	44	43	47	69
%	50.6	49.4	40.5	59.4

The mean values of QoL indicators differed from 100% level of the "ideal" health. Mean values of 8 SF-36 scales are given in Figure 1.

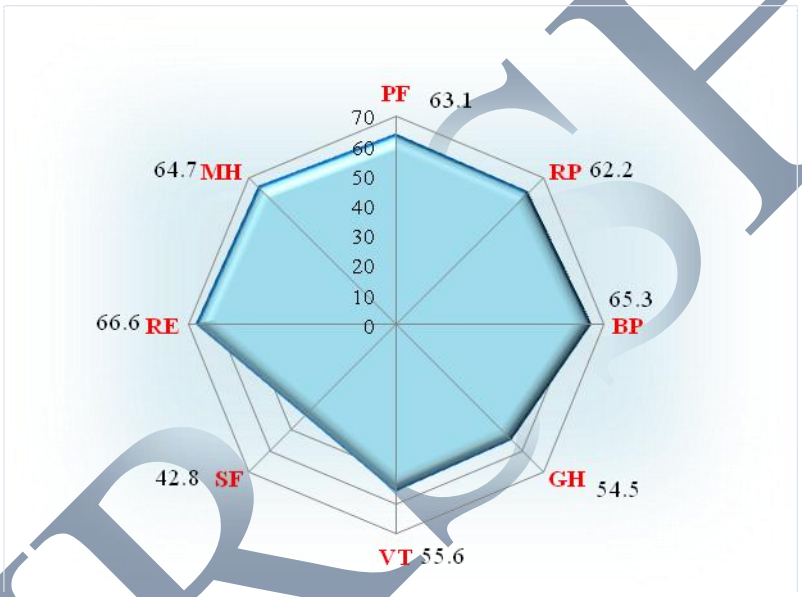

Figure 1. Mean values of 8 scales, sf-36 (n=203)

It is worth noting that the male population of the retirement age had better scores on all eight SF-36 scales compared to the female population. Indicator of physical functioning (PF) in men is 68.0, while this indicator for women is 59.5, it shows us that physical activity for women of the retirement age is more limited than men. Indicators of role-physical functioning (RP) in men also prevail over the indicators of women (68.6/57.3). Low indicators in this scale mean that daily activities are really confined by physical conditions of men. At the same time, indicators such us general health (GH), vitality (VT), social functioning (SF) and mental health (MH) had similar activities. According to these indicators the QoL of examined contingent is above average in both genders. Indicator of bodily pain (BP) in men is 69.7, in women is 62.0. Consequently, during daily activities pain confines an activity of women more than men. A considerable difference was found between men and women in indicators of role-emotional scale (71.7/62.7) that is women usually more depend on emotional states than men. Indicators of

mental health (MH) scales authenticate about having a depression, anxieties and mental troubles. Women have these problems more frequently than men (63.3/66.7).

As the result, they were calculated two general indicators: physical (PH) and mental (MH) well-being. Firstly, they were found Z-values for the eight scales of the questionnaire by the formulas:

PF-Z = (PF - 84,52404)/ 22,89490
RP-Z = (RP - 81,19907)/33,797290
BP-Z = (BP - 75,49196)/23,558790
GH-Z = (GH - 72,21316)/20,16964
VT-Z = (VT - 61,05453)/20,86942
SF-Z = (SF - 83,59753)/22,37642
RE-Z = (RE - 81,29467)/ 33,02717
MH-Z = (MH - 74,84212)/ 18,01189, then a value of PH indicators was calculated in such a way:

PH sum = (PF-Z * 0,42402) + (RP-Z * 0,35119) + (BP-Z * 0,31754) + (SF -Z * - 0,00753) + (MH-Z* -0,22069) + (RE-Z * -0,19206) + (VT-Z * 0,02877) + (GH-Z * 0,24954). At the end we calculated PH = (PH sum * 10) + 50. In our research PH=**42.66139058.** A value of MH indicators was calculated in the same way: MH sum = (PF-Z * -0,22999) + (RP-Z * -0,12329) + (BP-Z * -0,09731) + (SF * 0,26876) + (MH-Z* 0,48581) + (RE-Z * 0,43407) + (VT-Z * 0,23534) + (GH-Z * -0,01571) = (MH sum * 10) + 50= **43.22549476.** Thus, general indicators of QoL were assessed as not large less than average (Figure2).

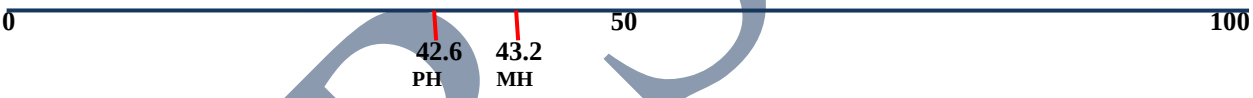

Figure II. General indicators of QoL

It is worth noting that indicators of QoL of working population were assessed higher than indicators of nonworking population. Moreover, these results were assessed in both genders. Mean values of 8 scales SF-36 of working and nonworking population are presented in Figure 3.

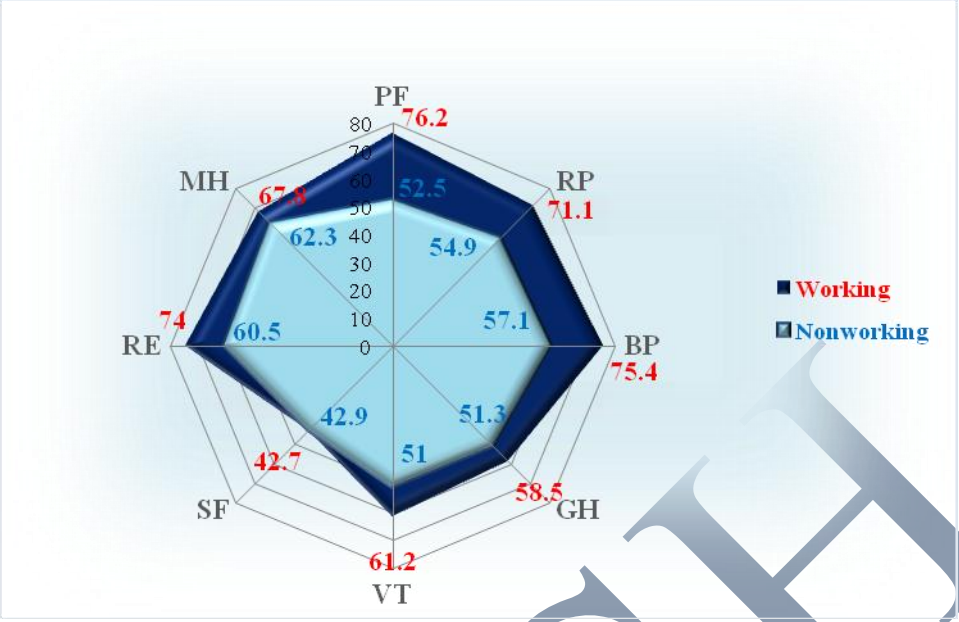

Figure III. Mean values of 8 scales sf-36 (n=203)

According to the null hypothesis (H0), the availability of work in the population of the retirement age has no effect on the QoL. In our research the fourfold table analysis was conducted, which showed dependence between characteristics. Accordingly, a null hypothesis (H0) was refused. According to the results of the analysis, the calculated value of chi-square Pearson was higher than a critical criterion: 6,402≥3,84 (p <0,05), the constraint force is a fractional closely-coupled interface (0.417). Consequently, the availability of work in the population of retirement age significantly improves their health and QoL. H1 is accepted: the high QoL of the working population due to the presence of work.

It is worth noting that the presence of work positively influences men and women equally. Indicators of 8 scales SF-36 of working men and women were assessed significantly higher than indicators of nonworking men and women. Mean value of 8 scales SF-36 distributed by gender and presence of the work is presented in table 2.

Table II. Mean value of 8 scales sf-36 distributed by gender and presence of the work

SF - 36	Men		Women	
	Working	**Nonworking**	**Working**	**Nonworking**
PF	77,1±20,9	58,6±8,9	75,3±13,9	48,7±13,2
RP	80,1±12,6	56,9±3,0	62,7±12,6	53,6±12,2
BP	76,2±22,4	63,1±24,0	74,6±20,7	53,4±25,2
GH	61,7±16,2	52,9±20,8	55,6±17,5	50,3±20,1
VT	63,1±13,3	53,0±17,5	59,4±18,3	49,8±17,5
SF	45,0±11,1	40,6±13,9	40,5±17,7	44,4±11,9
RE	80,4±13,0	62,9±9,9	68,1±13,9	59,0±14,9
MH	67,6±12,8	65,8±13,8	67,9±13,0	60,1±18,7

The results of the additional questionnaire to study the problems of working retired population (N = 91) are as follows: from the time of registration of a retirement benefit 41 (45.0%) of the respondents have been worked in the same place, while 39 (42.8%) have moved to another job, and only 12.2% have moved to another job, but at the same enterprises. Many of

the working population (43.9%) were continuing to work, because they were feeling physically better themselves during the work. Also 27.5% of the respondents found it difficult to live without work. Moreover, 26.3% of working population has continued to work because of financial difficulties. It was found that 41.7% of respondents work because of interest in the present work. To the question "Are you satisfied with your work in general?" 79.1% answered that they were satisfied, and only 10.5% were dissatisfied, respectively, 10.4% undecided. It should be noted that the high indicators of QoL of retirement age due to the fact that more than half of the respondents feel themselves physically better by having a job.

DISCUSSION

Analysis of the QoL of population of retirement age showed that all indicators of scales SF-36 are above average. Moreover, the male population has higher indicators of QoL for all scales than female population. This investigation suggests that indicators of QoL of retired population directly depend on presence of job. Over the past years, most researches have focused on lifelong but recently many researchers have focused their efforts on the quality of life in old age. Doing the effective actions on physical performance can decrease the stress and tension and improve the mental performance and quality of life [9].Compared with those who were working, those who were not working had considerably lower indicators of QoL. In group analyses, the group that was working had higher scores than the group that was not working for all physical aspects of QoL, and for 2 out of the 4 mental health aspects. Being physically active can help individuals maintain a healthy weight and reduce the risk of obesity. Physical activity is also associated with a lowered risk for developing heart disease, type 2 diabetes, certain cancers, high blood pressure, and osteoporosis [10].

The results imply that differences between physical and mental well-being indicators are not large. This shows us the fact that the physical and mental well-being are a dependent on each other. Thus, indicators of physical well-being (PF, RP, BP, and GH) influence to indicators of mental well-being (VT, SF, RE, MH) indicators and vice versa.

In the present study, the scores of the subgroups of working and nonworking participants were below the means of the SF (mental well-being) subscales. Nevertheless, remained indicators of 7 scales had lower scores than the average values. Furthermore, the highest results in two groups (working, nonworking) were in different scales. While working participants have the best score in PF scale, nonworking participants have it in MH scale. These results are attributable to several factors: doing some physical activities while working (in the first instance) or lack of the any negative depressions from environment (in the second instance). This might be expected, since the selection of participants consists of retired population. However, indicators of PH and MH scales were higher in working population. Furthermore, studied showed that inactive elders are physically and psychologically dependent on others people and this can reduce physical and mental function, social isolation, depression and low quality of life [11].

The response rate was satisfactory. One weakness of the study is that we did not have access to information about the participants, occupations and specific work places.

It was discovered that the feeling of well-being starts to decline between the ages of 25 and 40 approximately, and then a clear upturn can be seen, reaching a peak during a person's

sixties. This "happiness curve" did not correspond exactly to the average income growth curve: there may be a discrepancy between financial resources, in other words the "means" people have at their disposal, and the "results" in terms of well-being. This study looked at the well-being people experienced or their general satisfaction with their life at a given moment. This well-being is generally measured by asking participants to choose a level of satisfaction [12].

CONCLUSION

The SF-36 questionnaire was a suitable instrument, relatively quick and easy to use. The QoL was associated with life style, as indicated by the practice of physical activities and post-retirement occupation**.**

The results of the study may be useful to assess the QoL of the population in general, and in assessing the effectiveness of the influence of social factors on health of the population for research.

ETHICAL CONSIDERATIONS

Ethical issues (Including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

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