Quality of life of elderly people living in a retirement home

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Abstract

Background/Aim. The World Health Organization (WHO) identified four broad domains as being universally relevant to the quality of life, namely physical, and psychological health, social relationships, and environment. The aim of this study was to assess the relationship between sociodemographic characteristics and quality of life of old people. Methods. The World Health Organization Quality of Life BREF questionnaire (WHOQOL-BREF) was used to assess quality of life on a random sample of 200 people aged 60 years and over who lived in the Retirement Home in Novi Sad. Items within the questionnaire were organized into four domains: physical, psychological, social relationships and environment. Results. The majority of the participants were women (69.8%). The mean age was 79.2 years (SD = 6.6 years). Most of them were widowed (73.4%). More than two thirds of participants (68.8%) reported that they were ill at that moment and almost half of them (48.8%) had cardiovascular, 18.5% musculoskeletal, 9.6% endocrine and 5.9% neurological disease. In the social relations domain scores were lower in males (t = 2.4; p = 0.017). Scores of other domains did not differ significantly with regard to the age, educational level and the marital status of the participants. Participants who reported the presence of a disease had significantly lower mean scores of physical, psychological and environment domain. Conclusion. The presence of disease is a relevant factor for quality of life, whereas age, education and marital status do not reflect on physical health, psychological and environmental domain of quality of life.

Key words: aged; homes for the aged; quality of life; questionnaires; Serbia.

Introduction

Quality of life (QoL) is not a new concept. Jonathan Swift noted that every man desires to live long, but no man wishes to be old. Isaac Stern had expressed a similar statement when he advised that everyone should die young, but they should delay it as long as possible 1. The core of the QoL concept is to understand a human being and its needs, from different perspectives, keeping in mind that a human being is in constant interaction with the surroundings, according to the holistic-ecological approach 2. Quality of life spans a broad range of topics and disciplines. It is made up...
of both positive and negative experiences and affect. It is a
dynamic concept, which poses further challenges for measure-
ment. After a long scientific discussion, quality of life is
still a concept which is difficult to define. The World Health
Organization (WHO) Quality of Life Group developed a de-
finition frequently used in theoretical framework. WHO de-
fines quality of life as an individual’s perception of their po-
sition in life in the context of the culture and value systems
in which they live, and in relation to their goals, expecta-
tions, standards and concerns. It is a broad ranging
concept, incorporating in a complex way a person’s beliefs
and relationship to salient features in the environment.

Ageing is unprecedented, a process without parallel in the
history of humanity. At the world level, the number of older pe-
sons is expected to exceed the number of children for the first
time in 2045. In the more developed regions, where population
ageing is far advanced, the number of children dropped below
that of older persons in 1998. It is an enduring process. Since
1950, the proportion of older persons has been rising steadily,
passing from 8% in 1950 to 11% in 2009, and is expected to re-
ach 22% in 2050. People in Europe are older than any other
world region. According to the United Nations Population Fund,
2012 in Serbia people over 60 accounted for 20.5% and are
expected to increase to 32.2% in 2050. The ageing of popula-
ton in Serbia, as well as the whole world population, is the prob-
lem which we have to face with.

The elderly in the future will undoubtedly suffer from a
variety of diseases leading to disability and reduced quality
of life. The interests of the elderly and improving the
quality of life in this age, including their health concerns, need
to be a priority in the coming years.

Bilgili and Arpac in a recent study stated that QoL of
elderly people needs to be more analyzed, since the majority
of recent studies were focused on instrument psychometric
characteristics and less on QoL of this population group.

The aim of this study was to assess the relationship be-
tween the socio-demographic characteristics and the
quality of life of old people living in retirement home.

Methods

The study was conducted in 2009 on a sample of 200 peo-
ples, representing 25% of the total number of residents of The
Retirement Home. Systematic random sample (k = 4) was used
in this study. Through random selection, every fourth person
from the list of residents of The Retirement Home, which satis-
fied the criteria, was chosen to participate in this research. The
criteria were: aged 60 years or older, able to communicate and
oriented in all three directions, the respondent not situated in the
stationary part of the home. Data was collected through
interviews done by researchers. Ethical approval was obtained
from the Faculty of Medicine in Novi Sad. A letter of introduc-
tion describing the study was given and a written informed con-
sent was obtained from all the participants before interviewed
questioning with the WHOQOL-BREF questionnaire.

The Bosnian-Croatian-Serbian version of WHOQOL-
BREF was used in this study and this language version was ob-
tained from The WHOQOL Group. The WHOQOL-BREF is an
abbreviated 26-item version of the WHOQOL-100 and it is ba-
sed on four domain structure (Physical health, Psychological,
Social relationships and Environment). Each domain includes
three to eight items. Moreover, two questions yield information
on the global QoL, and health satisfaction. Each item is based
upon self-report and scored on a 5-point Likert scale. The scores
are transformed on a scale from 0 to 100 (higher score points to
better quality of life). The time frame for responses was the pre-
vious two weeks. An additional 6 questions were included con-
cerning sociodemographic characteristics such as age, gender,
marital status and educational level, as well as the present health
status. The results from 23 countries showed good internal
consistency reliability and construct validity for the internatio-
nal WHOQOL-BREF questionnaire. The sensitivity of the
questionnaire for assessing quality of life of elderly people who
living in the retirement home was tested by examining the
validity and reliability. It is a valid and reliable quality of life in-
strument for older people.

Statistical analysis was performed using the statistical pack-
age SPSS 14.0 for Windows. Results are given as mean value
and proportion. Differences in sample means were tested by
Student’s t-test (to compare means of the two groups) and ANOVA (to test differences between more than two groups).
The level of statistical significance was set at p < 0.05.

Results

Of the 200 subjects interviewed, 199 were analyzed
(one case was deleted with more than 20% missing data).
Table 1 shows sociodemographic characteristics as well as
the presence of disease in the study group.

<table>
<thead>
<tr>
<th>Sociodemographic characteristics</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>60 (30.2)</td>
</tr>
<tr>
<td>female</td>
<td>139 (69.8)</td>
</tr>
<tr>
<td>Age (years)</td>
<td></td>
</tr>
<tr>
<td>60–69</td>
<td>20 (10.1)</td>
</tr>
<tr>
<td>70–79</td>
<td>71 (35.7)</td>
</tr>
<tr>
<td>≥ 80</td>
<td>108 (54.3)</td>
</tr>
<tr>
<td>Education</td>
<td></td>
</tr>
<tr>
<td>none at all, primary school</td>
<td>80 (40.6)</td>
</tr>
<tr>
<td>high school no degree</td>
<td>31 (15.8)</td>
</tr>
<tr>
<td>high school degree</td>
<td>49 (24.6)</td>
</tr>
<tr>
<td>college degree and above</td>
<td>37 (18.7)</td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
</tr>
<tr>
<td>separated, divorced</td>
<td>34 (17.1)</td>
</tr>
<tr>
<td>with partner</td>
<td>19 (9.5)</td>
</tr>
<tr>
<td>widowed</td>
<td>146 (73.4)</td>
</tr>
<tr>
<td>Presence of disease</td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>137 (68.8)</td>
</tr>
<tr>
<td>no</td>
<td>62 (31.2)</td>
</tr>
</tbody>
</table>

The majority of participants were women (69.8%). The high-
pest percentage of respondents was found in the age group
80+ (54.3%). The mean age was 79.2 years (SD = 6.6, range
63–97 years). With regard to education level, 40.6% indi-
cated no education or primary school, 15.8% high school

without degree, 24.6% high school degree and 18.7% college degree and above. Most of them were widowed (73.4%). More than two thirds of participants (68.8%) reported that they were ill at that moment and almost half of them (48.8%) had a cardiovascular disease, 18.5% a musculoskeletal, 9.6% endocrine and 5.9% a neurological disease. The most frequently reported diagnosis was angina pectoris (15.6%).

Scores were lower in males in the social relations domain ($t = 2.4; \ p = 0.017$). The scores of the other three domains (physical health, psychological and environment) as well as total score did not differ significantly with regard to the gender. There was no significant association between age, educational level, marital status of participants and scores of all domains. The participants who reported the presence of a disease had significantly lower mean scores of the physical health ($t = 5.2; \ p = 0.000$), psychological health ($t = 3.1; \ p = 0.002$), and environment domain ($t = 2.2; \ p = 0.029$) and total WHOQOL-BREF score ($t = 3.7; \ p = 0.000$) (Table 2).

**Table 2**

<table>
<thead>
<tr>
<th>Domains mean score</th>
<th>Sociodemographic characteristics</th>
<th>Physical health</th>
<th>Psychological health</th>
<th>Social relations</th>
<th>Environment</th>
<th>WHOQOL-BREF</th>
</tr>
</thead>
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<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>male</td>
<td>70.0</td>
<td>68.5</td>
<td>60.7</td>
<td>71.2</td>
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<tr>
<td>female</td>
<td>64.7</td>
<td>63.7</td>
<td>67.8</td>
<td>66.4</td>
<td>65.6</td>
<td></td>
</tr>
<tr>
<td>$t$</td>
<td>1.75</td>
<td>1.53</td>
<td>2.4</td>
<td>1.9</td>
<td>0.84</td>
<td></td>
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<tr>
<td>$p$</td>
<td>0.082</td>
<td>0.126</td>
<td>0.017</td>
<td>0.056</td>
<td>0.401</td>
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<tr>
<td>Age (yars)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60–69</td>
<td>66.9</td>
<td>66.7</td>
<td>64.8</td>
<td>66.7</td>
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</tr>
<tr>
<td>70–79</td>
<td>66.1</td>
<td>64.9</td>
<td>65.1</td>
<td>68.0</td>
<td>65.9</td>
<td></td>
</tr>
<tr>
<td>$\geq$ 80</td>
<td>66.4</td>
<td>64.9</td>
<td>66.2</td>
<td>67.9</td>
<td>66.3</td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>0.01</td>
<td>0.06</td>
<td>0.08</td>
<td>0.05</td>
<td>0.02</td>
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<tr>
<td>$p$</td>
<td>0.987</td>
<td>0.937</td>
<td>0.919</td>
<td>0.946</td>
<td>0.978</td>
<td></td>
</tr>
<tr>
<td>Education</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>none at all, primary school</td>
<td>63.1</td>
<td>62.9</td>
<td>65.2</td>
<td>65.5</td>
<td>64.0</td>
<td></td>
</tr>
<tr>
<td>high school no degree</td>
<td>73.8</td>
<td>67.4</td>
<td>71.8</td>
<td>70.4</td>
<td>70.8</td>
<td></td>
</tr>
<tr>
<td>high school degree</td>
<td>67.7</td>
<td>65.4</td>
<td>64.8</td>
<td>69.6</td>
<td>66.9</td>
<td></td>
</tr>
<tr>
<td>college degree and above</td>
<td>65.8</td>
<td>66.9</td>
<td>62.5</td>
<td>68.2</td>
<td>65.8</td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>2.3</td>
<td>0.54</td>
<td>1.4</td>
<td>1.0</td>
<td>1.44</td>
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</tr>
<tr>
<td>$p$</td>
<td>0.075</td>
<td>0.655</td>
<td>0.252</td>
<td>0.393</td>
<td>0.231</td>
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<tr>
<td>Marital status</td>
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<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>separated, divorced</td>
<td>67.9</td>
<td>67.8</td>
<td>64.5</td>
<td>68.2</td>
<td>67.1</td>
<td></td>
</tr>
<tr>
<td>with partner</td>
<td>64.7</td>
<td>68.2</td>
<td>64.2</td>
<td>70.4</td>
<td>66.9</td>
<td></td>
</tr>
<tr>
<td>widowed</td>
<td>66.2</td>
<td>64.1</td>
<td>66.1</td>
<td>67.4</td>
<td>65.9</td>
<td></td>
</tr>
<tr>
<td>$F$</td>
<td>0.17</td>
<td>0.19</td>
<td>0.14</td>
<td>0.3</td>
<td>0.1</td>
<td></td>
</tr>
<tr>
<td>$p$</td>
<td>0.837</td>
<td>0.489</td>
<td>0.869</td>
<td>0.752</td>
<td>0.898</td>
<td></td>
</tr>
<tr>
<td>Presence of disease</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td>61.8</td>
<td>62.2</td>
<td>64.3</td>
<td>66.2</td>
<td>63.5</td>
<td></td>
</tr>
<tr>
<td>no</td>
<td>76.4</td>
<td>71.5</td>
<td>68.6</td>
<td>71.6</td>
<td>72.0</td>
<td></td>
</tr>
<tr>
<td>$t$</td>
<td>5.2</td>
<td>3.1</td>
<td>1.4</td>
<td>2.2</td>
<td>3.7</td>
<td></td>
</tr>
<tr>
<td>$p$</td>
<td>0.000</td>
<td>0.002</td>
<td>0.147</td>
<td>0.029</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

$t$ – Student’s $t$-test; $F$ – ANOVA.

**Discussion**

Aging causes health and social problems. It means that elderly people have to deal with certain obstacles and difficulties. In addition, there is a lack of everyday activities and the quality of life begins to decline. However, there are studies which reported a higher quality of life in the elderly compared with younger people.

Our study examined the quality of life of elderly people living in a retirement home. The study included respondents who use this facility primarily as a residence place and they are capable to take care of themselves independently. However, we should take into account the specific characteristics of life in the community, therefore the findings cannot be completely generalized to the whole population of old people, or it should be done with caution.

In this study one of three respondents considered himself healthy. The most frequently reported diagnoses were from the cardiovascular diseases group. A similar result was obtained in a study performed on elderly people living in rural areas in Turkey. Almost one third of the elderly had no medically diagnosed chronic disease, while the three most frequently occurring chronic diseases were hypertension, rheumatism-related diseases and diabetes. A Taiwan study showed that 10% of the elderly had no medically diagnosed diseases and the most frequent disease were hypertension, stroke, musculo-skeletal diseases and diabetes. Participants who had some kind of disease scored all domains but social relations significantly lower than those who had not.

Considering gender differences, only the social relations domain was significantly lower in men. Scores of other domains were higher in men, but the difference was not significant. Barua et al. revealed that scores of all four domains had not been affected by gender. A study conducted in
Austria on persons aged 57–70 and older than 70 showed that women from a younger age group had higher values of the physical health domain, compared to men, in contrast to women older than 70 years, but in both cases difference was not significant. Other studies confirmed that values of this domain were statistically higher in men. The same result considering psychological health domain was reported in the literature. On the other hand, women had lower values of this domain in the study of Arslantas et al. Scientists discovered that the loss of physical ability is more expressed in old aged women and this often can lead to depression. How important the gender difference is in quality of life was discussed in a study of Kirchengast and Haslinger who found that older women, especially those aged over 70 years, were more likely to live alone; of these women 47.6% were widowed. In contrast, only 5.4% males same age, like the female group, lived without a partner and only 2.7% were widowed. Besides that, women had significantly less stable employment histories, lower income, and lower pensions than men. All of these factors can cause disorders in the psychological sphere of the quality of life.

Contrast to our results, gender did not affect the social relations domain in several studies. Consistent with previous research the environmental domain score did not differ significantly according to gender. Also, environment domain did not show differences between groups concerning other sociodemographic characteristics, probably due to the fact that all participants live in retirement home, therefore they probably have the same living condition, have same opportunity for leisure, similar means of transportation and health services.

There were no statistically significant differences in the average values of the physical health domain according to age in this study, although the opposite could have been expected on the basis of the results of the previous research. Older age is associated with the deterioration of physical abilities that has an affect on the quality of life. Our results suggest that older adults were able to actively adjust the physical changes that appear with aging and kept a positive attitude towards it. On the other hand, the respondents from our study lacked positive feelings, or thought they did not know how to enjoy life. There were no statistically significant differences in mean values of psychological health domain according to the age group even though the youngest group (60–69 years) had the highest value. Perhaps it could be explained by the fact that significant changes in life and psychological adaptation on new situation appear by the age of 65, therefore all later changes are of less importance.

Social factors such as social integration, having a purpose in life and community affiliation were identified as very important factors for the quality of life in older people. Other factors include self-esteem, a sense of their personality and their identity, sense of control, and spiritual well-being. These concepts are important for older people, giving them a positive view of themselves, and have an impact on the relationship with their friends and family in their activities. It is also important to their ability to handle, adapt to change and make sense of their life. Higher-level social companionship was associated with the development of less depression. The social relations domain was represented with only 3 items (personal relationships, social support and sexual activity). The sexual activity item had the lowest response rate in the whole questionnaire (60%), similar to previous research. The average age of participants (79.2 years) could be cause of the low response rate of this item, moreover 73.4% of them were widowed, but cultural and psychological elements also cannot be omitted.

In our study, educational level did not have influence on the quality of life of old people living in a retirement home. The same conclusion was in made the previous research done in geriatric population. Marital status was not associated with significant changes in the quality of life in our study. Hagedoorn explained the role of marriage. It seems that marriage does not protect the elderly from psychological pain, and widows are apparently able to adapt well to their new role as an individual. No doubt that marriage has its advantages (spouse support, friendship and self-esteem), especially if marriage is harmonious, however, these benefits do not explain the higher levels of distress among single people. Singles also have lasting and significant interpersonal relationships from which they can gain the benefit. It can cautiously be concluded that marriage can be harmful if people feel undervalued and dissatisfied in marriage.

There are several limitations of the study. It included only the residents of retirement home, not the general population aged 60 and more.

The participants in our study were mostly from the group up 80 or older and widowed. But, despite the limitation, the authors wish to emphasize that this topic is less explored in Serbia, therefore, any contribution is a step forward in efforts to improve quality of life of elderly. The results also provide the basis for those wishing to use WHOQOL-BREF instrument to investigate the quality of life of elderly.

**Conclusion**

The presence of disease is a relevant factor for quality of life, whereas age, education and marital status do not reflect on physical health, psychological health and environmental domain of quality of life.
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