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**COMPARISON OF THE QUALITY OF LIFE OF  
GERIATRIC PATIENTS STAYING IN CARE AND  
TREATMENT INSTITUTIONS WITH ELDERLY  
PEOPLE LIVING WITH THEIR FAMILIES OR ALONE**

**Porównanie jakości życia pacjentów geriatrycznych przebywających  
w Zakładach Opiekuńczo – Leczniczych z osobami starszymi mieszkającymi  
z rodziną lub samotnie**

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A – Koncepcja i projekt badania, B – Gromadzenie i/lub zestawianie danych, C – Analiza i interpretacja danych, D – Napisanie artykułu, E – Krytyczne zrecenzowanie artykułu, F – Zatwierdzenie ostatecznej wersji artykułu

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**Abstract (in Polish):**

**Cel pracy**

Starzenie się jest to zjawisko naturalne oraz nieuniknione, które ma charakter globalny. Wraz z przybywaniem lat wzrasta także zjawisko wielochorobowości oraz występowanie różnych niepełnosprawności.

Bez wątpienia jest to jeden z wielu czynników, które mają wpływ na jakośó zycia, pojęcia które jest bardzo złozone. Celem pracy było porównanie jakośó zycia osób przebywających w Zakładach Opiekuńczo – Lecznicznych z osobami starszymi mieszkającymi z rodziną bądź samotnie.

### **Materiał i metody**

Badanie zostało przeprowadzone wśród grupy 102 osób przez okres trzech miesięcy. Do badania użyto: skalę WHOQOL-BREF, skalę Katza, skalę Norton oraz Geriatryczną Skalę do Oceny Depresji. Weryfikacji różnic między zmiennymi dokonano testem niezależności  $\chi^2$  oraz testem Manna-Whitneya. Przyjęto poziom istotności  $p < 0,05$ .

### **Wyniki**

Osoby przebywające w zakładzie (47,1%) oraz mieszkające w domu/mieszkanie (49,9%) na podobnym poziomie oceniali swoją jakośó zycia. Wśród osób przebywających w miejscu opieki długoterminowej częściej są to osoby u których występuje znaczna niepełnosprawność (60,4%). Osoby z umiarkowaną niepełnosprawnością (42,6%) oraz całkowicie sprawne (44,4%) częściej mieszkają z rodziną bądź też samotnie. U pacjentów ZOL występowało większe ryzyko powstania odleżyn i wynosiło ono 64,6%. Na występowanie depresji wśród seniorów nie wpływa w znaczący sposób ich miejsce zamieszkania/pobytu.

### **Wnioski**

Jakośó zycia osób przebywających w zakładach opieki długoterminowej jest bardzo zbliżona do jakośó zycia osób starszych, które w okresie starości mieszkają z rodziną bądź też samotnie.

### **Abstract (in English):**

#### **Aim**

Ageing is a natural and unavoidable phenomenon of a global nature. With age, the phenomenon of multiple disease and occurrence of various disabilities increases. Without a doubt, it is one of numerous factors influencing the quality of life, which is a highly complex term.

Comparison of the quality of life of geriatric patients staying in care and treatment institutions with elderly people living with their families or alone was the aim of the study.

#### **Material and methods**

The study was conducted in a group of 102 persons for the period of three months. For the purpose of the study the following tools were used: WHOQOL-BREF scale, Katz scale, Norton scale and Geriatric Depression Scale. Verification of the differences between the variables was performed with the  $\chi^2$  independence test and with Mann-Whitney test. Significance level of  $p < 0.05$  was assumed.

#### **Results**

Persons remaining in institution (47.1%) and living in a house/apartment (49.9%) rated their quality of life at a similar level. Among the persons remaining in the long-term care institution, these were more commonly the individuals with considerable level of disability (60.4%). Persons with moderate disability (42.6%) and fully fit (44.4%) more frequently live with a family or alone. In CTI patients, a higher risk of pressure ulcers occurred and it was 64.6%. The occurrence of depression among seniors is not significantly influenced by the method and location of their residence.

#### **Conclusions**

The quality of life of persons remaining in long-term care facilities is very similar to the quality of life of seniors who reside with family or alone.

**Keywords (in Polish):**

jakość życia, starość, pacjent geriatryczny, zakład opiekuńczo-leczniczy.

**Keywords (in English):**

quality of life, old age, geriatric patient, care and treatment institution.

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Jakość życia pacjentów geriatrycznych

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## Introduction

Society ageing and increasing percentage of elderly individuals is a phenomenon known not only from Poland, but also in other countries. Unfortunately, demographic prognoses show that its progressive character will continue in the next decade. Undoubtedly the number of elderly people will increase markedly [Kózka, Majda and Kula, 2013]. Factors influencing ageing of the general population include reduced number of births and deaths as well as, above all, prolonged mean life expectancy [Błędowski and Maciejasz, 2013]. Longer life has been obtained through, among others, propagation of protective vaccinations, increased standard of living and development of modern methods for diagnosing and treating numerous diseases. The increasing number of elderly persons constitutes a challenge for the economy, healthcare and social policy [Kędziora-Kornatowska, Muszalik and Skolmowska, 2015].

The situation of seniors in Poland does not encourage optimism. There is a considerable shortage of geriatric specialists, geriatric departments and hospitals, nursing homes, suitably qualified caregivers and support centers [Konieczna-Woźniak, 2013].

Family, as the main social unit is the natural care provider for the elderly. However, in the recent times the typical form of the multi-generation family and large family has changed. At present about 81% of Poles live in families, and only 11% of this number in a multi-generation family. This contributes to increased number of elderly persons living alone – this frequently concerns women.

The realization of the caregiving function for seniors by the family is impeded by the loosening of the emotional ties between the generations. Another unfavorable factor is the change in the position and role of women in the society and family. In traditional Polish family, the caring after children, ill family members and seniors was performed by women. Unfortunately, this behavior has undergone changes. Women are increasingly frequently take up and maintain professional activity for a long time. Professional work of both spouses often makes it impossible to take care of the older family members. Deterioration of the economic situation in the major part of the society further impedes these activities to a considerable degree.

In the case where family is not capable of taking care of the patient, who does not require hospitalization, and who attained less than 40 points on the Barthel scale, their further treatment and care

may be continued in a care and treatment institution. Such facility provides health care 24 hours a day. It includes nurturing, treatment and rehabilitation [Kędziora-Kornatowska, Muszalik and Skolmowska, 2015]. According to the latest data provided by the Central Statistical Office (GUS), there were 554 care and treatment and care and nurturing institutions with general and psychiatric profile in Poland at the end of 2016. Unfortunately, this number is 1.1% lower than in 2015. The total number of persons covered by care in these facilities was 61.0 thousand [Żyra and Malesa, 2017].

Thus far no golden mean has been found and no standards have been established which would help defining the quality of life with regards to medicine and measurement taking. Numerous studies have been conducted confirming the relationship between the quality of life and health status, disease, its stages and treatment methods with rehabilitation and social support [Wnuk and Marcinkowski, 2013].

The life situation of a senior has a certain impact on the quality of life, similarly to the subjective aspect of ageing and old age. However, forming of the quality of life of an individual takes place throughout their life. The quality of life at its early stages has an undoubtedly great impact on the personality of elderly individual, and it depends on the actual age to a minor degree [Zielińska-Więczkowska and Kędzior-Kornatowska, 2009].

The current number of tools used to rate the quality of life is impressive. It has been estimated that there are over 500 such tools. However, new are constantly being developed, still highly useful for this assessment [Chudiak and Lomper, 2016].

Standardized questionnaires, including SF-36 and WHOQOL-BREF can be used to assess the quality of life. The former is used to assess the quality of life depending on the health status. Individuals aged 18 or above, healthy or with various diseases are qualified for the measurement with this questionnaire. Assessment of the health status is performed with comparison to the previous year [Cieślik and Podbielska, 2015]. The second questionnaire, WHOQOL-BREF is an abbreviated version created on the basis of WHOQOL-100 questionnaire. It is used to investigate the quality of life of both healthy and ill individuals.

### **Aim of the study**

The aim of the study was comparison of the quality of life of geriatric patients staying in care and treatment institutions with elderly people living with their families or alone.

### **Materials and methods.**

The conducted study utilized the diagnostic survey method, and the utilized research method comprised of our original survey questionnaire. The research tool used in the study included the abbreviated survey questionnaire, WHOQOL-BREF, which enabled assessment of the quality of life of both healthy and ill persons. It comprises of 26 questions, enabling analysis of 4 areas of life of the surveyed: psychological, physical, environmental and social. The obtained score per answer range from 1 to 5 points – the higher the score the better the quality of life [Cieślik and Podbielska, 2015].

Another research tool used to conduct the study was the Katz Scale (ADL), which is used to assess functional fitness in activities of daily living. Obtaining 6 points means that all activities are fully retained, 4 points attained indicate moderate level of disability, whereas 2 points inform on the occurrence of severe disability.

The Norton scale was also used in the conducted study, which is designed to assess the risk of pressure ulcers. It is based on analysis of five risk factors: general physical status of a patient, psychological status,

daily activity, mobility and sphincter control. The risk of pressure ulcers increases with the reduced number of obtained points. Obtaining 14 points or less already indicates the possibility of developing pressure ulcers.

The last research tool used is the Geriatric Depression Scale (GDS), which comprises of 15 questions concerning well-being. According to the guidelines, the patient is awarded 1 'depression' point for each 'yes' answer — to questions 2, 3, 4, 6, 8, 9, 10, 12, 14, 15 and 'no' — to questions 1, 5, 7, 11, 13. The points are summed up, and the obtained result allows to determine the psychological status of the surveyed individual: to 5 points— normal status, 6–10 points — moderate depression, 11–15 points — severe depression [Yesavage, 1983].

The study concerning comparison of the quality of life of geriatric patients remaining at care and treatment institutions with elderly individuals residing with family or alone was conducted for the period of three months: December 2018 and January and February 2019. The study included patients of the Caritas Care and Treatment Institution in Grybów and elderly persons from the Lesser Poland Voivodeship. The study included 102 people. They were informed on the anonymous participation in the survey and the purpose of the study. The surveyed provided the answers eagerly, but in some cases they required assistance in writing them down.

Verification of the differences between the variables was performed with the  $\chi^2$  independence test and with Mann-Whitney test. Significance level of  $p < 0.05$  was assumed. The calculations were performed with the use of the SPSS 20 software.

## Results

Most frequently the seniors were aged between 75 and 90 (52.9%). The 65-75 age group included 37.3% people, and only a lower number was aged 90 and above (9.8%) – Fig. 1.

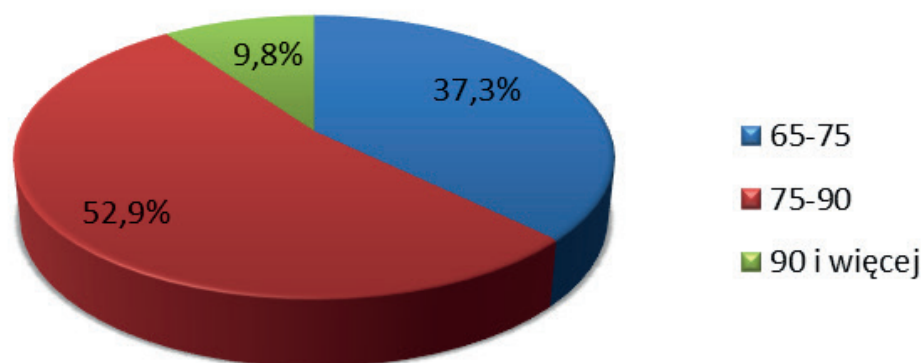
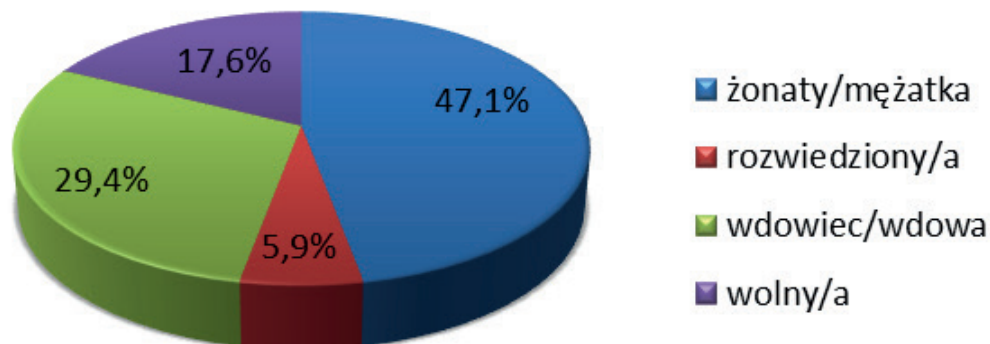


Figure 1 Age of the surveyed

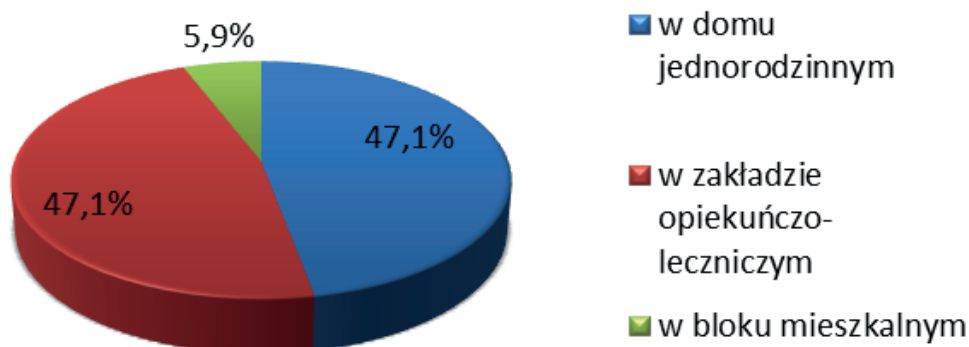
Women constituted 62.7% of the surveyed, whereas men 37.3%. Rural place of residence was indicated by 41.2% of the surveyed. 58.8% of the surveyed resided in urban areas. Married people constituted the largest group (47.1%). Widows/widowers constituted 29.4% of the population, and a low number of the seniors were single (17.6%) or divorced (5.9%) – Fig. 2.



**Figure 2 Marital status of the surveyed**

16.7% of the seniors had one child. Typically (60.8%) the surveyed had two or more children. 22.5% of the population had no children.

47.1% of the surveyed resided in single-family house. The same number of the surveyed remained in a care and treatment institution, and a low number (5.9%) resided in a block of flats – Fig. 3.



**Figure 3 Current place of residence**

Surveyed individuals living with their children constituted 59.3% of the population, with their spouse (55.6%). Less commonly the seniors lived with grandchildren (25.9%) or alone (13.0%) – Table 1.

**Table 1. Method of residence**

|                    | No |       | Yes |       |
|--------------------|----|-------|-----|-------|
|                    | N  | %     | N   | %     |
| with children      | 22 | 40.7% | 32  | 59.3% |
| with spouse        | 24 | 44.4% | 30  | 55.6% |
| with grandchildren | 40 | 74.1% | 14  | 25.9% |
| alone              | 47 | 87.0% | 7   | 13.0% |

*N* – number of patients

Arterial hypertension was the most common disease in the population (67.6%). Less than half of the population had diabetes (44.1%), systemic atherosclerosis (35.3%), osteoporosis (26.5%), urinary and fecal incontinence (25.5%). To a lesser degree the seniors suffered from osteoarthritis (24.5%), fractures (23.5%) or other diseases – Table 2.

**Table 2. Diagnosed clinical entities**

|                                       | No  |        | Yes |       |
|---------------------------------------|-----|--------|-----|-------|
|                                       | N   | %      | N   | %     |
| <b>arterial hypertension</b>          | 33  | 32.4%  | 69  | 67.6% |
| <b>diabetes</b>                       | 57  | 55.9%  | 45  | 44.1% |
| <b>systemic atherosclerosis</b>       | 66  | 64.7%  | 36  | 35.3% |
| <b>osteoporosis</b>                   | 75  | 73.5%  | 27  | 26.5% |
| <b>urinary and fecal incontinence</b> | 76  | 74.5%  | 26  | 25.5% |
| <b>osteoarthritis</b>                 | 77  | 75.5%  | 25  | 24.5% |
| <b>fractures</b>                      | 78  | 76.5%  | 24  | 23.5% |
| <b>Parkinson's disease</b>            | 84  | 82.4%  | 18  | 17.6% |
| <b>weaknesses</b>                     | 85  | 83.3%  | 17  | 16.7% |
| <b>depression</b>                     | 86  | 84.3%  | 16  | 15.7% |
| <b>ulcerative lesions</b>             | 87  | 85.3%  | 15  | 14.7% |
| <b>blood diseases</b>                 | 87  | 85.3%  | 15  | 14.7% |
| <b>epilepsy</b>                       | 89  | 87.3%  | 13  | 12.7% |
| <b>dementia syndrome</b>              | 94  | 92.2%  | 8   | 7.8%  |
| <b>other</b>                          | 94  | 92.2%  | 8   | 7.8%  |
| <b>cancers</b>                        | 98  | 96.1%  | 4   | 3.9%  |
| <b>aphasias</b>                       | 102 | 100.0% | 0   | 0.0%  |

*N* – number of patients

Over half of the surveyed (63.7%) assessed their health status in ambiguous manner – neither good nor poor. Poor health status was indicated by 25.5% of the surveyed, and very poor health status was indicated by 10.8% of the population.

Based on the WHOQOL-BREF scale it was determined that seniors assessed their quality of life higher (3.40±0.75 point) than their quality of health (2.97±0.91 point) – Table 3.

**Table 3. Quality of life perception (scale 1-5 points)**

|             | Individual general perception of the quality of life | Individual general perception of the quality of health |
|-------------|--|--|
| <b>Mean</b> | 3.40   | 2.97   |
| <b>Me</b>   | 3.50   | 3.00   |



|            |      |      |
|------------|------|------|
| <b>SD</b>  | 0.75 | 0.91 |
| <b>Min</b> | 2    | 1    |
| <b>Max</b> | 5    | 5    |

Me – Median; SD – standard deviation; min– minimum; max –maximum;

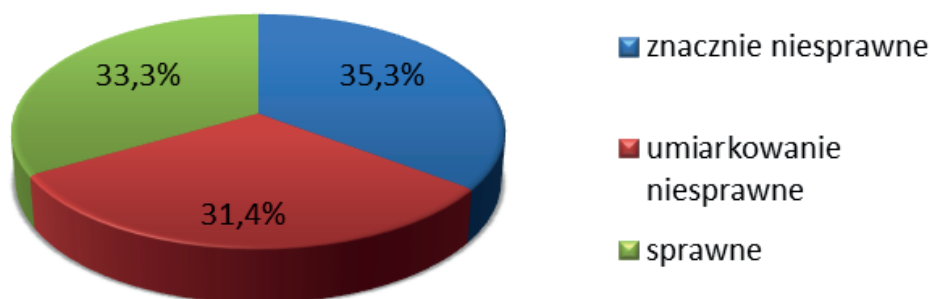
It was observed that the highest quality of life of the seniors remained in the environmental (65.37±12.16 points) and social area of life (62.83±14.29 points). The quality of life in its psychological area was slightly lower (58.55±15.09 points). However, the quality of life in its physical area was considerably reduced (48.75±16.14 points) – Table 4.

**Table 4. Quality of life (scale 0-100 points)**

|             | Physical area of life | Psychological area of life | Social area of life | Environment |
|-------------|-----------------------|----------------------------|---------------------|-------------|
| <b>Mean</b> | 48.75                 | 58.55                      | 62.83               | 65.37       |
| <b>Me</b>   | 50.00                 | 58.00                      | 67.00               | 66.00       |
| <b>SD</b>   | 16.14                 | 15.09                      | 14.29               | 12.16       |
| <b>Min</b>  | 14                    | 25                         | 25                  | 28          |
| <b>Max</b>  | 79                    | 92                         | 92                  | 88          |

Me – Median; SD – standard deviation; min– minimum; max –maximum;

Application of the ADL scale demonstrated that persons with severe disability constituted 35,3% of the senior population. Moderately disabled constituted 31,4% of the surveyed, and 33,3% were fully fit – Fig. 4.



**Figure 4 Assessment of basic activities in daily living**

The risk of pressure ulcers (according to Norton scale) concerned 47.1% of the surveyed. In the case of 52.9% of the persons there was no risk of pressure ulcers.

Based on the GDS scale it was determined that 50.0% of seniors did not have depression. 37.3% of the surveyed had minor depression, and severe – 12.7% of the population – Fig. 5.



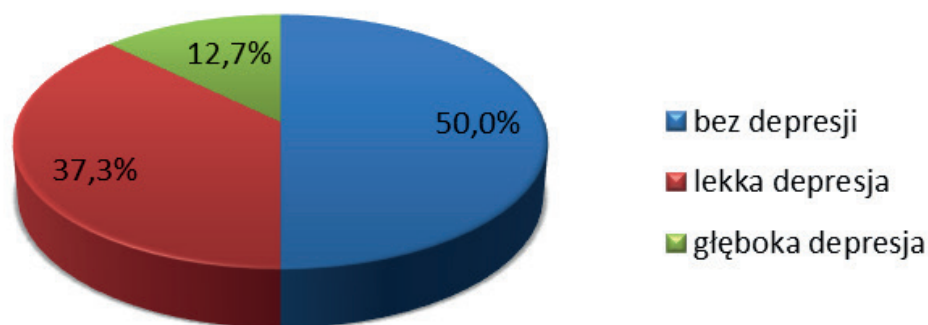


Figure 5 Depression (GDS)

Analysis of own study demonstrated that individuals residing in a house/apartment assessed the quality of their health higher (3.24) than CTI residents (2.67). Differences in the quality of health were statistically significant. Differences in the quality of life were statistically insignificant – Table 5.

Table 5. Quality of life and health perception vs. current place of residence

| Current place of residence |      | Individual general perception of the quality of life | Individual general perception of the quality of health |
|----------------------------|------|--|--|
| in a house/apartment       | Mean | 3.50   | 3.24   |
|                            | SD   | 0.75   | 0.85   |
| in CTI                     | Mean | 3.29   | 2.67   |
|                            | SD   | 0.74   | 0.88   |
| Total                      | Mean | 3.40   | 2.97   |
|                            | SD   | 0.75   | 0.91   |
| P                          |      | 0.1342   | 0.0017   |

SD – standard deviation; p – significance level

Place of residence of the surveyed significantly differentiated the quality of life of the seniors. Individuals residing in house/apartment had higher quality of life in the physical (52.20), psychological (62.61) and social area of life (66.26) than CTI residents – Table 6.

Table 6. Quality of life vs. current place of residence

| Current place of residence |      | Physical area of life | Psychological area of life | Social area of life | Environment |
|----------------------------|------|-----------------------|----------------------------|---------------------|-------------|
| in a house/apartment       | Mean | 52.20                 | 62.61                      | 66.26               | 63.17       |
|                            | SD   | 16.32                 | 14.90                      | 13.30               | 12.70       |
| in CTI                     | Mean | 44.88                 | 53.98                      | 58.98               | 67.85       |
|                            | SD   | 15.16                 | 14.10                      | 14.52               | 11.13       |
| Total                      | Mean | 48.75                 | 58.55                      | 62.83               | 65.37       |
|                            | SD   | 16.14                 | 15.09                      | 14.29               | 12.16       |
| p                          |      | 0.0181                | 0.0129                     | 0.0117              | 0.0692      |

SD – standard deviation; p – significance level

Own study demonstrated that individuals with severe disabilities are more frequently CTI residents (60.4%). House/apartment residents were more frequently moderately disabled (42.6%) or fully fit (44.4%). The differences were statistically significant– Table 7.

**Table 7. Assessment of basic activities in daily living vs. the current place of residence**

|   |                        |        | Current place of residence |        | Total |
|---|------------------------|--------|----------------------------|--------|-------|
|   |                        |        | in a house/<br>apartment   | in CTI |       |
| Assessment of basic activities<br>in daily living (ADL) | severe disa-<br>bility | N      | 7                          | 29     | 36    |
|   |                        | %      | 13.0%                      | 60.4%  | 35.3% |
|   | moderate<br>disability | N      | 23                         | 9      | 32    |
|   |                        | %      | 42.6%                      | 18.8%  | 31.4% |
|   | fit                    | N      | 24                         | 10     | 34    |
|   |                        | %      | 44.4%                      | 20.8%  | 33.3% |
| <b>Total</b>  |                        | N      | 54                         | 48     | 102   |
| <b>%</b>  |                        | 100.0% | 100.0%                     | 100.0% |       |
| <b>p</b>  |                        |        | 0.0000                     |        |       |

*N* – number of patients; *p* – significance level

Analysis of study results demonstrated that persons with the risk of pressure ulcers more commonly reside in CTI (64.6%) than in house/apartment (31.5%). The differences were statistically significant– Table 8.

**Table 8. Risk of pressure ulcers vs. current place of residence**

|                                     |                               |        | Current place of residence |        | Total |
|-------------------------------------|-------------------------------|--------|----------------------------|--------|-------|
|                                     |                               |        | in a house/<br>apartment   | in CTI |       |
| Risk of pressure<br>ulcers (Norton) | no risk of pressure<br>ulcers | N      | 37                         | 17     | 54    |
|                                     |                               | %      | 68.5%                      | 35.4%  | 52.9% |
|                                     | risk of pressure<br>ulcers    | N      | 17                         | 31     | 48    |
|                                     |                               | %      | 31.5%                      | 64.6%  | 47.1% |
| <b>Total</b>                        |                               | N      | 54                         | 48     | 102   |
| <b>%</b>                            |                               | 100.0% | 100.0%                     | 100.0% |       |
| <b>p</b>                            |                               |        | 0.0008                     |        |       |

*N* – number of patients; *p* – significance level

No significant relationship between the current place of residence of the surveyed and depression could be discerned – Table 9.

**Table 9. Depression vs. current place of residence**

|  |  |  | Current place of residence |        | Total |
|--|--|--|----------------------------|--------|-------|
|  |  |  | in a house/<br>apartment   | in CTI |       |

|                         |                         |               |        |        |       |
|-------------------------|-------------------------|---------------|--------|--------|-------|
| <b>Depression (GDS)</b> | <b>no depression</b>    | <b>N</b>      | 26     | 25     | 51    |
|                         |                         | <b>%</b>      | 48.1%  | 52.1%  | 50.0% |
|                         | <b>minor depression</b> | <b>N</b>      | 24     | 14     | 38    |
|                         |                         | <b>%</b>      | 44.4%  | 29.2%  | 37.3% |
|                         | <b>deep depression</b>  | <b>N</b>      | 4      | 9      | 13    |
|                         |                         | <b>%</b>      | 7.4%   | 18.8%  | 12.7% |
| <b>Total</b>            |                         | <b>N</b>      | 54     | 48     | 102   |
| <b>%</b>                |                         | <b>100.0%</b> | 100.0% | 100.0% |       |
| <b>P</b>                |                         |               | 0.1203 |        |       |

*N* – number of patients; *p* – significance level

Analysis of own study results demonstrated high values of correlation between quality of life perception and the obtained quality of life results in individual areas. The higher the assessment of the quality of life and health the higher the actual quality of life in its physical, psychological, social and environmental area – Table 10.

**Table 10. Perception of quality of life vs. quality of life**

|   |     | <b>Physical area of life</b> | <b>Psychological area of life</b> | <b>Social area of life</b> | <b>Environment</b> |
|---|-----|------------------------------|-----------------------------------|----------------------------|--------------------|
| <b>Individual general perception of the quality of life</b>   | rho | 0.582                        | 0.585                             | 0.544                      | 0.442              |
|   | p   | <0.0001                      | <0.0001                           | <0.0001                    | <0.0001            |
| <b>Individual general perception of the quality of health</b> | rho | 0.642                        | 0.593                             | 0.441                      | 0.388              |
|   | p   | <0.0001                      | <0.0001                           | <0.0001                    | 0.0001             |

*p* – significance level

CTI was more frequently inhabited by persons without wife/husband/children/grandchildren. Persons with wife/ husband resided more frequently (60.4%) in a single family house. Similarly, persons with children (64.6%) or grandchildren (27.1%) resided more frequently in a single family house – Table 11.

**Table 11. Type of residence vs. current place of residence**

|                           |     | <b>Current place of residence</b> |       |                                     |        |                     |       | <b>p</b>      |
|---------------------------|-----|-----------------------------------|-------|-------------------------------------|--------|---------------------|-------|---------------|
|                           |     | in a sin                          |       | in a care and treatment institution |        | in a block of flats |       |               |
|                           |     | N                                 | %     | N                                   | %      | N                   | %     |               |
| <b>with spouse</b>        | no  | 19                                | 39.6% | 48                                  | 100.0% | 5                   | 83.3% | <b>0.0000</b> |
|                           | yes | 29                                | 60.4% | 0                                   | 0.0%   | 1                   | 16.7% |               |
| <b>with children</b>      | no  | 17                                | 35.4% | 48                                  | 100.0% | 5                   | 83.3% | <b>0.0000</b> |
|                           | yes | 31                                | 64.6% | 0                                   | 0.0%   | 1                   | 16.7% |               |
| <b>with grandchildren</b> | no  | 35                                | 72.9% | 48                                  | 100.0% | 5                   | 83.3% | <b>0.0006</b> |
|                           | yes | 13                                | 27.1% | 0                                   | 0.0%   | 1                   | 16.7% |               |
| <b>alone</b>              | no  | 44                                | 91.7% | 48                                  | 100.0% | 3                   | 50.0% | <b>0.0000</b> |
|                           | yes | 4                                 | 8.3%  | 0                                   | 0.0%   | 3                   | 50.0% |               |

*N* – number of patients; *p* – significance level

The present study has not demonstrated statistically significant differences between perception of the quality of life and health and the sex of the surveyed – Table 12.

**Table 12. Quality of life and health perception vs. sex of the surveyed**

| Sex    |      | Individual general perception of the quality of life | Individual general perception of the quality of health |
|--------|------|--|--|
| female | Mean | 3.41   | 2.95   |
|        | SD   | 0.71   | 0.90   |
| male   | Mean | 3.39   | 3.00   |
|        | SD   | 0.82   | 0.93   |
| Total  | Mean | 3.40   | 2.97   |
|        | SD   | 0.75   | 0.91   |
| P      |      | 0.9579   | 0.7503   |

SD – standard deviation; p – significance level

Males of the surveyed group had slightly higher quality of life in environmental area ( $67.82 \pm 12.91$ ) than females ( $63.92 \pm 11.55$ ). No statistically significant differences in other areas of life between women and men could be found – Table 13.

**Table 13. Quality of life vs. sex**

| Sex    |      | Physical area of life | Psychological area of life | Social area of life | Environment |
|--------|------|-----------------------|----------------------------|---------------------|-------------|
| female | Mean | 48.70                 | 58.48                      | 64.38               | 63.92       |
|        | SD   | 15.46                 | 14.39                      | 12.10               | 11.55       |
| male   | Mean | 48.84                 | 58.66                      | 60.24               | 67.82       |
|        | SD   | 17.43                 | 16.40                      | 17.24               | 12.91       |
| Total  | Mean | 48.75                 | 58.55                      | 62.83               | 65.37       |
|        | SD   | 16.14                 | 15.09                      | 14.29               | 12.16       |
| P      |      | 0.7495                | 0.6889                     | 0.5570              | 0.0565      |

SD – standard deviation; p – significance level

## Discussion

Ageing is a natural process, which cannot be avoided and it is of global nature [Gajewski et al., 2013]. According to the published demographic prognoses, the number of the elderly in the society will continue growing. Numerous factors influence the course of the ageing process in humans. These include: demographic, social, cultural, genetic, health and economic factors [Muszalik et al., 2013]. The ongoing ageing process brings numerous degenerative changes occurring within the entire human organism. Ageing is further associated with increased number of diseases often producing considerable pain and resulting in various disabilities [Bujnowska-Fedak, Kumięga and Sapilak, 2013]. The ageing process, its associated diseases, support from family and the place of residence have undoubtedly impact on the quality of life of the elderly.

The term of the quality of life is based on the definition of health provided by the WHO stating that it is a status of good physical, social and psychological well-being and not only lack of medical problems and disorders. The definition of the quality of life further states the term of disability and assessment of

physical activity of human in the daily living. Literature states that the environment inhabited by a given person also vastly influences the quality of life level [Grzegorzczuk et al., 2007]. Therefore, within the conducted study, persons remaining at a care and treatment institution and residing with family or alone to assess their quality of life. They responded as follows: persons residing at CTI assessed it at an average of 2.67 – meaning that they assess they assess their quality of life at a moderate level. In the analysis of individual areas of life that make up its quality, the respondents gave it the lowest score in the physical area, whereas the highest in the environmental area.

The investigation carried out by Wiesław Fidecki et al. [2011] confirmed the results of the present study. In the referred study the surveyed assessed their quality of life at a mean of 2.80. They assessed its components in a similar manner. The physical area had the lowest score, whereas the highest – the environmental score. Results of another publication by Wiesław Fidecki et al. [2015] produced very similar results. The mean quality of life was 2.90. The highest score was found for the environmental area and lowest in the physical area of life.

According to the preset study, the surveyed residing with family or alone assessed their quality of life at a mean of 3.24. The lowest score was given to physical area and the highest social area of life. In the study of Anna Pacian et al. [2014] the mean quality of life was 3.00. However, the psychological and physical were areas with the lowest score.

Numerous publications emphasize the specific dualism of depression in the elderly, which at the same time may be the cause for and the result of disabilities or chronic diseases. However, in both cases depression states contribute indirectly or directly to reduced quality of life of seniors.

Alberto Raggi et al. [2016] demonstrated that the occurrence of depression correlates significantly with lower quality of life results. However, authors of the above study did not conduct a depression diagnostics with the use of questionnaires, and only used declarations of the surveyed individuals. Depression diagnostics with GDS was conducted by Ines Conrad et al. [2014] in a group of 1133 German residents aged 60 and above. They demonstrated that depression symptoms had strong impact on all aspects of life according to the WHOQoL-OLD scale as well as on the general quality of life ( $p \leq 0.001$ ).

Fernández et al. [2006] were also able to show a relationship between depression states and the perception of lower quality of life, particularly in its physical and psychological area. The present study has demonstrated that the place of residence did not influence the level of depression in the surveyed individuals. In the CTI 52.1% of people had no depression, minor depression occurred in 29.2%, and deep depression occurred in 18.8% of the surveyed. In contrast, the study of Joanna Kowalska, Joanna Szczepańska-Gieracha and Joanna Piątek [2010] including residents of a Care and Treatment Institution showed that 61.5% of their surveyed group perceived depression. In the investigation of Martyna Kwiatkowska et al. [2018] only 5% of the surveyed had clinically confirmed depression, whereas 33% of the individuals had minor depression (behaviors requiring precise diagnostics) and in 62% of the surveyed no depression could be observed.

The health status and well-being are undoubtedly significant determinants of satisfaction from life. Reports of numerous authors clearly indicate the occurrence of a considerable correlations between the level of physical fitness and the quality of life of seniors [Zielińska-Więczkowska and Kędziora-Kornatowska, 2007; Naumann and Byrne, 2004]. According to the Central Statistical Office report entitled “Jakość życia w Polsce” (Quality of life in Poland), persons with limited ability to perform daily activities constituted in 2016 22.8% of the population [GUS, 2016]. On the other hand, the study of Bień shows that 46% of people aged 65 and above required assistance in performing at least one complex activity of the daily living [Bień, 2002].

Eva Kahana et al. [2013] based on a survey involving 585 Florida residents demonstrated that a higher number of chronic diseases and the occurrence of functional limitations forecast lower satisfaction from life of elderly people. Also Yuwal Palgi et al. [2015], who conducted study as part of the Survey of Health and Retirement in Europe project on a group of 18,781 seniors confirmed that lower quality of life was associated with higher level of dysfunctions, both with regards to basic ( $r=-0.243$ ;  $p=0.011$ ), and complex activities of the daily living ( $r=-0.0277$ ;  $p=0.009$ ) (measured as follows: with the activities of daily living scale (ADL) and with IADL scale).

Another factor of interest in the conducted present study was comparison of the physical status of CTI residents with person living alone or with family. Obtained results (with the use of ADL) demonstrated that persons with severe disability were statistically more frequently residents of CTI (60.4%). In their study involving patients of the Care and Treatment Institution in Rzeszow, Bońkowski and Klich-Rączka [2007] observed that residents of this facility had serious functional disability. These authors utilized the Barthel scale.

The present study further demonstrated that CTI patients were significantly more frequently exposed to the risk of pressure ulcers (64.6%) than persons remaining at home (31.5%). Similarly high risk of pressure ulcers in patients of care and treatment institutions was demonstrated in the study of Horn et al. [2002]. A study involving 2420 persons covered by long-term care demonstrated that 53% of these individuals were exposed to a risk of pressure ulcers. The risk of pressure ulcers among long-term care patients was studied by Italian research team, Alessandra Capon et al. [2007]. They conducted the study involving patients from 10 long-term care facility in Italy and Rome. Their results showed that the risk of pressure ulcers in these patients was 56% [Capon et al., 2007].

Another issue covered by the conducted present study was finding out whether the surveyed individuals assessing their health status as poor, assessed the quality of life at lower level than the persons assessing their health status as neither good nor poor. According to the obtained results of the present study, the higher is the quality of life and health, the higher is the actual quality of life in its physical, social, environmental and physical area. Aneta Toczyńska, Elżbieta Krajewska-Kułak and Cecylia Łukaszuk [2012] demonstrated in their publication that the higher is the health status of patients: better physical fitness and independence, that is general quality of health, the better is the quality of life. These authors further indicate a certain relationship they found during the course of the study. The better the health status and higher its evaluation, the better assessment was given by the surveyed to their well-being.

The last factor analyzed in the present study was the assessment of the quality of life performed by men and women. Analysis of the results presented in this paper allows to conclude men and women assessed this element at a similar level. Analogous results were also obtained by Pilar Guallar-Castillón et al. [2005], who surveyed the older part of the Spanish population with the use of the SF-36 questionnaire. The results they obtained confirmed that differences in the assessment of the quality of life between women and men occurred among the younger population, whereas in the older part of the population the differences were minor.

In a summary, the quality of life is often assessed by people in both objective and subjective dimension. When older individuals evaluate their quality of life, they often take into account the health status, social contacts, dependence on others, material status as well as their current place of residence. Adaptation to the present life situation largely influences its quality. Older individuals often suffer from depression, however, according to the obtained results, the current place of residence does not have a significant impact on its occurrence.



## Conclusions

Based on the analysis of the conducted present study the following conclusions can be drawn:

Quality of life of Care and Treatment Institution patients is lowest with regards to the physical area of life and highest in the environmental area. A similar situation concerns the persons living with family or alone, yet here the highest score is given to the social area of life.

Seniors' place of residence does not have a marked impact on their psychological status.

A correlation between the quality of life and quality of health exists. Higher quality of health has a positive impact on the quality of life.

Single people who do not have a family are more frequently placed in long-term care facilities. In addition, persons with serious disability are more frequently residents of such facilities.

Sex does not have a significant influence the quality of life.

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