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Elderly people's perspectives on quality of life in the example of patients in ambulatory and institutional care

Bożena Kowalczyk[1] [ID], Bogumiła Lubińska-Żądło[1] [ID], Bożena Zawadzka[2] [ID]

[1]Podhale State College of Applied Sciences in Nowy Targ, Poland
[2]Jan Kochanowski University in Kielce, Poland

ABSTRACT

Introduction: Contrary to stereotypical beliefs, elderly people's perceptions about quality of life are not always negative. Paying attention to the elderly living in a family house or in various institutions is important. Quality of life assessment should become an inherent part of diagnosis and treatment as the results of the study can be used in preventive treatment of many illnesses.

Material and methods: The study was conducted among 236 randomly selected individuals aged 60 and over who received rehabilitation services at the medical rehabilitation center in Ptaszkowa or were admitted to a care and treatment facility in Nowy Sącz. For the purposes of the study, a diagnostic survey was used, the technique of which was a questionnaire and the tools were the authors' own survey questionnaire and the WHOQOL-AGE scale.

Results: The value of Cramér's V coefficient between the overall quality of life score according to the WHOQOL-AGE and the type of medical care received by the patient was $V = 0.579$. It was significantly higher among those receiving institutional care than those receiving outpatient treatment. The analysis concerning assessment of a correlation between the quality of life score according to the WHOQOL-AGE scale and all the analyzed sociodemographic factors showed statistically significant differences.

Conclusions: Subjective perception of quality of life is determined by the type of medical care received by the patient. There is a correlation between the type of medical care received and overall quality of life in female patients, urban residents, patients aged over 75 as well as those with primary education, regardless of the type of work performed in the past.

KEY WORDS: quality of life, older adults, outpatient treatment, institutional care, WHOQOL-AGE scale.

ADDRESS FOR CORRESPONDENCE: Bogumiła Lubińska-Żądło, Podhale State College of Applied Sciences in Nowy Targ, 71 Kokoszków St, 34-400 Nowy Targ, Poland, e-mail: bogumila.lubinska@interia.pl

INTRODUCTION

Despite stereotypical views, the perception of quality of life by older adults is not always negative. Their assessment is highly affected by their place of residence (own house or institution). Home for the elderly is more than a physical place; it is associated with the presence of loved ones from whom they experience a sense of being needed, loved and valued, which positively affects their quality of life. Quality of life in various types of institutions is often perceived in contrasting ways as it is determined by the attitude of medical and nursing staff [1]. Paying attention to elderly people living in various types of institutions in order to meet their healthcare needs is crucial as the primary task of healthcare providers is to focus on maintaining or even improving their quality of life [2, 3]. Assessment of quality of life should be an integral part of diagnosis in the patient treatment process as the results of the study of quality of life can be used in the prevention of many diseases [3, 4]. The demand for quality of life research in the elderly is reported by the medical and nursing community because the health problems that affect it make it difficult to effectively treat

multimorbidity [3, 5]. Quality of life assessment is in accordance with a holistic approach to every patient [6], which is confirmed by the strategic document "Healthy Future" adopted by the Council of Ministers, the main objective of which is to improve the quality of life related to health in the elderly, contributing to the improvement of the well-being of the society [6].

Therefore, the authors undertook to examine the factors related to the quality of life in the group of elderly people covered by outpatient treatment and institutional care.

The aim of the study was to assess the relationship of elderly people's sense of quality of life with selected sociodemographic factors and the type of care of patients receiving outpatient and institutional care.

MATERIAL AND METHODS

The study included 236 patients, 111 of whom were admitted to a care and treatment facility in Nowy Sącz (the Society of Patients' Friends "Sądeckie Hospicjum", operating at the Sadecki Hospice, opened on January 2, 2017) and 125 received rehabilitation services at the medical rehabilitation center in Ptaszkowa between February and May 2020. In both facilities, patients received rehabilitation under National Health Fund benefits. The average waiting time for admission to the ward of the Care and Treatment Facility in Nowy Sącz was 10 months, while the waiting time for services under outpatient care at the Rehabilitation and Medical Center in Ptaszkowa was 4 months. In both facilities, rehabilitation services are provided in an eight-hour workday. The mean age of the patients included in the study was 75.4 and ranged from 60 to 93 years. The method used was a diagnostic survey, the technique was a questionnaire, and the tools included the authors' survey questionnaire and the 13-item WHOQOL-AGE questionnaire with a standardized scale for assessing quality of life. The total score ranges from 0 to 100 points, which gives the opportunity to compare the obtained results with other scales for assessing quality of life, e.g. WHOQOL-BREF questionnaire, Euro – Quality of Life Questionnaire (EQ-5D) or SF-36. Higher WHOQOL-AGE score indicates higher health-related quality of life [7].

Inclusion criteria for the study were as follows: patients receiving ambulatory treatment or institutional care, 60 years of age and above, an ability to communicate logically with the residents, informed consent of the patient.

The following descriptive statistics were used to describe the variables: mean, median, standard deviation, minimum and maximum values. Cramér's V coefficient was used to determine the strength of a correlation between the qualitative variables. The following reference ranges were adopted:
- from 0.00 to 0.29 – weak correlation between the variables,

- from 0.30 to 0.49 – moderate correlation between the variables,
- from 0.50 to 1.00 – strong correlation between the variables.

In all the analyses performed the statistics for probability of committing a type 1 error were deemed statistically significant ($p < 0.05$). Values above were deemed statistically insignificant. The statistical analysis of collected data was performed using the IBM SPSS Statistics 23 program.

RESULTS

The majority of the sample were women (62.71%). Over half of the respondents (52.54%) were people aged 60 to 74 years. Of the respondents, 49.15% were married, 31.78% were widowed, 11.86% were single and 7.20% were divorced. The most numerous group of the respondents were people with primary education (31.78%), followed by those with vocational education (28.81%) and secondary education (26.27%). The respondents with higher education constituted 13.14%. Most of those surveyed lived in an urban area (56.36%). The vast majority (64.41%) reported having performed blue-collar work in the past (Table 1).

The Cramér's V coefficient between the overall quality of life score according to the WHOQOL-AGE and the type of medical care received by the patient was $V = 0.837$, which implies a strong relationship. The Cramér's V coefficient value between the subscale Satisfaction and the subscale Fulfillment of expectations for the WHOQOL-AGE scale and type of patient care also indicates the presence of a strong correlation. The overall quality of life score was significantly higher among those receiving institutional care than those receiving outpatient treatment (Table 2).

While analyzing the determinants of the objective quality of life in terms of the type of patient care, one can observe the occurring statistical correlations between sociodemographic variables and the studied characteristics. The strength of the correlation between gender and type of medical care provided to the patient was significant for women (Cramér's $V = 0.901$, significance level < 0.05), whereas no significant correlation was found for men. On the basis of analysis of yet another characteristic determining the objective quality of life of people receiving medical care, it can be concluded that people aged 75-89 receiving institutional care rated their quality of life higher than those receiving outpatient treatment. The strength of the relationship between the analyzed variables was significant ($V = 0.888$). Seniors aged 90 and over and receiving institutional care also rated their quality of life significantly higher. People residing in urban areas and receiving institutional care reported considerably higher quality of life than those receiving outpatient treatment. The strength of the relationship between the analyzed variables was significant

TABLE 1. Sociodemographic parameters of the respondents by type of care received

Indicator/Variable	Receiving outpatient care		Receiving institutional care		In total	
	n	%	*n*	%	*n*	%
Gender						
Female	79	63.20	69	62.16	148	62.71
Male	46	36.80	42	37.84	88	37.29
Age [years]						
60-74	78	62.40	46	41.44	124	52.54
75-89	38	30.40	49	44.14	87	36.86
90 and over	9	7.20	16	14.41	25	10.59
Marital status						
Single	7	5.60	21	18.92	28	11.86
Married	77	61.60	39	35.14	116	49.15
Divorced	4	3.20	13	11.71	17	7.20
Widowed	37	29.60	38	34.23	75	31.78
Education						
Primary	22	17.60	53	47.75	75	31.78
Vocational	38	30.40	30	27.03	68	28.81
Secondary	48	38.40	14	12.61	62	26.27
Higher	17	13.60	14	12.61	31	13.14
Place of residence						
Urban area	60	48.00	73	65.77	133	56.36
Rural area	65	52.00	38	34.23	103	43.64
Professional history						
White-collar worker	48	38.40	36	32.43	84	35.59
Blue-collar worker	77	61.60	75	67.57	152	64.41

n - number of patients

($V = 0.910$). Conversely, when analyzing the relationship between the level of quality of life and education, it can be observed that those with primary education who received institutional care rated their quality of life notably higher than those with the same education level who received outpatient treatment. The obtained statistical significance using Cramér's contingency coefficient V in the studied correlations was $V = 0.933$, so the probability of an actual correlation between the studied variables was greater than 90%. The results also indicate a statistically significant correlation between the type of work performed in the past and quality of life. Regardless of the type of work performed in the past, those who received institutional care rated their quality of life higher than those who received outpatient treatment (white-collar work Cramér's $V = 0.929$; blue-collar work Cramér's $V = 0.869$) (Table 3).

Analysis of the results of our own study concerning evaluation of the correlation between the assessment of satisfaction according to the WHOQOL-AGE scale and the respondents' sociodemographic characteristics showed statistically significant differences. Correlations

between sociodemographic factors such as gender, place of residence and type of professional activity depending on the type of medical care received as measured by Cramér's V coefficient values were strong in all the surveyed groups and were above $V = 0.61$; thus the probability of an actual correlation between the study variables was greater than 61%. The respondents in institutional care rated their quality of life in terms of subscale F1 and subscale F2 significantly higher, with the exception of unmarried people in institutional care, who reported a markedly lower quality of life level in subscale F1 – Cramér's $V = 0.926$ (Tables 4 and 5).

Analysis of the correlation between evaluation of fulfillment of expectations according to the WHOQOL-AGE scale and sociodemographic factors of the respondents indicated statistically significant differences. Correlations between sociodemographic factors such as gender, age, place of residence and type of professional activity depending on the type of medical care received as measured by Cramér's V coefficient values were strong in all the surveyed groups and were above $V = 0.79$. Considering the obtained value of Cramér's V coefficient for

TABLE 2. WHOQOL-AGE and type of patient care

Quality of life		Mean (M)	Median (Me)	SD	Correlation
WHOQOL-AGE	Receiving outpatient care	15.05	15.00	4.28	Cramér's *V* = 0.837 *p* < 0.05
	Receiving institutional care	18.04	18.58	2.27	
	In total	16.46	17.54	3.78	
Subscale F1 – Satisfaction	Receiving outpatient care	19.78	20.00	5.93	Cramér's *V* = 0.631 *p* < 0.05
	Receiving institutional care	22.98	23.00	3.29	
	In total	21.29	22.50	5.12	
Subscale F2 – Fulfillment of expectations	Receiving outpatient care	10.32	10.50	2.87	Cramér's *V* = 0.807 *p* < 0.05
	Receiving institutional care	13.11	13.33	1.54	
	In total	11.63	12.33	2.72	

TABLE 3. Correlation between quality of life level according to the WHOQOL-AGE and sociodemographic factors

WHOQOL-AGE					
Variable	Indicator	Receiving outpatient care	Receiving institutional care	In total	Correlation
Gender	Female	15.30	18.46	16.77	Cramér's *V* = 0.901 *p* < 0.05
	Male	14.64	17.35	15.93	Cramér's *V* = 0.887 *p* > 0.05
Age [years]	60-74	15.36	17.26	16.07	Cramér's *V* = 0.842 *p* > 0.05
	75-89	14.72	18.33	16.75	Cramér's *V* = 0.888 *p* < 0.05
	90 and over	13.76	19.42	17.38	Cramér's *V* = 1.000 *p* < 0.05
Marital status	Single	17.52	15.83	16.25	Cramér's *V* = 1.000 *p* < 0.05
	Married	15.16	18.57	16.31	Cramér's *V* = 0.868 *p* < 0.05
	Divorced	14.77	17.98	17.23	Cramér's *V* = 1.000 *p* > 0.05
	Widowed	14.39	18.74	16.59	Cramér's *V* = 0.945 *p* < 0.05
Education	Primary	13.98	18.00	16.82	Cramér's *V* = 0.933 *p* < 0.05
	Vocational	15.85	17.79	16.71	Cramér's *V* = 0.970 *p* > 0.05
	Secondary	15.51	18.36	16.15	Cramér's *V* = 0.920 *p* > 0.05
	Higher	13.36	18.44	15.65	Cramér's *V* = 1.000 *p* > 0.05
Place of residence	Urban area	15.19	18.54	17.03	Cramér's *V* = 0.910 *p* < 0.05
	Rural area	14.92	17.09	15.72	Cramér's *V* = 0.940 *p* > 0.05
Type of professional activity	White collar work	15.14	18.74	16.68	Cramér's *V* = 0.929 *p* < 0.05
	Blue collar work	15.00	17.71	16.34	Cramér's *V* = 0.869 *p* < 0.05

TABLE 4. Comparison of quality of life score in Subscale F1 – Satisfaction depending on sociodemographic factors by type of care received

Subscale F1 – Satisfaction					
Variable	Indicator	Receiving outpatient care	Receiving institutional care	In total	Correlation
Gender	Female	20.10	23.59	21.73	Cramér's V = 0.684 $p < 0.05$
	Male	19.24	21.96	20.54	Cramér's V = 0.766 $p < 0.05$
Age [years]	60-74	20.17	21.84	20.79	Cramér's V = 0.701 $p < 0.05$
	75-89	19.30	23.32	21.56	Cramér's V = 0.765 $p < 0.05$
	90 and over	18.44	25.22	22.78	Cramér's V = 0.956 $p > 0.05$
Marital status	Single	23.21	20.31	21.04	Cramér's V = 0.926 $p < 0.05$
	Married	19.82	23.68	21.12	Cramér's V = 0.652 $p > 0.05$
	Divorced	20.50	22.04	21.68	Cramér's V = 1.000 $p < 0.05$
	Widowed	18.99	24.05	21.55	Cramér's V = 0.839 $p < 0.05$
Education	Primary	18.52	22.92	21.63	Cramér's V = 0.712 $p < 0.05$
	Vocational	20.78	22.60	21.58	Cramér's V = 0.759 $p > 0.05$
	Secondary	20.43	23.32	21.08	Cramér's V = 0.806 $p < 0.05$
	Higher	17.38	23.68	20.23	Cramér's V = 0.866 $p > 0.05$
Place of residence	Urban area	19.93	23.66	21.98	Cramér's V = 0.741 $p < 0.05$
	Rural area	19.65	21.66	20.39	Cramér's V = 0.728 $p < 0.05$
Type of professional activity	White collar work	19.82	24.04	21.63	Cramér's V = 0.823 $p < 0.05$
	Blue collar work	19.76	22.47	21.10	Cramér's V = 0.616 $p < 0.05$

$p \leq 0.05$, it can be concluded that among people with primary, vocational and secondary education, there is a strong statistical correlation between subjective assessment of quality of life in terms of fulfillment of expectations and the type of medical care received by the patient. The respondents receiving institutional care rated their quality of life in terms of fulfillment of expectations significantly higher than those receiving outpatient treatment (Table 5).

DISCUSSION

Kawalec-Kajstura *et al.* conducted a study on a group of 92 people aged 60 years and over who were hospita-lized in the department of rehabilitation, the mean age of whom was 73.34 ± 7.08. The mean score of the WHOQOL-AGE scale in the sample group was 66.46 ± 11.41. The level of quality of life in the study population was rated as average [8]. Nowicki *et al.* conducted a study on a group of 92 people aged 65 years and over who participated in the University of the Third Age meetings. The respondents' quality of life mean score according to the WHOQOL-AGE scale was 64.45 ± 13.47. In the sub-scale Satisfaction the mean value was 66.56 ± 12.84, whereas in the subscale Fulfillment of expectations it was 58.34 ± 16.51 [4]. Kowalczyk *et al.* surveyed a group

TABLE 5. Comparison of quality of life score in Subscale F2 – Fulfillment of expectations depending on sociodemographic factors by type of care received

Subscale F2 – Fulfillment of expectations					
Variable	Indicator	Receiving outpatient care	Receiving institutional care	In total	Correlation
Gender	Female	10.49	13.33	11.81	Cramér's $V = 0.823$ $p < 0.05$
	Male	10.03	12.74	11.32	Cramér's $V = 0.902$ $p < 0.05$
Age [years]	60-74	10.55	12.67	11.34	Cramér's $V = 0.793$ $p < 0.05$
	75-89	10.14	13.34	11.94	Cramér's $V = 0.898$ $p < 0.05$
	90 and over	9.07	13.61	11.98	Cramér's $V = 1.000$ $p < 0.05$
Marital status	Single	11.83	11.34	11.46	Cramér's $V = 0.864$ $p > 0.05$
	Married	10.51	13.47	11.50	Cramér's $V = 0.893$ $p < 0.05$
	Divorced	9.04	13.92	12.77	Cramér's $V = 1.000$ $p > 0.05$
	Widowed	9.78	13.43	11.63	Cramér's $V = 0.939$ $p < 0.05$
Education	Primary	9.44	13.08	12.01	Cramér's $V = 0.895$ $p < 0.05$
	Vocational	10.93	12.98	11.83	Cramér's $V = 0.925$ $p < 0.05$
	Secondary	10.60	13.39	11.23	Cramér's $V = 0.920$ $p < 0.05$
	Higher	9.33	13.20	11.08	Cramér's $V = 0.909$ $p > 0.05$
Place of residence	Urban area	10.46	13.41	12.08	Cramér's $V = 0.830$ $p < 0.05$
	Rural area	10.19	12.51	11.05	Cramér's $V = 0.904$ $p < 0.05$
Type of professional activity	White collar work	10.45	13.43	11.73	Cramér's $V = 0.834$ $p < 0.05$
	Blue collar work	10.24	12.95	11.58	Cramér's $V = 0.877$ $p < 0.05$

of 1008 older adults whose average age was 71.0 ± 8.1. The mean quality of life score according to the WHOQOL-AGE scale in the surveyed group was 67.20 ± 15.61. Conversely, the mean quality of life score for dependent individuals who scored < 18 points according to the IADL scale was 47.84 points [3]. In the study conducted by Fidecki and Wrońska, the study group consisted of 284 elderly people living in long-term care facilities. Overall quality of life according to the Polish version of the WHO-QOL-BREF scale was rated as average. Quality of life was rated the lowest in the physical domain (10.37 ± 1.76

out of 20 points) and the highest in the environmental domain (11.95 ± 2.52) [9]. Scocco and Nassuato used the WHOQOL-BREF to assess the quality of life in a sample group of 207 elderly persons, 135 of whom lived at home and 72 resided in nursing homes. The residents of nursing homes obtained higher WHOQOL-BREF scores only in the physical domain [10].

The results of the present study on a group of 236 seniors with illnesses, including 111 receiving institutional care and 125 receiving outpatient rehabilitation, whose mean age was 75.4 years, are significantly different,

as the respondents' mean score for the overall quality of life according to the WHOQOL-AGE was merely 16.46 ± 3.78. For outpatients, it was 15.05 ± 4.28, and for patients receiving institutional care it was 18.04 ± 2.27. In the subscale Satisfaction, the overall mean score was 21.29 ± 5.12 and in the subscale Fulfillment of expectations it was 11.63 ± 2.72.

In the opinion of Kowalczyk et al. transition from home care to institutional care is potentially a more efficient and cost-effective approach; unfortunately, it can adversely affect the quality of life in the elderly, although it is not confirmed by the present findings. The concept of prioritizing the quality of life over its length is controversial in the world of medicine and raises ethical questions among many, but it is important to remember that the essence of treatment is not simply to sustain life [3]. Therefore, the opinion of Świtalski et al. that quality of life should be an essential part of diagnosing geriatric patients residing in long-term care facilities is well founded [11].

The study by Gobbens and Remmen showed that association between sociodemographic factors and quality of life in middle age and old age individuals is dependent on the tools used to assess the quality of life [12]. The study by Top and Dikmetas using the Turkish version of the WHOQOL-OLD, which was administered to 120 adult residents (> 65 years old) of two nursing homes in Turkey, showed that gender does not affect the overall QOL in the elderly [13]. The results of the study conducted by Bilgili and Arpacı [14] and the present authors' study in which the Polish version of WHOQOL-OLD was used showed that gender is an important factor of quality of life in older adults. The results of the study by Jarzynkowski et al. [15] indicated higher quality of life among women. In contrast, the results of a study by Bornet et al. [16] conducted among patients hospitalized at a geriatric rehabilitation center in Switzerland also indicated gender as a predictive factor for quality of life in the elderly.

Soósová surveyed a group of community-dwelling elderly people living in Košice, Slovakia, who were hospitalized in a geriatric ward. His study showed that living without a partner negatively affects one's quality of life [17]. Bilgili and Arpacı conducted a study on a group of 300 community-dwelling individuals and found that marital status was associated with better quality of life [14]. The results of the study by Kuś et al. indicated that quality of life in patients of extended care facilities is very similar to that of elderly people who live with family or alone in old age [18].

The results of the current study indicated that people receiving institutional care reported significantly higher quality of life in terms of the overall quality of life and subscale F1, with the exception of those covered by institutional care who reported being single, who reported markedly lower quality of life.

According to the study by Jarzynkowski et al., age affected quality of life in such a way that higher quality of life was observed in young people [15]. A negative correlation between quality of life and age was also observed in the studies conducted by Bilgili and Arpacı [14], Bornet et al. [16], Zielińska-Więczkowska and Polasik [19] and Kąsiel-Ziarkowska [20]. Świtalski et al. in their study conducted on a group of older adults, the mean age of whom was 90 years old, found that age did not affect the quality of life in patients of long-term care facilities [11]. The authors' own study indicated that quality of life in people receiving institutional care is higher than in those receiving ambulatory care, especially among those over the age of 75.

Among the authors investigating the matter, a correlation between education and quality of life level was observed by Fidecki and Wrońska [9], Bilgili and Arpacı [14], Jarzynkowski et al. [15], Zielińska-Więczkowska and Polasik [19]. Their findings indicated the existence of a correlation between the education level and better quality of life of older people. Only Świtalski et al. in their study did not find a correlation between the education level and quality of life in patients of long-term care facilities [11]. Such a correlation was also found in the present authors' study.

The study by Jarzynkowski et al. corroborated that place of residence and occupational status also have an influence on quality of life [15]. The present study results confirmed the notion. Higher quality of life was also observed among the residents of urban areas who had performed white-collar work in the past.

Perception of quality of life among the residents of nursing homes also depends on having one's individual needs and expectations met, such as the right to privacy, being respected by the staff, being able to choose leisure activities, experiencing kindness from others or being able to establish interpersonal relationships [1].

The findings of the present study demonstrated that sociodemographic factors bear a varying degree of influence on quality of life perception among older people receiving ambulatory and institutional care.

The assessment of quality of life is also determined by other specific factors mentioned in the document "Healthy Future" adopted by the Council of Ministers and which were not included by the authors in the above study, but which should also be taken into account in continuing research on this topic [6].

CONCLUSIONS

Quality of life among the participants was significantly higher in people receiving institutional care.

Statistical correlations between sociodemographic variables, i.e. gender, age, marital status, place of residence and education, were found. Women, people aged 75 or over, urban residents and people with primary education who were in institutional care demonstrated

a higher level of satisfaction. A statistically significant correlation between the type of professional activity and quality of life was observed; the respondents receiving institutional care reported higher quality of life.

The respondents in institutional care reported considerably higher quality of life depending on sociodemographic factors such as gender, place of residence and type of professional activity, with the exception of those in institutional care who declared being single, who reported significantly lower quality of life.

Subjective perception of quality of life is determined by the type of medical care received. The respondents receiving institutional care reported significantly higher quality of life with respect to fulfillment of expectations than those in outpatient treatment.

DISCLOSURE

The authors report no conflict of interest.

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AUTHORS' CONTRIBUTIONS