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Quality of life of the elderly residents of nursing homes and patients of the Psychogeriatric Day Ward

Magdalena Pawlaczyk[1], Teresa Gąsior[2], Michał Michalak[3], Andrzej Jóźwiak[4], Ewa Zasadzka[2], Monika Matecka[2], Mariola Pawlaczyk[2]

[1] Laboratory of Neuropsychobiology, Department of Psychiatry, Poznan University of Medical Sciences, Poland
[2] Department of Geriatric Medicine and Gerontology, Poznan University of Medical Sciences, Poland
[3] Department of Computer Science and Statistics, Poznan University of Medical Sciences, Poland
[4] Regional Hospital for Neurotic and Psychiatric Patients in Gniezno, Poland

ABSTRACT

Introduction. Due to the prolonged average life span and constantly increasing number of the elderly, research of this population's quality of life (QoL) is being conducted to assess the spheres requiring improvement.
Aim. To assess and compare the life quality in different domains between residents of nursing homes (NH) and patients of the Psychogeriatric Day Ward (PDW).
Material and Methods. The study encompassed 68 PDW patients and 62 NH residents. The WHOQOL-BREF questionnaire and a structured interview concerning diseases, different forms of support and activities preferred were used.
Results. Women predominated among the subjects (83%). The elderly aged 75–90 constituted the majority (64.62%). The average assessment of QoL in the whole group amounted to 3.6 points. No significant differences in the assessment of QoL satisfaction and one's own health satisfaction were observed between PDW patients and NH residents. The participants of both groups assessed the highest QoL in the environment domain and the lowest in the social relationships domain. A relationship between higher QoL in the physical health domain and participation in social forms of spending free time was observed. Relationships between QoL in particular domains and age, marital status and length of stay in NH were found.
Conclusions. Elderly people's QoL, similarly to their satisfaction with health, were on an average level regardless of the institutional care. The QoL remains in a significant relationship with health. The changing needs of the elderly should be the basis for creating an individual plan of professional support.

Keywords: the elderly, quality of life, institutional care.

Introduction

According to the official forecasts the population of people aged 65 and over in the European Union will increase from 87.5 million in 2010 to 152.6 million in 2060. There are also predictions of the number of persons aged 80 and above growing from 23.7 million in 2010 to 62.4 million in 2060 [1]. Designing and implementing measures aimed at improving the quality of such extended life is one of the challenges facing medicine today.

Quality of life (QoL) is a multi-dimensional and interdisciplinary term. Various sciences make attempts to conceptualise this term – above all medicine and psychology, but also sociology, pedagogy and economics. Hence the multitude and variety of definitions highlighting different aspects of human functioning and their importance in the process of formulating a subjective assessment of one's own life. Assessment of the QoL of the elderly is very difficult because the elderly are not a homogenous social group [2], and old

age is a phase where the biggest personal differences occur. Experiencing the ageing process and old age is an individual matter. There is no universal way of living through and assessing this period of life.

Attempts to narrow down the semantic area of QoL has led in medicine to the formulation of the term health-related quality of life (HRQOL). According to Schipper at al. [3], HRQOL is the functional effect of a disease and its treatment perceived by the patient, and to put it more precisely, a subjective and multidimensional assessment of the impact of a disease and its treatment upon the physical condition and vocational functioning, psychological state, social interactions and somatic sensations. Research into the consequences of illnesses, i.e. extensive and usually adverse changes in all important walks of human life, is also of interest to psychology.

According to the definition of the World Health Organization (WHO), quality of life refers to "individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns" [4]. The diversity of QoL definitions is reflected in the creation of many different research tools used for its global assessment, allowing measurement of generic or disease specific QoL [5]. The WHO definition was used as the point of departure in designing the WHOQOL–100 measurement tool, followed by the elaboration on its basis of the WHOQOL-BREF survey (used in the own research presented). WHOQOL allows to make an individual valuation and a subjective assessment of the following domains: physical health (pain and discomfort, energy and tiredness, sexual activity, sleep and rest, sensual sensations), psychological health (positive and negative feelings, cognitive processes, self-appraisal, image of one's own body and appearance), level of independence (ability to move, daily activities, dependence on medical and non-medical substances, ability to communicate and take up work), social relationships (personal ties, experiencing social support; conduct directed towards supporting others), environment (freedom, feeling of physical security, home environment, work satisfaction, financial resources, health and access to social care, possibility to gain new information and skills, recreation possibilities, physical environment, transport), spirituality/religion/personal beliefs [6]. Analysis of the usefulness of individual dimensions of the WHOQOL–100 and WHOQOL-BREF scales in studying the elderly has led to the creation of the WHOQOL-AGE scale, validated also for Polish senior citizens [7].

Aim

The objective of the study was to assess the QoL of elderly persons subjected to institutional care and to compare the life quality in different domains between residents of nursing homes (NH) and patients of the Psychogeriatric Day Ward (PDW).

Material and Methods

The study was carried out January 2015 to January 2016 and included a total of 130 persons. Among them were 62 residents of two NH in Poznań, and 68 patients of the PDW of the Regional Hospital for Neurotic and Psychiatric Patients in Gniezno. PDW patients spent 8 hours daily at the hospital ward for the eight consecutive weeks. The following study inclusion criteria were adopted: age 60 or above, ability to establish and maintain full logical contact, consent to participation in the study.

The researcher used the WHOQOL-BREF questionnaire and an own survey. The WHOQOL-BREF questionnaire is a research tool used for assessing the QoL of healthy and ill persons, both for cognitive and clinical purposes [8]. It contains 26 questions and allows assessing the QoL in four domains: physical health, psychological health, social relationships and environment. It also includes two questions subject to separate analysis: the first pertains to the general perception of the QoL, the second to an overall perception of one's health. Persons taking part in the study made the assessment on a five-point scale; the higher the score, the better the QoL. The researcher's own survey contained nine questions regarding duration of stay at the NH, illnesses and medications, ability to move unassisted, frequency of rehabilitation procedures and preferred forms of spending free time.

The study was approved by the Bioethics Committee at Poznań University of Medical Sciences (No 44/15).

Statistical analysis

The results were presented as mean values and a standard deviation (SD), providing the minimum and maximum ranges. In the case of category variables data were presented as figures and percentages. Comparison of two independent groups was conducted using the Mann-Whitney U test, and in the case of qualitative variables the Chi-square and a test for structure indi-

cator were used. Tests were considered statistically significant at $p < 0.05$.

Results

The demographic characteristic of the studied group is presented in **table 1**.

In the NH residents group, 40 persons (64.5%) remained at the facility for more than three years, 12 persons (19.3%) from two to three years, and 10 persons for no longer than one year.

In both groups of respondents, 103 persons (79.2%) reported no fall during the last two months preceding the study, with 27 persons (20.8%) experiencing a fall in that period. The most frequently indicated causes of falls included uneven surface or vertigo. The frequency of falls did not depend on the age of subjects ($p = 0.5$).

In both groups 83 persons (63.8%) used daily rehabilitation treatment, 20 persons (15.45%) several times a week, and 27 persons (20.8%) used no rehabilitation at all. The number of persons not using this form of professional support was significantly higher among the NH residents ($p = 0.002$).

Almost all subjects participating in the study (98.5% of the PDW patients and 100% of the NH residents) followed medical recommendations, 69.3% of NH residents and 53.7% of PDW patients took diet supplements.

Multiple chronic disorders were diagnosed in 103 persons (79.2%); at the same time no significant difference was found between age and the occurrence of three or more diseases ($p = 0.5$). The largest number of diagnosed disorders involved the skeletal-joint-muscle system and the cardio-vascular system. A dependence between heart diseases and age was observed ($p < 0.029$). Persons with heart diseases accounted for: 35.3% in the 60–75 group, 60.7% in the 75–90 group and 66.7% in the above 90 age group, respectively. The occurrence of multimorbidity was similar in two studied groups.

No significant statistical differences were found between both groups when it came to QoL satisfaction (WHOQOL-BREF1 $p = 0.64$) and satisfaction with one's health (WHOQOL-BREF2 $p < 0.07$). NH residents (WHOQOL-BREF1 points: 3.61± 0.75, range 1–5; WHOQOL-BREF2 points: 3.46 ± 0.82, range 2–5) and PDW patients (WHOQOL-BREF1 points: 3.62 ± 0.75, range 2–5; WHOQOL-BREF2 points: 3.13 ± 1.03, range 1–5) similarly assessed their level of satisfaction with regard to both these aspects. A statistically significant medium dependence was found between QoL assessment and health satisfaction assessment, both in the entire sample examined ($p < 0.05$) and in both sub-groups. PDW patients, just like NH residents gave the highest score to their QoL in the domain of environment, and the lowest in the social relationships domain. The results of the QoL assessment in the particular domains for the two studied groups, PDW and NH patients, are presented in **Table 2**.

Table 1. Demographic characteristics of the studied group

Characteristics	Total	NH	PDW	p-value
Number of patients	130	62	68	
Women n (%)	108 (83)	54 (87.10)	54 (79.41)	0.2431
Men n (%)	22 (17)	8 (12.90)	14 (20.59%)	
		Age (years)		
Mean ± SD Range	80.38 ± 8.26 (aged 60–98)	84.47 ± 6.94 (aged 66–98)	76.65 ± 7.62 (aged 60–94)	< 0.0001
		Age groups, n (%)		
60–75 years	34 (26.15)	6 (9.68)	28 (41.18)	< 0.0001
75–90 years	84 (64.62)	46 (74.19)	38 (55.88)	0.0292
> 90 years	12 (9.23)	10 (16.13)	2 (2.94)	0.0095
		Education, n (%)		
Primary	31 (23.85)	12 (19.35)	19 (27.94)	0.2512
Vocational	35 (26.92)	12 (19.35)	23 (33.82)	0.0632
Secondary	41 (31.54)	25 (40.32)	16 (23.53)	0.0396
Higher	23 (17.69)	13 (20.97)	10 (14.71)	0.3501
		Marital status, n (%)		
Single	22 (16.92)	18 (29.03)	4 (5.88)	0.0004
Married	25 (19.23)	2 (3.23)	23 (33.82)	< 0.0001
Widowed	83 (63.85)	42 (67.74)	41 (60.29)	0.3773

Table 2. Summary of the quality of life assessment values in particular domains in PDW and NH patients

Domain score in points	NH (n = 62)	PDW (n = 68)	p-value
Physical health			
Mean ± SD	55.27 ± 11.4	59.45 ± 10.19	0.0237
Range	19–81	19–81	
Psychological health			
Mean ± SD	56.25 ± 13.68	58.57 ± 9.87	0.3717
Range	19–81	31–81	
Social relationships			
Mean ± SD	30.53 ± 22.86	38.5 ± 23.93	0.0372
range	0–94	0–94	
Environment			
Mean ± SD	76.12 ± 10.73	75.73 ± 9.85	0.9008
Range	44–100	50–94	

A statistically significant difference was found in the assessment of the QoL in the physical health ($p < 0.02$) and social relationships ($p < 0.04$) domains; PDW patients assessed their QoL in both these domains higher than NH residents.

It was also noticed that a significantly higher QoL in the physical health domain was connected with the participation of the NH residents and the PDW patients in socialised forms of spending the free time, such as chess and/or card games; meetings with friends; looking after grandchildren; cinema outings; choir practice ($p < 0.005$).

Analysis of the results enabled us to observe statistically significant relations between the QoL in the physical health domain and the duration of stay at the NH ($p < 0.02$). The lowest QoL in the physical health domain was found in persons in their first year of stay at the NH and the highest in those who stayed there from two to three years. No statistically significant differences were found in other domains.

Taking into account the effect of the marital status on the QoL of NH residents it was observed that in the social relationships domain it was higher among widows/widowers compared with singles ($p < 0.0034$). QoL assessments in the physical health, environment and psychological health domains were similar in both groups (widowed-single). In the case of NH residents no statistically significant dependences were found between QoL assessment and education as well as QoL assessment and age.

A statistically significant difference in QoL was shown among PDW patients in the social relationships domain depending on the marital status ($p < 0.0002$). Married persons graded their QoL in this area much higher than widows/widowers.

There was also a statistically significant difference in the QoL results in the environment domain depending on the age of the PDW patients ($p < 0.0073$); subjects aged between 75–90 years scored higher than those aged 60–75.

Discussion

The overall assessment of QoL of the NH residents and the PDW patients in our study was average. Both groups also expressed similar satisfaction with their state of health. A medium strong dependence was found between QoL and satisfaction with one's health across the entire studied group, as well as in individual sub-groups. A significant correlation between satisfaction with one's state of health and a subjective assessment of QoL was observed by Waszkiewicz et al. [9]; in a study conducted using the WHOQOL-BREF survey more than half of the elderly assessed their life quality as being at least good, with 5.5% expressing a negative opinion. The differences in QoL assessment were related to gender with men scoring higher than women. Research into the impact of nutrition upon the QoL of the over-60 NH residents and the University of the Third Age (UTA) students showed that most people assessed their QoL positively [10]. The QoL in all areas was assessed better among the UTA students than among the NH residents. The NH residents most often complained about their state of health, unlike the UTA student group who mostly saw it in a positive light. In our study residents who remained in NH for no longer than one year were also unsatisfied with their health conditions. It is not surprising as the worsening of the health status is usually the reason of admission to welfare service institution. In the study conducted by Waszkiewicz et al. [9] just under 45% of respondents indicated satisfaction (at various levels) with their state of health, while 21% voiced strong dissatisfaction.

A significant correlation was also observed between satisfaction with the state of health and gender – men showed more satisfaction in this regard.

We noted significant ties between QoL assessment in individual areas and specific variables, such as: duration of stay at the facility, marital status, age. It was also established that QoL was highest in the environment domain, lower in the psychological health and physical health domains and lowest in the social relationships domain. In the study carried out by Waszkiewicz et al. [9] the highest QoL was observed in the area of social relationships, followed by the environment and the psychological domain with the lowest quality recorded in the physical health domain. In the study conducted by Kurowska and Kajut [11] the highest score was obtained in the environmental domain, followed by the physical health, social relationships and psychological domains. The lowest QoL in the psychological domain was also observed by Zboiny [12]. Kurowska and Kajut [11] did not find statistically significant correlations between QoL and age, which was in agreement with our results, but only with regard to NH residents. In this group of subjects the level of education did not influence the QoL. According to Kurowska and Simon [10] persons with higher education better assessed their own life quality and were more satisfied with their health.

Based on own research it was established that QoL in the physical health domain was higher among persons preferring social forms of spending their free time. The availability of support resulting from membership in social networks is conducive to maintaining high QoL [13]. Kurowska and Kajut [11] point to a correlation between higher QoL in the social area and maintaining contacts with the family or friends. In a Turkish study [14] conducted among the elderly living in their family homes and using institutional assistance QoL as well as satisfaction with the state of health was similar in both groups. Persons living with their family better assessed their QoL in the area of social relationships and the environment. As determined by Garcia et al. [15], deficits in contacts with the family and friends are significantly correlated with a reduction of QoL of the elderly. The study by Xavier et al. [16] indicates that the overall state of health is a significant factor reducing the QoL of elderly patients; a positive role is played by factors such as: physical activity, financial security and participation in family and social life. The impact of exercise upon functional abilities and the QoL of the elderly was also confirmed by others [17].

The majority of respondents in our study presented multiple morbidity, mainly cardio-vascular diseases and skeletomuscular system disorders. The prevalence of multiple chronic conditions among older persons is increasing worldwide and is associated with poor health status [18, 19]. The occurrence of more than four chronic diseases in one NH patient aged above 60 [20] as well as the multiple morbidity in persons above the age of 90 [21, 22] were documented. Four or more chronic diseases predisposes to cognitive disorders or depression [23]. Depression may lead to functional limitations [24], increase the risk of all types of dementia [25] and as a consequence significantly impact the QoL [26] and self-care motivation [27]. Our study revealed that elderly hospitalized at the daily ward presented similar number of diseases as nursing home residents but assessed the physical health domain of their QoL better. They were also more satisfied with their social life. The limitation of our study is a small number of participants but on the other hand up to our best knowledge the comparison of different areas of QoL between PDW patients and NH residents was not conducted before.

Conclusions

The overall QoL of the elderly under the institutional care, both the NH residents and the PDW patients, is at an average level. There exists a significant connection between the QoL assessment and the level of satisfaction with one's state of health. QoL assessment with the use of WHOQOL-BREF differs between individual domains of functioning of the elderly. The study of the QoL results in the elderly population may be used in the process of drawing up individual care and support plans taking into account the deficits and resources of the elderly in specific areas.

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Conflict of interest statement
The authors declare no conflict of interest.

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Informed consent and ethical approval
Informed consent was obtained from all subjects included in the study. The study design was positively evaluated and approved by the Bioethics Committee at Poznan University of Medical Sciences.

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Correspondence address:
Mariola Pawlaczyk
Department of Geriatric Medicine and Gerontology
6 Święcickiego Street, 60-781 Poznan, Poland
phone/fax: +48 618546573
email: mariolapawlaczyk@o2.pl