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Self-evaluation of the Quality of Life of Seniors with Neurological Disorders

Samoocena jakości życia seniorów ze schorzeniami neurologicznymi

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Abstract

Introduction. Quality of life and old age are closely related. Aging is perceived as a destructive, progressive, and irreversible process. This process is caused by biological factors related to physical involution as well as psychosocial factors. Elderly people have difficulties related to deteriorating health.
Aim. The study aims to determine the quality of life of elderly people with neurological disorders.
Material and Methods. The research was conducted in the Lublin Voivodeship, in a group of 111 elderly people diagnosed with neurological diseases. 51.35% of participants were female. The age of the respondents was in the range of 65–95 years. A standardized questionnaire: the WHOQOL-BREF constituted the research tool.
Results. In the examined group of patients, the general quality of life was assessed at an average level of 3.11±1.12, and the assessment of health at the level of 2.81±1.00. The respondents rated the highest the environmental domain (57.05±16.23). The social relationship domain was at an average level; 54.00±24.08, while the psychological one was 46.38±13.16. The physical health domain received the lowest scores (44.53±12.42).
Conclusions. The self-evaluation of the quality of life completed by elderly people with neurological disorders was at a low level. Marital status differentiated the quality of life in the social domain. The residence of the studied seniors influenced the assessment of their overall quality of life. **(JNNN 2019;8(1):11–15)**
Key Words: quality of life, neurological disorders, elderly people

Streszczenie

Wstęp. Jakość życia i starość są ze sobą ściśle związane. Starzenie się postrzegane jest jako proces destrukcyjny, postępujący i nieodwracalny. Proces ten powodują czynniki biologiczne związane z inwolucją fizyczną jak i czynniki psychospołeczne. Osoby starsze mają trudności związane z pogarszającym się stanem zdrowia.
Cel. Celem badań było określenie jakości życia osób w podeszłym wieku ze schorzeniami neurologicznymi.
Materiał i metody. Badania przeprowadzono na terenie województwa lubelskiego, w grupie 111 osób w podeszłym wieku, u których stwierdzono występowanie chorób neurologicznych. W badanej grupie było 51.35% kobiet. Wiek badanych zawierał się w przedziale 65–95 lat. W pracy wykorzystano wystandaryzowane narzędzie badawcze: skalę WHOQOL-Bref.
Wyniki. W badanej grupie pacjentów ogólna jakość życia oceniona została na poziomie średniej 3,11±1,12, a ocena stanu zdrowia na poziomie 2,81±1,00. Badani najlepiej ocenili dziedzinę środowiskową (57,05±16,23). Dziedzina społeczna kształtowała się na poziomie średniej 54,00±24,08, natomiast dziedzina psychologiczna na poziomie 46,38± 13,16. Najniżej badani ocenili dziedzinę somatyczną (44,53±12,42).
Wnioski. Samoocena jakości życia dokonana przez osoby starsze ze schorzeniami neurologicznymi kształtowała się na obniżonym poziomie. Stan cywilny różnicował jakość życia w zakresie dziedziny społecznej. Miejsce zamieszkania badanych seniorów wpływało na ocenę ich ogólnej jakości życia. **(PNN 2019;8(1):11–15)**
Słowa kluczowe: jakość życia, schorzenia neurologiczne, osoby w podeszłym wieku

Introduction

The concept of quality of life is a complex one, and therefore, when defining its components, we should take into account physical, material, social, emotional well-being, and contentment from our productivity. The quality of life model of the Health Promotion Center of The University of Toronto adopts three critical areas of quality of life:

— exist (mentally, physically, spiritually),
— belong (physically, socially, socially),
— to become (in development, leisure, action) [1].

Quality of life and old age are closely related. Aging is perceived as a destructive, progressive, and irreversible process. This process is caused by biological factors related to physical involution as well as psychosocial factors. Older people have difficulties related to deteriorating health. With age, efficiency drops significantly in the case of physical and mental abilities [2].

In the case of health problems, geriatric patients are characterized by multiple comorbidities (multimorbidity), i.e., a condition in which a patient is diagnosed in succession of several diseases interacting with each other. The leading causes of disability and mobility limitations, i.e., mobility, are cardiovascular diseases and diseases of the musculoskeletal system, followed by neurological disorders, diseases of the eye organs, diseases of the hearing organ and other diseases [3].

The study aims to determine the quality of life of elderly people with neurological disorders.

Material and Methods

The research was conducted in the Lublin Voivodeship, on 111 elderly people diagnosed with neurological diseases. The research was carried out according to ethical principles. The respondents expressed their free and informed consent to participate in the study. 51.35% of participants were female. The age of the respondents was in the range of 65–95 years. Table 1 presents the detailed characteristics of the surveyed seniors.

The work employed a standardized research tool: the WHOQOL-BREF questionnaire. The tool is used to assess the quality of life of both healthy and unhealthy people. The questionnaire comprises 26 items. 24 items are divided into four broad domains: physical health, psychological health, social relationships, and environment, and two questions considered as separate, regarding the general perception of the quality of life and subjective general satisfaction with health. The higher the score obtained in the assessment, the better the quality of life assessment [4,5].

Table 1. Characteristics of the study group

Variable	N	%
Gender		
Woman	57	51.35
Man	54	48.65
Age		
65–74 years	53	47.75
75–89 years	52	46.85
90 years and more	6	5.41
Education		
Primary	30	27.02
Secondary	27	24.32
Vocational	43	38.74
Higher	11	9.92
Place of residence		
Village	38	34.23
City	73	65.77
Marital status		
Single	25	22.52
Married	31	27.93
Divorcee	15	13.51
Widow/Widower	40	36.04

The obtained material was subjected to statistical analysis using Statistica. The $p \leq 0.05$ was set as the level of significance, which indicated a statistically significant difference or dependence.

Results

Table 2 presents the assessment of the quality of life of the respondents in individual domains of the WHOQOL-BREF questionnaire. The overall quality of life was assessed at an average level of 3.11±1.12, and the assessment of general health at 2.81±1.00. The respondents rated the environmental domain best (57.05±16.23), and the lowest evaluation was assigned to the physical health domain (44.53±12.42).

The assessment of the quality of life depending on the gender of the respondents was at a diverse level. Women rated higher the overall quality of life, the social domain and the environment. Men, on the other hand, characterize a better quality of life in the area of health, physical and psychological assessment. However, there was no statistically significant difference between gender and assessment of the quality of life (Table 3).

The analysis of the quality of life depending on the education was analyzed. It was found that in the group of people with secondary education the rating was the

Table 2. Quality of life evaluation

Quality of life	Variable		
	M	Me	SD
Overall quality of life (1–5)	3.11	3.00	1.12
General health (1–5)	2.81	3.00	1.00
Physical health (0–100)	44.53	44.00	12.42
Psychological health (0–100)	46.38	44.00	13.16
Social relationships (0–100)	54.00	56.00	24.08
Environment (0–100)	57.05	56.00	16.23

Table 3. The quality of life and the gender of the respondents

Quality of life	Woman		Man		t	p
	M	SD	M	SD		
Overall quality of life (1–5)	3.19	1.14	3.02	1.11	0.92	0.36
General health (1–5)	2.65	1.00	2.98	0.98	–1.74	0.08
Physical health (0–100)	44.37	11.41	44.70	13.51	–0.14	0.89
Psychological health (0–100)	46.02	12.59	46.76	13.84	–0.30	0.77
Social relationships (0–100)	56.82	22.61	51.02	25.41	1.27	0.21
Environment (0–100)	58.89	16.10	55.11	16.28	1.23	0.22

Student's t-test

Table 4. Education and the quality of life of the respondents

Quality of life	Primary		Vocational		Secondary		Higher		H	p
	M	SD	M	SD	M	SD	M	SD		
Overall quality of life (1–5)	2.90	1.24	3.16	1.17	3.22	0.90	3.18	1.16	1.63	0.65
General health (1–5)	2.57	1.17	2.95	0.97	3.04	0.85	2.36	0.81	6.94	0.07
Physical health (0–100)	43.70	12.48	42.88	11.92	47.63	11.36	45.64	16.46	2.19	0.53
Psychological health (0–100)	44.03	13.14	48.05	13.54	44.87	13.22	50.18	11.39	3.66	0.30
Social relationships (0–100)	49.73	25.43	59.35	23.24	51.63	23.00	50.55	25.59	3.08	0.38
Environment (0–100)	52.63	17.70	58.58	16.13	59.41	14.60	57.36	16.04	3.20	0.36

Kruskal–Wallis test

highest in the range of general quality of life (3.22±0.90), general health assessment (3.04±0.85) and in the areas of: physical health (47.63±11.36) and environment (59.41±14.60). People with vocational education obtained the highest scores in the social relationships domain (59.35±23.24). Senior citizens with higher education rated the psychological domain the highest (50.18±11.39). Statistical analysis did not show a significant difference between education and assessment of the quality of life of the seniors surveyed (Table 4).

When analyzing the assessment of the quality of life depending on the marital status of the respondents, it was found that the highest scores were among married respondents. Especially in the domains concerned with the overall quality of life, subjective assessment of general health status, and in each of the constituent domains. However, statistical analysis showed that a statistically significant difference occurred only in case of social relationships domain (p=0.004) (Table 5).

When analyzing the assessment of the quality of life depending on the place of residence of respondents, it was found that people from the urban areas scored higher that rural inhabitants in every dimension of quality of life. However, the statistical difference was significant only in the assessment of the overall quality of life (p= 0.05) (Table 6).

Table 5. The marital status and the quality of life of respondents

Quality of life	Single		Married		Widow/Widower		H	p
	M	SD	M	SD	M	SD		
Overall quality of life (1–5)	3.05	1.13	3.29	1.07	3.02	1.16	0.91	0.64
General health (1–5)	2.85	1.00	3.06	0.96	2.58	1.00	3.88	0.14
Physical health (0–100)	45.25	11.98	46.81	13.33	42.05	12.00	1.41	0.25
Psychological health (0–100)	46.35	12.71	49.06	11.72	44.33	14.53	1.14	0.33
Social relationships (0–100)	54.25	23.01	64.55	24.31	45.58	22.16	5.91	0.004
Environment (0–100)	55.05	15.53	62.29	14.17	55.00	17.79	2.30	0.11

Kruskal–Wallis test

Table 6. The place of residence of respondents and the quality of life of respondents

Quality of life	Village		City		Z	p
	M	SD	M	SD		
Overall quality of life (1–5)	2.81	1.20	3.26	1.05	–1.98	0.05
General health (1–5)	2.78	1.07	2.87	0.98	0.34	0.74
Physical health (0–100)	43.89	12.15	44.86	12.63	–0.45	0.66
Psychological health (0–100)	44.97	12.83	47.11	13.36	–0.68	0.50
Social relationships (0–100)	52.13	26.27	54.97	22.99	–0.72	0.47
Environment (0–100)	52.92	16.92	59.21	15.54	–1.85	0.06

Mann–Whitney U test

Discussion

The concept of health-related quality of life (HRQOL) introduced the medical sciences of Schipper et al. In 1990, defining them as a "functional effect of disease and treatment, subjectively or objectively not perceived by the patient". HRQOL covers four domains: physical condition and physical fitness, mental state, social situation, and economic conditions, somatic experiences [6].

Many authors highlight the need of subjective and objective perspective when analysing the quality of life in modern medicine. Subjective components include such determinants as physical — pain, well-being, ailments; mental — hope, depression, self-esteem, social way of spending free time, job satisfaction; interpersonal — social support, conflicts with your spouse. Objective determinants consist of a health condition based on laboratory tests, a diagnosis related to psychopathology, a socio-economic position — income, housing conditions, the quantity and quality of social relationships. Despite the existence of many definitions of HRQOL, researchers agree that it is a primarily subject to subjective evaluation of the individual. HRQOL is characterized by variability over time, as well as it is influenced by external and internal factors. Besides, its assessment is multidimensional [6].

Original research of the authors found that the surveyed elderly people with neurological disorders assessed the quality of their life at a low level. The lowest respondents assessed their functioning in the physical health domain. Studies by other authors [7,8] indicate a low level of quality of life assessment for people after stroke. On the other hand, research by Jabłońska et al. [9] surveyed patients with a nervous system tumour and participants of the study rated their quality of life very high.

Our research did not uncover any significant relationship between gender and the assessment of the quality of life. Nevertheless, female participants scored higher on the overall quality of life, social relationships, and environment, while men rated their general health, physical health, and psychological health higher. Studies conducted by Iwańczuk et al. [10] also demonstrated no significant differences in the quality of life between women and men after stroke. Correspondingly, the results of the research by Błaszczyszyn et al. [11] did not present any statistically significant difference in the quality of life between women and men.

The results of our research indicated a lack of dependence between the quality of life assessment and the education of the respondents. Nevertheless, participants with secondary education scored the highest on majority of component of the WHOQOL-BREF domains. Canuto et al. [12] obtained different results. The results of their research showed a relationship between education and the assessment of the quality of life.

Our research showed that married respondents rated higher their quality of life compared to single people.

However, this difference was statistically significant only in the social relationships domain; also, the highest number of points was assigned to this domain. Similarly, Zawadzka et al. [8] presented in their research that the respondents scored social relationships domain the highest. Other researchers also confirmed the results of our study [13] claiming that staying in a marriage improves the quality of life. At the same time, some researchers [14] argued that people in marriage show less functional fitness due to the over-protection of their spouse, which significantly lower quality of life.

The results of our research indicated a better quality of life in the respondents from the urban environment. However, the difference was statistically significant only in the aspect of the assessment of the general quality of life. Dębińska and Mraz research [15] also indicated the impact of place of residence on the quality of life; higher scores were assigned by people from urban areas. Likewise, studies by Zawadzka et al. [8] did not present any correlation between the assessment of the quality of life of patients and their place of residence.

Conclusions

The self-evaluation of the quality of life completed by elderly people with neurological disorders was scored as low. Marital status differentiated the quality of life in the social relationships domain. The place of residence of the studied seniors influenced the assessment of their overall quality of life.

Implications for Nursing Practice

The assessment of the quality of life of patients with neurological disorders should be an element of nursing care. Patient making a subjective assessment indicates the directions of nursing intervention, as well as other members of the interdisciplinary therapeutic team. Those results enable an assessment of patients' deficits and aid to plan the therapeutic and caring process. This assessment should be part of the systematically performed Geriatric Comprehensive Assessment.

References

[1] Lada A. Jakość życia seniorów. *Ann UMCS Sect J*. 2018;31(2):331–345.

[2] Szarota Z. *Gerontologia społeczna i oświatowa. Zarys problematyki*. Wydawnictwo Naukowe AP, Kraków 2004.

[3] Car J., Sygnowski T., Gębska-Kuczerowska A., Wysocki M.J. *Epidemiologia niepełnosprawności w podeszłym wieku. Materiały konferencyjne*. PTG, Warszawa 2004.

[4] Jaracz K., Wołowicka L., Kalfos M. Analiza walidacyjna polskiej wersji WHOQOL-100. W: Wołowicka L. (Red.), *Jakość życia w naukach medycznych*. Wydawnictwo Uczelniane AM w Poznaniu, Poznań 2001;291–302.

[5] Jaracz K., Kalfoss M., Górna K., Bączyk G. Quality of life in Polish respondents: psychometric properties of the Polish WHOQOL-Bref. *Scand J Caring Sci*. 2006;20(3): 251–260.

[6] Szewczyczak M., Stachowska M., Talarska D. Ocena jakości życia osób w wieku podeszłym — przegląd piśmiennictwa. *Now Lek*. 2012;81(1):96–100.

[7] Tasiemski T., Knopczyńska A., Wilski M. Jakość życia osób po udarze mózgu — badania pilotażowe. *Gerontol Pol*. 2010;18(3):128–133.

[8] Zawadzka J., Bejer A., Kwolek A. Wpływ wybranych czynników społeczno-demograficznych na jakość życia pacjentów po udarze mózgu — doniesienie wstępne. *Prz Med Uniw Rzesz Inst Leków*. 2014;1:36–46.

[9] Jabłońska R., Wieczorkiewicz-Świtała B., Królikowska A. Jakość życia chorych z guzem układu nerwowego a rodzaj i umiejscowienie nowotworu. *Pielęg Neurol Neurochir*. 2013;2(4):140–148.

[10] Iwańczuk A., Kwolek A., Leszczak J. Jakość życia osób po przebytym udarze mózgu. Badania ankietowe. *Zamoj Stud Mater*. 2012;14(2):89–96.

[11] Błaszczyszyn M., Opara J. Ocena jakości życia w okresie wczesnym po udarze mózgu. *Zamoj Stud Mater*. 2010; 12(1):25–33.

[12] Canuto M.A., Nogueira L.T., Araújo T.M. Health-related quality of life after stroke. *Acta Paul Enferm*. 2016;29(3): 245–252.

[13] Naess H., Waje-Andreassen U., Thomassen L., Nyland H., Myhr K.M. Health-related quality of life among young adults with ischemic stroke on long-term follow-up. *Stroke*. 2006;37(5):1232–1236.

[14] Kauhanen M.L., Korpelainen J.T., Hiltunen P., Nieminen P., Sotaniemi K.A., Myllylä V.V. Domains and determinants of quality of life after stroke caused by brain infarction. *Arch Phys Med Rehabil*. 2000;81(12):1541–1546.

[15] Dębińska M., Mraz M. Jakość życia osób po udarze mózgu. *Med Rodz*. 2016;1(19):14–18.

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