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The quality of life in the most frequently occurring chronic diseases in patients over 60 years of age

Jakość życia w najczęściej występujących chorobach przewlekłych u pacjentów powyżej 60. roku życia

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Abstract

Introduction. *The assessment of the quality of life in the most frequently occurring chronic diseases should be an important element of diagnosing an aging population.* ***Aim***. *Comparing the overall quality of life in patients > 60 years with different chronic diseases – diabetes, hypertension and diseases of the spine and motor system in individual areas.* ***Material and methods***. *WHOQOL-BREF applied during the interview with the patient at SOR Pabianice. The study involved 197 people 58.1% of whom were women and 41.9% men. The average age was (73.92 ± 11.86) years – of whom: 36.54% suffered from hypertension, 34.01% had diabetes, 29.45% of people were diagnosed with diseases of the spine and musculoskeletal system.* ***Results.*** *General quality of in the population was (2.78 ± 0.81) and the overall perception of health (2.49 ± 0.73), both values were at a medium level in all patients. The highest level of overall of quality of life was estimated in patients with the spine/motor system diseases (2.88 ± 0.88), the lowest in patients with diabetes (2.73 ± 0.81). The highest results of the overall perception of health were in patients with hypertension (2.53 ± 0.73). The lowest results were estimated in patients with diabetes (2.46 ± 0.72). There were negative correlations between age and every domain of the WHOQOL. Significant difference in "Physical health" scores occurred between males and females diagnosed with the spine disease (p = 0.044). Males (M = 11.05; SD = 1.32) had lower mean scores in physical health domain than females (M = 11.98; SD = 1.66)* ***Conclusions.*** *Patients with spine/motor system diseases showed the highest overall quality of life, the lowest results quality of life were recorded in diabetic people. The lowest quality of life was assessed in the environmental field in patients with hypertension and the highest quality of life was assessed in the social field and patients suffering from hypertension. (Gerontol Pol 2020; 28; 136-141)*

Keywords*: quality of life, elderly, diabetes, spinal and musculoskeletal diseases*

Streszczenie

Wstęp. *Ocena jakości życia w najczęściej występujących chorobach przewlekłych powinna być istotnym elementem diagnozowania wśród starzejącego się społeczeństwa.* ***Cel.*** *Porównanie ogólnej jakości życia, samopoczucia u chorych na nadciśnienie tętnicze, cukrzycę, choroby kręgosłupa i narządu ruchu.* ***Materiał i metody.*** *WHOQOL-BREF podczas wywiadu z pacjentami w SOR Pabianice. Badanie objęło 197 osób, z czego 58,1% kobiet,41,9% mężczyzn oraz 36,54% pacjentów z nadciśnieniem tętniczym; 34,01% z cukrzycą; 29,45% chorych, u których zdiagnozowano choroby kręgosłupa/narządu ruchu. Średnia wieku u wszystkich badanych to (73,92 ± 11,86) lat.* ***Wyniki.*** *Ogólna jakość życia u wszystkich pacjentów plasuje się na średnim poziomie (2,78 ± 0,81), podobnie ogólne zadowolenie ze zdrowia (2,49 ± 0,73). Najwyższy poziom ogólnej jakości życia szacuje się u pacjentów z chorobami kręgosłupa/narządu ruchu (2,88 ± 0,88 pkt), a najniższy poziom u chorych z cukrzycą (2,73 ± 0,81 pkt).* ***Najwyższe wyniki ogólnego zadowolenia ze zdrowia uzyskali chorzy z nadciśnieniem tętniczym,*** *(2,53 ± 0,73), a najniższe wyniki chorzy z cukrzycą (2,46 ± 0,72). Wiek ujemnie koreluje ze wszystkimi wynikami jakości życia w każdej domenie. Istotna różnica w ocenie jakości życia u chorych z chorobami kręgosłupa/narządu ruchu pomiędzy kobietami a mężczyznami jest na poziomie (p = 0,044). Mężczyźni (M = 1,05; SD = 1,32 w domenie fizycznej jakości życia mają niższe wyniki niż kobiety (M = 11,98; SD = 1,66).* ***Wnioski.*** *Najwyższy poziom jakości życia szacowali pacjenci z chorobami kręgosłupa natomiast najniższy chorzy z cukrzycą. Jakość życia ujemnie koreluje z wiekiem, czyli im wyższy wiek, tym gorsza jakość życia. Wśród pacjentów z chorobami kręgosłupa/narządu ruchu kobiety oceniają wyżej niż mężczyźni jakość swojego życia w domenie fizycznej. (Gerontol Pol 2020; 28; 136-141)*

Słowa kluczowe: *jakość życia, osoby w podeszłym wieku, cukrzyca, nadciśnienie tętnicze, choroby kręgosłupa/narządu ruchu*

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Introduction

Demographic research in highly developed countries, including Poland, in the last ten years has shown a progressive process of increasing the lifespan of older people. This is due to the progress of preventive medicine as well as interventional medicine. However, there are more and more elderly people with various chronic diseases. According to the WHO report, the most common diseases among elderly people are chronic diseases of the circulatory system, hypertension, diseases of the spine and motor organs, respiratory system and diabetes [1]. We can observe an increase in the interest in quality of life research in patients > 60 years who are struggling with chronic diseases, and how they deal with the consequences of a given disease. Doctors, examining the quality of life and assessing, for example, the improvement of mobility, see the effectiveness of the medical interventions. However, recovery is not only the physical parameters of reducing pain, but returning to normal functioning at home, at work, in a society, being free from physical ailments, but also from social and financial problems related to the disease [2]. Often, older people are subject to dangerous injuries due to degenerative changes in the spine, osteoporosis, which results in immobilization. Long-lasting pain hinders normal functioning and such people often need long-term nursing care or the involvement of the patient's family [3]. In the case of diabetics, the situation looks different. Diabetic patients are taught how to dose drugs or insulin from the very beginning of the disease, how to check their blood glucose level and what to eat. Diabetes requires the patient's discipline and diligence, and the patient must first take care of it, because the consequences of untreated diabetes or poor supply of medicines may end tragically [4]. Hypertension seems to be the most common disease both among young and elderly people. Measuring blood pressure does not cause problems and suitable medicine allows normal functioning, working and even practising sport. It turns out, that the illness in physical terms, can be compensated for by the positive mental attitude and good support of relatives [5]. And vice versa, sometimes a bad mental condition can be the reason that a person with a minor chronic illness feels sick. In medicine, quality of life means a holistic view of the patient's condition and strengthening all aspects of their life that directly or indirectly affect their health [6]. Disease may lead to the loss of a job, and even the reduction of social life, which in turn leads to loneliness and social alienation [7]. The assessment of health-related quality of life is also useful when assessing the impact of treatment on the patient, drug effects, treatment techniques, rehabilitation and how much they allow a return to a normal life, which in general, is understood as a return to fulfilling the existing social roles [8].

Aims

Comparing the overall quality of life, well-being of patients > 60 years with different chronic diseases - diabetes, hypertension and diseases of the spine and motor system in individual areas.

Material and methods

The research was conducted from 13.03.2015 to the end of 2016 in the Hospital Emergency Department in Pabianice. The method of recruitment people to the examined group consisted in an interview with a sick person staying in the Emergency Medical Center, patients reported to the hospital in person or were brought by a team of Emergency Medical Services. During the interview, each patient completed the WHOQOL-BREF questionnaire. The questionnaire contained a total of 26 questions and basic information about the surveyed: age, sex, education, marital status. In total, there were 197 patients: 58.1% were women and 41.9% men. The average age was 73.92 ± 11.86 years.

Results

Jamovi (v1.2.8) and IMB SPSS (v25) were used to analyse the data and answer questions stated in this paper. First of all, basic descriptive statistics were computed as well as Shapiro-Wilk test for normality of variables' distributions. Test results were significant in all cases despite one. This means the distributions of variables were different in shapes of the Gaussian curve. Nonetheless distributions were assumed normal based on the absolute value of skewness not greater than 2 (George, Mallery, 2016), thus parametric models were used to verify the hypothesis. Descriptive statistics and Shapiro-Wilk test are shown in table I.

Average results of general quality of life in all patients mean "neither good nor bad" but the highest level showed in patients with spine/motor system diseases (2.88). Regarding general well-being – health satisfaction, the biggest group of respondents determined a low level. The highest results were in respondents with hypertension (2.53). On the basis of the WHOQOL-BREF questionnaire, the highest results were obtained in the social field in people with the hypertension (11.96), the lowest in the environmental field also in patients with hypertension (10.79). In other patients results were at average level in all fields.

Table I. Quality of life

WHOQOL	M	Me	Sd	p
Patients with Hypertension n = 72				
Overall perception of quality of life	2.75	3.00	0.75	<0.001
Overall perception of health	2.53	2.00	0.73	<0.001
Physical health	11.49	11.43	1.88	0.009
Psychological	11.14	11.33	1.46	0.002
Social relationships	11.96	12.00	2.38	<0.001
Environmental	10.79	10.50	1.68	0.026
Patients with Diabetes n = 67				
Overall perception of quality of life	2.73	3.00	0.81	<0.001
Overall perception of health	2.46	2.00	0.72	<0.001
Physical health	11.60	10.86	1.76	0.021
Psychological	11.35	11.33	1.6	<0.001
Social relationships	11.76	12.00	1.95	<0.001
Environmental	11.08	10.5	1.72	<0.001
Patients with Spine and motor system diseases n = 58				
Overall perception of quality of life	2.88	3.00	0.88	<0.001
Overall perception of health	2.47	2.00	0.73	<0.001
Physical health	11.57	10.86	1.57	0.039
Psychological	11.23	11.33	1.79	<0.001
Social relationships	11.84	12.00	2.4	0.022
Environmental	11.23	11.00	1.88	0.229
All Patients n = 197				
Overall perception of quality of life	2.78	3.00	0.81	<0,001
Overall perception of health	2.49	2.00	0.73	<0.001
Physical health	11.55	10.86	1.75	<0.001
Psychological	11.24	11.33	1.60	<0.001
Social relationships	11.86	12.00	2.24	<0.001
Environmental	11.02	10.50	1.75	<0.001

Table II. Correlation coefficients for age and quality of life

		1.	2.	3.	4.	5.	6.	7.
1. Age	Spearman's *rho*	-						
	p-value	-						
2.Overall of quality of life	Spearman's *rho*	-0.25	-					
	p-value	<0.001	-					
3. Overall well-being	Spearman's *rho*	-0.15	0.69	-				
	p-value	0.031	<0.001	-				
4. Physical health	Spearman's *rho*	-0.14	0.47	0.47	-			
	p-value	0.053	<0.001	<0.001	-			
5. Psychological	Spearman's *rho*	-0.17	0.42	0.37	0.46	-		
	p-value	0.016	<0.001	<0.001	<0.001	-		
6. Social interactions	Spearman's *rho*	-0.18	0.47	0.35	0.36	0.49	-	
	p-value	0.013	<0.001	<0.001	<0.001	<0.001	-	
7. Environmental	Spearman's *rho*	-0.28	0.60	0.49	0.55	0.58	0.60	-
	p-value	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	-

Relationship between age and quality of life domains

A Spearman's rank-order correlation was run assess the relationship between age and quality of life. There were a statistically significant weak negative correlation between age and every dimension of WHOQOL except physical health. Correlation coefficients are shown in table II.

Table III. Two-way analysis of variance results for differences in WHOQOL subscales scores

		F	*df*	*p*	η^2
Gender	Overall perception of quality of life	0.00	1	0.966	0.00
	Overall well-being	0.26	1	0.611	0.00
	Physical health	0.01	1	0.910	0.00
	Psychological	0.88	1	0.348	0.00
	Social interactions	0.01	1	0.934	0.00
	Environmental	0.22	1	0.642	0.00
Diagnosis	Overall perception of quality of life	0.45	2	0.637	0.01
	Overall well-being	0.18	2	0.838	0.00
	Physical health	0.04	2	0.957	0.00
	Psychological	0.27	2	0.767	0.00
	Social interactions	0.32	2	0.729	0.00
	Environmental	1.01	2	0.367	0.01
Gender * Diagnosis	Overall perception of quality of life	0.83	2	0.437	0.01
	Overall well-being	0.01	2	0.988	0.00
	Physical health	3.88	2	0.022	0.04
	Psychological	0.21	2	0.815	0.00
	Social interactions	1.59	2	0.206	0.02
	Environmental	0.06	2	0.944	0.00

Differences in quality of life based on participants' diagnosis and gender

A two-way ANOVA was conducted to examine the effects of gender and diagnosis on quality of life. Residual analysis was performed to test for the assumptions of the two-way ANOVA. Homogeneity of variances was assessed by Levene's test. There were no outliers. Residuals were normally distributed ($p > .05$) and there was homogeneity of variances in every case. There were no statistically significant main effects both for diagnosis and gender. There was a statistically significant interaction between gender and diagnosis. Therefore, an analysis of simple main effects was performed. There was a statistically significant difference in mean "Physical health" scores between male and female diagnosed with spine disease ($p = 0.044$). It explained 4% of variance. Males ($M = 11.05$; $SD = 1.32$) had lower mean scores in physical health domain than females ($M = 11.98$; $SD = 1.66$). This was the only statistically significant simple main effect. Results are shown in table III.

Discussion

Many authors examine the quality of life in chronic diseases for patients of all ages. This is evidence that the interest has increased not only in the basic disease but in increasing the well-being of the patient in every area of their life [9]. Patients with hypertension often adapt to their illness and classify their quality of life as satisfactory. Own research also shows medium results (2.75 ± 0.75). The quality of life in the environmental field among those suffering from hypertension (10.79 ± 1.68 points) was the lowest, the highest results were among patients with hypertension in social relationships (11.96 ± 2.38). It can be concluded, that despite the development of technological possibilities, the quality of life in various chronic diseases generally decreases. The lowest quality of life is assessed in the psychological field- patients worry about their health about the danger of wrongly selected treatment [10]. Many authors also pay attention to depression [11]. The lowest results in this field declared patients with hypertension (11.14 ± 1.46). Hypertension can lead to a stroke. A few patients had suffered from ischemic stroke, so they were afraid of not getting another one. Some showed that overall quality of life after stroke was also at a medium level (3.22 ± 0.82) [12].

Own research shows that most of patients with diabetes classify their quality of life as "neither good nor bad" at a medium level (2.73 ± 0.81points). According to available literature 6.7% of diabetic patients indicated poor health [13], or medium level- perception of quality of their life (3.62) and overall perception of health (2.74 ± 0.74 points) [14], and the same quality of life assessed in a medium level measured by another questionnaire for example SF-36 [15,16] .

Patients suffering from diseases of the spine, the musculoskeletal system and different degenerations need help, often in a larger range than patients with diabetes [17,18]. Spinal pain and dependence on medication, the impossibility of free movement greatly reduces the quality of life [6,19]. In patients with spinal and musculoskeletal diseases in own research overall quality of life was (2.88 ± 0.88) and declared rather low quality in the physical field (11.57 ± 1.57 points). Overall quality of life in other research was (3.33 ± 0.81) [17]. It means an upward trend in the number of people with low quality of life. Similarly, literature studied showed 46% are the people with low quality of life caused by physical disability. According to the available literature 66.1% determined their quality of life as low in the physical field [20] or (9.93 ± 1.93) [4]. In own results there are significant differences between males and females, males had lower scores than females, similarly according other authors [18]. Greatest correlations are visible in people with severe back pain, the greater the pain, the lower the quality of life (13.88 ± 2.77) [21]. Many studies show that patients can also endure the disadvantages of physical disability when they have social support. In the own study, the quality of life in the psychological field was rated lowest in the respondents with spine or motor system disease (11.23 ± 1.79 points). In this research the results were at the similar level of 60% [3]. Therefore, health programs for people > 60 should be laid in such a way so that they could notice the positive sides of their lives despite illnesses and other difficult life situations [10]. Maintaining good health requires regular information from the medical staff or mass media, supporting from others, as well as the ability to convince oneself in caring for one's own health. We should convince the society that caring for such patients, especialy elderly and chronically ill people, lying and living alone is our responsibility [19]. The health care financing sector should secure financial resources for the retirement period and introduce additional care insurance systems. The availability of doctors and the potential of long-term care should be increased, medical standards and procedures how to deal with various chronically ill patients and environmental education of patients should be introduced. The main aim is to maintain the highest quality of life and to prevent from diseases and disabilities [2,22].

Conclusions

1. Patients with spine/motor system diseases showed the highest overall quality of life and diabetic people were the most satisfied with their well-being.
2. The lowest quality of life was assessed in the environmental field in patients with hypertension and the highest quality of life was assessed in the social field and patients suffering from hypertension.
3. There was a statistically significant weak negative correlation between age and every dimension of WHOQOL, except the physical field.
4. Statistically significant difference occurred in "Physical health" scores between male and female diagnosed with spine disease ($p = 0.044$). Males ($M = 11.05$; $SD = 1.32$) had lower mean score in physical health domain than females ($M = 11.98$; $SD = 1.66$)

Conflict of interest
None

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