

The chosen determiners of the quality of life of people over 60 years old in Poland and Slovakia

Bożena K. Kowalczyk¹, Bożena Zawadzka², Lucia Demjanovič Kendrová³

¹Faculty of Physical Education and Security Sciences, University of Applied Sciences, Nowy Sącz, Poland

²Medical Academy of Applied and Holistic Sciences, Warsaw, Poland

³Department of Physiotherapy, Faculty of Health Care, University of Presov, Slovakia

Medical Studies 2025; 41 (4): 395–404

DOI: <https://doi.org/10.5114/ms.2025.157984>

Key words: elderly people, geriatrics, quality of life, late-life.

Abstract

Introduction: All over the world society is growing old, and with age health is deteriorating. The research of the subjective evaluation of older people's quality of life in sociodemographically similar countries is an important cognitive factor that influences the improvement of medical workers' ways of behaviour. It stimulates the search for alternative ways of supporting people over 60 years of age, taking into account individual needs.

Aim of the research: In the research an answer to the following question was sought: do sociodemographic factors as well as factors connected to the level of fitness and body mass indicator influence the quality of life of people over 60 years of age in Poland and Slovakia.

Material and methods: This research was applied to a group of 1534 people over 60 years of age who were staying at home. The research was based on the author's questionnaire and standardised research tools: Timed Up and Go (TUG) test, 30-Second Chair Stand test, and the WHOQOL-BREF questionnaire for evaluating the quality of life. A significance level of 0.05 was assumed in all tests.

Results: On the level of significance $p < 0.001$ between the quality of life in the psychological sphere and the analysed variables there were: people at the age of 60–74 years, males, living in cities, married, overweight, who did not do the TUG test, or did it within < 10 s.

Conclusions: Independent from the analysed sociodemographic factors, the quality of life in the psychological sphere was significantly lower in the Polish group than in the group from Slovakia.

Introduction

Growing old is a natural process, which is analysed by many specialists on many different levels. It is an unavoidable process leading to several adverse changes, and therefore the necessity of creating and implementing effective rehabilitation programs is constantly on the rise. They are supposed to make some of the adverse changes of old age less troublesome. Monitoring health in the case of old-age people is becoming important [1].

The data presented by Central Statistical Office show that more than 75% of the old people from Poland do not engage in any physical activity, which might improve their independence, and as a result their quality of life. This information does not augur well for the future especially because in 2008 there were about 13% of people older than 65 years and it was predicted that by 2030 this percentage will have risen to 21.1%; however, presently 25.5% of all the people in Poland are older than 65 years [2, 3]. The number of people older than 60 years in the Republic of Slovakia in 2020 was 23.94%. In 2050, 37.4% of all the people

will be older than 60 years, and in Poland there will be 40% of people older than 60 years [4].

Due to medical progress as well as to the quality and standard of life, people live longer and longer, and because of this the number of old people is on the rise [5]. Because society is growing old, many European countries, including Poland and Slovakia, are dealing with many socio-economic problems [6]. The data concerning the quality of life in relation to health connected to socio-demographic variables can be used to assess the present health of old people and to identify people who are in danger of having a low-quality life [7]. Presently, old people cannot count on their family's support due to the fact that there are fewer and fewer extended families. This is caused by modern lifestyle and young people's greater mobility, which is why it is vital that old people's biological, psychological, and social needs are satisfied [8]. Such a holistic approach to old people helps to improve the quality of their lives.

Aim of the research

The aim was to determine the correlation of the influence of sociodemographic factors as well

as the factors connected to the level of fitness and the body mass index (BMI) indicator on the quality of life of people at the age of more than 60 years old in Poland and in Slovakia.

On the start of the research, it was assumed that knowing more about the physical and social determinants of life quality of people over 60 years old in Poland and in Slovakia can be used in educational programs as well as in medical and social services in both countries leading to the improvement of their effects in favour of elderly adults.

Material and methods

The qualification was carried out during routine physiotherapist's visits in elderly people's houses, presenting to them all the aim of the research, ensuring their anonymity, and asking them to give their consent to take part in the research. The research consisted of filling in a specially prepared questionnaire and doing the Timed Up and Go (TUG) and 30-Second Chair Stand tests. The patients were informed that despite their initial consent they could quit participation in the research at any time without any consequences. Voluntary return of filled-in questionnaires was seen as conscious consent to take part in the research. The evaluation of the level of functional prowess was done in The Centre of the Daytime Stay in Nowy Targ and in Presova.

The following were the criteria of research inclusion: people more than 60 years old living at their home, whose mental prowess and verbal communication were on a level enabling them to take part in the research without other people's help, as well as the patient's conscious and voluntary consent to take part in the research.

In the research the author's questionnaire was used, which comprised 7 questions, including one open question and 6 closed questions. Moreover, in the research standardised research tools were used: the TUG test, the 30-Second Chair Stand test, and the WHOQOL-BREF questionnaire.

The WHOQOL quality of life questionnaire was prepared by an international Quality of Life Research Team, which is part of the World Health Organisation, with the intent of creating a universal research tool that would be independent from cultural differences. The evaluation of life quality of the researched group was done according to the WHOQOL-BREF questionnaire, which comprises 26 closed questions with scores of 1–5 points, and enables quality of life profile to be obtained in 4 fields: motor, psychological, social, and environmental. Two of the questions refer to the self-evaluation of the global perception of life quality (Q1) and the general perception of one's health (Q2), and they are individually analysed. The scoring of the fields is positive – the more the points, the better the quality of life. Raw results were changed to the range 0–100 [9].

To evaluate the general fitness and risk of a fall the TUG test was used. The studied person's objective was to rise from a chair located by a wall with a seat 46 cm high from a sitting position, with their back against the wall, and walking a distance of 3 m, then turning 180°, returning to the chair, and sitting down again. The studied person was asked to perform this task as fast as they could. After describing it to them twice, and after a test attempt, the patient did the test twice. The time was measured with a stopwatch. For the analysis the attempt was used during which the patient scored a better result. The people who performed the task in longer than 20 s and had to use somebody else's help have a high risk of falls; those, however, who used technical help (a cane, a walker) have a medium risk of falls. Little risk of falls applies to the people who did the test in less than 20 s and did not use any help [10].

The next stage was to perform a functional 30-Second Chair Stand test called the Functional Strength Test (FS). The test is helpful in evaluating the functional state of elderly people who are in danger of losing physical fitness and mobility. FS test is an adequate research tool enabling not only a fast evaluation of lower limb strength but also the evaluation of functional prowess of elderly people, thus making it possible to monitor the process of medical rehabilitation. The studied senior, from a 43 cm high chair without armrests, taking up half the sitting space with a straight back and feet on the floor, with their hands crossed at the wrists and resting against the chest, was supposed to stand up and sit down for 30 s as fast as possible. The obtained number of times they did that task was counted according to the norms applied for the gender and age of the studied person [11].

Statistical analysis

Statistical analysis was performed using SPSS 20 software. Data analysis included comparing the results in different groups of subjects according to the type of variable. A significance level of 0.05 was assumed in all tests.

Results

The objective research comprised a group of 1534 people who were over 60 years of age and stayed at home. There were 831 people from Poland and 703 people from Slovakia. The group from Poland comprised 64.26% women and 35.74% men, whereas the group from Slovakia consisted of 60.17% women and 39.83% of men. The average age of the Polish adult elderly people was 70 ± 7.3 years, whereas for the people from Slovakia it was 73 ± 6.6 years. Table 1 contains detailed data regarding the characteristics of the studied group.

While evaluating and comparing life quality regarding gender, a statistically significant correlation

was discovered. On the basis of statistical analysis in terms of evaluating the global perception of life quality (Q1) and the perception of health (Q2) and also in terms of the 4 fields, statistically significant differences in both groups were discovered. In the group of men from Slovakia the level of life quality in terms of psychological and environmental spheres was statistically significantly higher than in the group from Poland. In the case of women from Slovakia the level of life quality in terms of the psychological sphere was statistically higher than in the group of women from Poland; however, in terms of Q1, Q2, and the physical sphere of life quality it was significantly statistically higher than in the group of women from Poland than in the group of women from Slovakia (Table 2).

Statistically significant differences were observed in the range between age and the evaluation of the studied people's life quality. The general perception of life quality (Q1) and health (Q2) as well as life quality regarding the physical sphere of people at the age of 60 to 74 years was statistically higher in Poland than in Slovakia. However, regarding the psychological and environmental spheres the level of life quality was higher in Slovakia. In the group of people older than 90 statistically significant differences of life quality were observed regarding the general perception of life quality and the psychological sphere in the group of elderly people from Slovakia as opposed to elderly people from Poland (Table 3).

In the further part of the research correlations between place of residence and the evaluation of life quality of elderly people from Slovakia and Poland were analysed. The analysis showed a correlation between the place of residence and life quality in terms of satisfaction from life (Q1) and health (Q2) and in the physical and psychological spheres among people from cities and villages, but in the social and environmental spheres only among people from cities. In terms of the satisfaction from life and health, and in the physical and social sphere, the studied people from Poland showed a statistically higher life quality than people from Slovakia (Table 4).

In the case of the satisfaction from life and health, and different spheres of life quality, statistically significant differences between the studied elderly people from Poland and Slovakia were observed considering marital status. Evaluating and comparing life quality and marital status it was noted that the satisfaction from life and health was higher in the Polish group; however, in the psychological and environmental spheres it was higher in the group from Slovakia (Table 5).

It was observed that there is a statistically significant correlation between running a household and evaluation of their life quality. Depending on running a household, the group from Poland got higher results in terms of satisfaction from life and health and in the physical sphere. However, it was significantly

Table 1. The characteristics of the studied population

Sociodemographic data	Poland		Slovakia	
	<i>n</i>	%	<i>n</i>	%
Gender				
Men	297	35.74	280	39.83
Women	534	64.26	423	60.17
Education				
Primary	141	16.97	107	15.22
Vocational	355	42.72	225	32.01
Secondary	244	29.36	280	39.83
University	91	10.95	91	12.94
Place of residence				
City	429	51.69	325	46.23
Village	401	48.31	378	53.77
Age				
60–74	617	74.25	435	61.88
75–89	209	25.15	256	36.42
> 90	5	0.60	12	1.71
Marital status				
Single	52	6.26	34	4.84
Married	486	58.48	397	56.47
Divorced	128	15.40	31	4.41
Widowed	165	19.86	241	34.28
Family status				
Single	154	18.53	185	26.32
Only with a partner	278	33.45	280	39.83
With a family	368	44.28	238	33.85
With a partner and children	31	3.73	0	0
BMI				
Underweight	7	0.84	5	0.71
Correct	260	31.29	174	24.75
Overweight	363	43.68	360	51.21
Obesity I deg.	148	17.81	115	16.36
Obesity II deg.	53	6.38	49	6.97
TUG test				
Didn't do it	9	1.08	8	1.14
< 10 s	346	39.83	160	22.76
10–19 s	314	37.79	380	54.05
20–29 s	71	8.54	86	12.23
≥ 30 s	91	10.95	69	9.82
30-Second Chair Stand test				
Below average	393	47.29	409	58.18
Average	372	44.77	234	33.29
Above average	66	7.94	60	8.53

n – number of studied people, % – percentage of the whole studied group.

Table 2. Life quality of elderly people according to WHOQOL-BREF vs, the gender of elderly people from Poland and Slovakia

Life quality	Quality of life WHOQOL-BREF – gender					
	Men		U/p	Women		U/p
	Poland	Slovakia		Poland	Slovakia	
	M ± SD (Me)			M ± SD (Me)		
Q 1	3.76 ±0.81 (4)	3.65 ±0.82 (4)	38323.5 0.075	3.82 ±0.77 (4)	3.60 ±0.76 (4)	93395.5 0.000
Q 2	3.27 ±0.93 (3)	3.19 ±0.95 (3)	39265.0 0.224	3.29 ±0.90 (3)	3.10 ±0.90 (3)	100243.0 0.002
Physical sphere	64.85 ±18.05 (69)	62.48 ±18.45 (63)	38183.5 0.088	64.93 ±17.03 (69)	60.57 ±18.57 (63)	98051.0 0.000
Psychological sphere	62.36 ±16.41 (69)	67.92 ±16.70 (69)	33997.0 0.000	61.87 ±15.80 (63)	64.85 ±16.20 (69)	101089.0 0.005
Social sphere	66.08 ±17.71 (69)	64.90 ±17.53 (69)	40035.5 0.434	64.90 ±17.07 (69)	64.65 ±17.62 (69)	112608.5 0.937
Environmental sphere	68.35 ±13.37 (69)	70.57 ±16.18 (72)	37551.0 0.042	68.60 ±13.07 (69)	69.54 ±15.83 (69)	108095.0 0.249

M – medium, ± SD – standard deviation, Me – median, U – Mann-Whitney test, p – level of statistical significance.

Table 3. Correlations between life quality according to WHOQOL-BREF and the age of elderly people from Poland and Slovakia

Life quality	Life quality WHOQOL-BREF – age								
	60–74 years			75–89 years			> 90 years		
	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p
Q 1	3.85 ±0.79	3.71 ±0.75	118851.5 0.000	3.67 ±0.74	3.46 ±0.82	22998.0 0.004	3.40 ±0.89	3.58 ±0.66	15702.0 0.000
Q 2	3.36 ±0.89	3.25 ±0.90	124205.0 0.029	3.04 ±0.90	2.94 ±0.91	24821.0 0.158	3.00 ±0.00	3.50 ±1.08	18063.0 0.098
Physical sphere	67.53 ±17.12	64.91 ±17.73	121810.5 0.010	57.59 ±15.76	55.39 ±18.43	24803.0 0.173	45.20 ±17.64	58.33 ±17.16	18701.0 0.306
Psychological sphere	63.34 ±15.98	68.94 ±16.42	107408.5 0.000	58.45 ±15.53	61.38 ±15.51	24340.5 0.091	52.60 ±16.47	62.08 ±14.79	17493.5 0.038
Social sphere	67.01 ±17.12	67.03 ±17.55	133831.5 0.939	60.50 ±16.93	61.33 ±16.79	25928.5 0.562	58.80 ±18.17	55.08 ±20.99	18553.0 0.246
Environmental sphere	69.22 ±13.27	71.32 ±16.22	122313.0 0.013	66.62 ±12.62	67.82 ±15.41	25216.0 0.282	60.00 ±13.58	65.75 ±13.56	18325.5 0.177

M – medium, ± SD – standard deviation, Me – median, U – Mann-Whitney test, p – level of statistical significance.

higher in the group from Slovakia in terms of the psychological sphere (Table 6).

The obtained results in terms of satisfaction from life and health and in the physical sphere show a statistically significant drop in the life quality of the people from Slovakia in relation to the studied people from Poland regarding the level of education. Welfare was better evaluated by people with the highest level of education, so it can be assumed that investment in education results in a higher standard of living (Table 7).

On the basis of the results obtained from the analysis, it was observed that there was a correlation between BMI and the level of life quality. Respondents from Slovakia felt a significantly lower life quality than respondents from Poland in the sphere of individual general perception of life quality (Table 8).

Studying the significance for satisfaction from life and grouping variable: the result of the test of rising from a chair showed that groups with functional state below average differ statistically significantly. There-

Table 4. Correlations between life quality according to WHOQOL-BREF and the place of residence of elderly people from Poland and Slovakia

Life quality	Life quality WHOQOL-BREF – place of residence					
	City			Village		
	Poland	Slovakia	U/p	Poland	Slovakia	U/p
Q 1	3.81 ±0.77	3.62 ±0.83	60691.5 0.000	3.80 ±0.79	3.62 ±0.74	65132.5 0.000
Q 2	3.26 ±0.90	3.11 ±0.94	63235.5 0.020	3.30 ±0.91	3.16 ±0.90	69074.0 0.024
Physical sphere	65.02 ±17.15	61.87 ±18.54	62379.0 0.010	64.74 ±17.67	60.87 ±18.54	67074.5 0.005
Psychological sphere	62.03 ±15.90	66.05 ±16.77	60262.0 0.000	62.03 ±16.16	66.09 ±16.20	65277.0 0.001
Social sphere	65.05 ±17.53	63.62 ±18.03	67011.5 0.360	65.60 ±17.08	65.71 ±17.13	75442.0 0.911
Environmental sphere	68.27 ±13.18	69.81 ±16.30	64915.5 0.100	68.77 ±13.17	70.07 ±15.69	71379.0 0.156

M – medium, $\pm$ *SD* – standard deviation, *U* – Mann-Whitney test, *p* – level of statistical significance.

fore, the studied people over 60 years old from Poland have a higher level of satisfaction from life. Satisfaction from health was higher in the group of Polish elderly people with an average functional state. Regarding life quality in the somatic sphere, a higher level of life quality was observed in the group of Polish elderly people who, in the test of rising from a chair got an average level of functional fitness. However, a statistically higher life quality in the group of elderly people from Slovakia was observed in the psychological sphere independently of the level of functional fitness, and in the environmental sphere in groups with a fitness state lower or higher than the average (Table 9).

Satisfaction from life was higher in Polish elderly people, but the differences were significant only in the groups who did the task in less than 29 s. Satisfaction from life was also higher in Polish groups of elderly people who did the task in less than 10 s. Life quality in the somatic sphere was higher in Polish groups of elderly people, but the difference was significant in the trust range $\alpha = 0.1$, on the significance level $p = 0.055$, only in the group who did the task in less than 10 s. In the psychological sphere a higher life quality was observed in the groups of elderly people from Slovakia, but the differences were significant only in groups who did the task in less than 19 s (Table 10).

Discussion

Measuring life quality is an inseparable part of the process of caring for elderly people [12]. Regardless from the fact that aiming at a good life quality is an important aspect in every decade of life, with the rising costs of healthcare and social care caused by a rising frequency of suffering from many diseases

and disabilities, this problem is becoming especially important in the group of people of over 60 years old [13]. The objective of this research was to identify all the differences in the subjective life quality of elderly people of over 60 years old from Poland and Slovakia in relation to socio-demographic factors, the level of fitness, and body mass indicator.

In the research by Wróblewska *et al.*, gender did not affect the life quality of the examined people [14]. Sováiov Soósová's research of the people over 60 years old living in the Koszyce region in Slovakia also do not show any correlation between gender and life quality [15]. However, our own research results show that there is a cause and effect relationship between gender and a subjective evaluation of life quality among the examined group. Research by Ćwirlej-Sozańska *et al.* done in a group of 973 respondents at the age of 60–80 years showed that gender has an impact on the general perception of health (Q2) and on the social sphere [16]. Racziewicz *et al.* showed in their research that men of 90 years old or more said their health and life quality were better than did women of the same age [13]. The results of the analysis by Abramowska-Kmon *et al.* show that people at the age of 65 years or older living in Slovakia, independently from their gender, said that their self-evaluation of health is higher than the people living in Poland [17]. However, the results of our own analysis showed a significantly higher level of life quality among the studied people independently from gender in the group in Slovakia only in the psychological sphere. Age had an impact on the life quality of the participants in all spheres of life and the global perception of life quality (Q2) in the research done by Ćwirlej-Sozańska *et al.* [16]. Racziewicz *et al.* [13] in the group of people

Table 5. Correlations between life quality according to WHOQOL-BREF and the marital status of elderly people from Poland and Slovakia

Life quality	Life quality WHOQOL-BREF – marital status											
	Single			Married			Divorced			Widow/widower		
	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p
Q 1	3.35 ±0.88	3.47 ±0.92	780.0 0.325	3.90 ±0.74	3.77 ±0.74	86424.0 0.003	3.73 ±0.86	3.32 ±0.70	1386.5 0.005	3.72 ±0.73	3.42 ±0.79	15702.0 0.000
Q 2	2.98 ±0.91	3.35 ±1.12	701.5 0.093	3.39 ±0.90	3.20 ±0.91	84710.5 0.001	3.15 ±0.88	3.16 ±0.96	1967.5 0.940	3.16 ±0.89	3.00 ±0.79	18063.0 0.098
Physical sphere	57.75 ±17.51	63.94 ±18.78	669.5 0.056	68.04 ±16.68	63.89 ±17.60	82057.0 0.000	63.31 ±16.68	60.65 ±19.14	1841.5 0.532	59.13 ±17.75	56.83 ±19.16	18701.0 0.306
Psychological sphere	54.42 ±18.29	61.29 ±17.69	690.0 0.084	64.46 ±15.22	69.56 ±15.26	79241.0 0.000	61.01 ±16.32	61.84 ±17.41	1901.0 0.715	58.13 ±15.81	61.54 ±16.75	17493.5 0.038
Social sphere	48.33 ±18.24	62.85 ±19.28	458.5 0.000	70.33 ±14.68	67.3 ±16.99	88631.0 0.034	60.58 ±18.72	59.52 ±14.37	1837.0 0.516	59.59 ±16.88	61.48 ±18.00	18553.0 0.246
Environmental sphere	62.71 ±16.80	69.03 ±15.58	722.5 0.150	69.79 ±12.66	71.79 ±15.00	88478.5 0.032	68.58 ±13.07	63.06 ±16.36	1601.5 0.092	66.52 ±12.78	67.93 ±17.07	18325.5 0.177

M – medium, $\pm$ SD – standard deviation, *U* – Mann-Whitney test, *p* – level of statistical significance.

Table 6. Correlations between life quality according to WHOQOL-BREF and family status of elderly people from Poland and Slovakia

Life quality	Quality of Life WHOQOL-BREF – family status											
	Single			Only with a partner			With a family			With a partner and children		
	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p
Q 1	3.48 ±0.88	3.41 ±0.77	13377.5 0.338	3.81 ±0.81	3.72 ±0.78	35900.0 0.069	3.91 ±0.69	3.45 ±0.83	12494.0 0.000	4.00 ±0.57	3.82 ±0.71	1877.0 0.232
Q 2	2.98 ±0.88	3.08 ±0.94	13338.0 0.329	3.29 ±0.92	3.09 ±0.94	33973.5 0.005	3.37 ±0.88	3.09 ±0.90	15022.0 0.002	3.55 ±0.76	3.37 ±0.86	1881.0 0.287
Physical sphere	58.55 ±17.89	59.82 ±18.77	13468.5 0.431	65.61 ±17.68	60.88 ±19.13	33306.5 0.002	66.39 ±16.69	56.83 ±19.34	13376.0 0.000	72.35 ±11.80	67.61 ±14.59	1664.5 0.058
Psychological sphere	55.9 ±16.87	61.79 ±16.79	11426.0 0.002	63.33 ±16.12	66.59 ±16.13	34878.0 0.027	63.28 ±15.10	63.22 ±15.24	18508.5 0.949	66.42 ±14.27	72.85 ±15.35	1578.0 0.024
Social sphere	54.57 ±19.65	59.90 ±18.30	11893.0 0.010	66.09 ±16.94	66.00 ±16.9	38819.0 0.899	68.73 ±14.61	63.45 ±17.45	15408.5 0.007	71.39 ±16.31	69.66 ±16.46	2010.0 0.638
Environmental sphere	63.55 ±14.58	67.41 ±16.72	12100.0 0.020	69.01 ±13.10	70.12 ±15.76	37481.0 0.404	69.79 ±12.08	69.94 ±16.49	17881.0 0.556	73.55 ±12.85	73.01 ±14.53	2092.0 0.897

M – medium, $\pm$ SD – standard deviation, *U* – Mann-Whitney test, *p* – level of statistical significance.

Table 7. Correlations between life quality according to WHOQOL-BREF vs. the level of education of elderly people from Poland and Slovakia

Life quality	Life quality WHOQOL-BREF – education											
	Primary			Vocational			Secondary			University		
	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p
Q1	3.75 ±0.83	3.36 ±0.86	5655.0 0.000	3.78 ±0.74	3.52 ±0.81	32444.5 0.000	3.85 ±0.79	3.73 ±0.73	30594.5 0.020	3.85 ±0.87	3.80 ±0.73	3925.0 0.502
Q2	3.25 ±0.86	2.93 ±0.97	6040.0 0.005	3.18 ±0.88	3.06 ±0.97	36568.5 0.071	3.39 ±0.90	3.20 ±0.85	29606.5 0.005	3.42 ±1.04	3.42 ±0.88	4128.5 0.971
Physical sphere	62.24 ±17.23	53.96 ±20.60	5774.5 0.001	63.55 ±17.29	60.17 ±19.10	35599.0 0.026	67.57 ±15.93	62.87 ±16.91	28929.5 0.002	67.08 ±20.60	68.14 ±16.27	4070.5 0.843
Psychological sphere	59.48 ±15.32	59.65 ±17.10	7458.0 0.877	61.96 ±15.81	64.65 ±17.08	36612.5 0.087	63.6 ±015.79	68.31 ±15.58	28710.0 0.001	62.19 ±18.07	70.24 ±14.27	3073.0 0.002
Social sphere	62.58 ±16.40	59.98 ±18.79	6924.5 0.263	65.05 ±17.25	63.91 ±17.58	37995.0 0.316	65.93 ±17.95	66.25 ±16.82	33402.5 0.657	69.00 ±16.56	67.82 ±17.38	3948.0 0.582
Environmental sphere	67.74 ±12.66	64.29 ±16.25	6619.5 0.095	68.38 ±13.07	70.41 ±16.60	36800.0 0.107	68.50 ±13.22	70.89 ±15.65	30529.5 0.034	70.24 ±14.19	72.55 ±13.57	3784.5 0.310

M – medium, ± SD – standard deviation, U – Mann-Whitney test, p – level of statistical significance.

Table 8. Correlations between life quality according to WHOQOL-BREF vs. body mass indicator of elderly people from Poland and Slovakia

Life quality	Life quality WHOQOL-BREF – result BMI											
	Correct			Overweight			1 degree obesity			2 degree obesity		
	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p	Poland	Slovakia	U/p
Q 1	3.81 ±0.75	3.63 ±0.77	19657.5 0.010	3.85 ±0.78	3.68 ±0.76	56904.5 0.001	3.82 ±0.76	3.54 ±0.77	6743.5 0.001	3.51 ±0.86	3.35 ±0.87	1132.5 0.221
Q 2	3.37 ±0.93	3.24 ±0.94	20847.5 0.144	3.31 ±0.90	3.20 ±0.91	60602.5 0.075	3.19 ±0.81	3.03 ±0.89	7583.0 0.109	3.02 ±0.90	2.67 ±0.85	1021.0 0.049
Physical sphere	65.66 ±17.34	62.55 ±20.30	20902.0 0.177	65.59 ±17.16	62.75 ±17.24	58503.0 0.014	65.01 ±16.70	59.93 ±18.50	7262.5 0.040	59.96 ±17.87	51.65 ±18.01	944.0 0.017
Psychological sphere	63.05 ±16.60	65.94 ±17.41	20355.5 0.074	62.87 ±15.55	67.23 ±15.82	55616.0 0.000	60.96 ±14.92	64.23 ±16.10	7512.0 0.099	57.26 ±17.06	63.18 ±18.33	1031.5 0.070
Social sphere	65.48 ±18.84	64.71 ±18.49	22380.0 0.849	67.11 ±16.46	65.21 ±17.93	62026.0 0.232	62.09 ±16.91	63.43 ±15.60	8245.0 0.660	64.28 ±13.44	64.96 ±15.24	1260.00 0.793
Environmental sphere	68.95 ±12.48	68.05 ±16.53	22145.5 0.708	68.85 ±13.41	70.78 ±15.98	59923.0 0.052	68.31 ±13.79	71.60 ±14.71	7512.5 0.100	66.79 ±12.35	67.98 ±15.59	1222.00 0.605

M – medium, ± SD – standard deviation, U – Mann-Whitney test, p – level of statistical significance.

90 years old or more showed that age in the researched range only lowered the evaluation of physical health. However, the results of Sováriová Soósová's research showed the correlation between age and life quality in the physical and psychological spheres [15]. From the research done by Lepsy *et al.* it is clear that elderly people at the age of 80–93 years living in Poland are characterised by a good life quality, which is connected to a good fitness level [18].

In our own research the most important correlations were shown in the group of people at the age of 60–74 years. Regardless from the age of the studied people, no correlations in the social sphere were detected. Independently from the age of the studied people, no correlations in the social sphere were detected. In the research done by Raczkiewicz *et al.* living in a city was a factor that lowered all the aspects of life quality [13]. However, Wróblewska *et al.* [14] showed that the place of residence was one of the factors with the greatest influence on the participants' life quality. The results of our own analysis did not show significant correlations between elderly people from Poland and Slovakia whose place of residence was the countryside, in the social and environmental spheres. Raczkiewicz *et al.* confirmed that there was an influence of marital status on the feeling of high quality of the respondents' life [13]. Being a widow was a factor lowering all aspects of life quality [13]. Also, in the research done by Sováriová Soósová, life quality was significantly lower among the people living without a partner, which was also pointed out by the authors of the present study [15]. It was observed in the present research that Q1, Q2, and all the spheres of life quality differed significantly among elderly people from Poland who were married when compared to those from Slovakia. The research concerning the socio-economic situation of elderly people from Poland and their subjective evaluation of life quality was done by Chruściel *et al.* Life quality of seniors, to a high degree, is on a higher level if they are surrounded by people close to them, in comparison to people living alone [19]. According to Wang *et al.*, family support is an important factor in improving the quality of older people's life [20]. Chruściel *et al.* were of the opinion that loneliness, which is often a part of old age, leads to the deterioration of life quality [19]. The level of education had an impact on the quality of life of the participants in all spheres of life and Q1 and Q2 in the research done by Wróblewska *et al.* [14] and Ćwirlej-Sozańska *et al.* [16]. In the research done by Raczkiewicz *et al.* [13], lack of education had a negative impact only on mental health. However, research done by Sováriová Soósová does not show any correlation between education and life quality [15]. The results of the present research also show education as a factor on which the life quality of people from Poland and Slovakia depends. The most significant differences were observed in terms of self-

evaluation of global perception of life quality and in the physical sphere. In the research by Wróblewska *et al.* body mass indicator had the biggest influence on the participants' quality of life [14]. However, it was noted in the results of the present studies that the most important differences in life quality were observed among obese elderly people. As evidenced by the results of research by Costa Pereira *et al.* [21], lower limb muscle strength assessed using the 30-Second Chair Stand test is related with the level of quality of life among community-dwelling older adults. One of the factors influencing the evaluation of life quality of elderly people is the functional prowess of the studied person, which is confirmed by the research by Szewczyszczak *et al.* [3]. Also, Raczkiewicz *et al.* showed in their research that functional handicap was a factor lowering all aspects of life quality, and it is in accordance with the results obtained by the present authors [13].

With regard to dynamic population changes, "old age is beginning to be the key concept scientifically studied in psychological, social, medical, economic, or geographic terms" [22]. The research of elderly people living at home cannot focus only on their physical prowess, which is pointed out by Ylönen *et al.* [23]. The research of the subjective evaluation of life quality of elderly people in socio-demographically similar countries is an important cognitive, practical, and prognostic factor, which can affect the improvement of ability and improvement of life quality of elderly people in our country by introducing corrective actions.

Conclusions

Independently from sociodemographic factors, the quality of life in the Polish group was significantly lower in the psychological sphere. The image of a person of the lowest life quality in the psychological sphere is a woman over 90 years of age, who is single, has primary education, running a household all alone, in the city or in the countryside.

In the population of elderly people in Poland it is advisable to introduce intervention programs carried out by an interdisciplinary team, in order to improve psychological well-being. Continuation of those research actions is needed with more emphasis on evaluating ways that can be used to improve the sphere of psychological health among people over 60 years old from Poland.

All the analysed sociodemographic factors significantly differentiated self-evaluation of the global perception of life quality and the general perception of one's health. The image of a person with the lowest perception of life quality as well as the lowest perception of their health is a woman at the age of 75–89 years, after divorce, running a household by herself, having primary education.

In the case of elderly people in Slovakia, it is advised that intervention programs are introduced. Their primary objective will be to improve the general perception of health, which will indirectly improve the global perception of life quality.

Funding

No external funding.

Ethical approval

The study was conducted in accordance with the Declaration of Helsinki and approved by the Bioethics Committee of Cracow Regional Medical Chamber (Resolution No. 121/KBL/OIL/2023).

Conflict of interest

The authors declare no conflict of interest.

References

- Sundberg L, Agahi N, Wastesson JW, Fritzell J, Fors S. Increasing inequalities in disability-free life expectancy among older adults in Sweden 2002–2014. *Scand J Public Health*. 2023; 51(6): 835-842.
- Boguradzka A, Wroński Z, Wojtal A, Krupa J. Impact of reminder calls on the attendance of geriatric patients in general fitness classes. *Fam Med Prim Care Rev*. 2023; 25(1): 25-28.
- Szewczyzak M, Stachowska M, Talarska D. Evaluation of life quality of elderly people – review of the literature. *Nowiny Lekarskie*. 2012; 81: 96-100.
- Kowalczyk B, Lubińska-Żądło B, Kendrová L, Mikuláková W, Gajdoš M. Quality of life in seniors living in home environment in Poland and Slovakia. *Ann Agric Environ Med*. 2024; 31(4): 552-559.
- Sztandera P. Physical activity and its importance for the health of elderly. *J Educ Health Sport*. 2017; 7(7): 580-589.
- Puto G, Repka I, Ścisło L, Walewska E, Skrzypień D, Kawalec-Kajstura E, Dąbczyńska M, Zurzycka P. Psychosocial problems affecting the elderly. *Medical Studies*. 2019; 35: 224-229.
- Jensen MB, Jensen CE, Gudex C, Pedersen KM, Sørensen SS, Ehlers LH. Danish population health measured by the EQ-5D-5L. *Scand J Public Health*. 2023; 51(2): 241-249.
- Paplicki M, Susło R, Dopierała K, Drobnik J. Systemic aspects of securing the health safety of the elderly. *Fam Med Prim Care Rev*. 2018; 20(3): 267-270.
- Gnacińska-Szymańska M, Dardzińska J.A, Majkowicz M. Evaluation of life quality of overweight people by means of WHOQOL-BREF form. *Endokrynol Otyłość Zab Przem Materii*. 2012; 8 (4): 136-142.
- Podsiadlo D, Richardson S. The time “Up & Go”: a test of basic functional mobility for frail elderly persons. *J Am Geriatr Soc*. 1991; 39: 142-148.
- Mętel S, Kwiatkowska A, Głodzik J, Szczygieł E. Application of the Functional Strength Test in the assessment of functional status and monitoring of medical rehabilitation of the elderly people. *Gerontol Pol*. 2012; 20(4): 148-154.
- Libova L, Solgajova A, Vorosova G, Zrubcova D, Sollar T, Mrazova S, Debnarova J, Zubata P, Pechova K. Clinical, demographic and psychological predictors of quality of life in patients with osteoarthritis. *Clin Soc Work Health Interv*. 2021; 12(4): 62-69.
- Rackiewicz D, Bejga P, Owoc J, Witczak M, Bojar I. Gender gap in health condition and quality of life at advanced age. *Ann Agric Environ Med*. 2020; 27(4): 636-643.
- Wróblewska Z, Chmielewski JP, Wojciechowska M, Florek-Łuszczki M, Wójcik T, Hlinková S, Wróblewska I. The evaluation of the quality of life of older people with diabetes. *Ann Agric Environ Med*. 2023; 30(3): 505-512.
- Sovářiová Sořsová M. Determinants of quality of life in the elderly. *Cent Eur J Nurs Midw*. 2016; 7(3): 484-493.
- Ćwirlej-Sozańska AB, Sozański B, Wiśniowska-Szurlej A, Wilmowska-Pietruszyńska A. Quality of life and related factors among older people living in rural areas in south-eastern Poland. *Ann Agric Environ Med*. 2018; 25(3): 539-545.
- Abramowska-Kmon A, Kotowska I.E, Łątkowski W, Szveda-Lewandowska Z. Health condition and provision of care for the elderly in Central and Eastern Europe. Strojny M. [red.] *Middle and Eastern Europe towards global trends, economicsociety and business*. Oficyna Wydawnicza SGH, Warsaw 2019; 109-137.
- Lepsy E, Radwańska E, Żurek G, Żurek A, Kaczorowska A, Radajewska A, Kołcz A. Association of physical fitness with quality of life in community-dwelling older adults aged 80 and over in Poland: a cross-sectional study. *BMC Geriatr*. 2021; 21: 491.
- Chruściel P, Szczekala KM, Derewiecki T, Jakubowska K, Nalepa D, Czekirda ME, Mianowana V, Czarkowska M. Differences in the quality of life dependent on family status of the elderly living in rural areas – a cross-sectional survey. *Ann Agric Environ Med*. 2018; 25(3): 532-538.
- Wang Q, Liu X, Zhu M, Pang H, Kang L, Zeng P, Ge N, Qu X, Chen W, Hong X. Factors associated with health-related quality of life in community-dwelling elderly people in China. *Geriatr Gerontol Int*. 2020; 20: 422-429.
- da Costa Pereira JP, Freire YA, da Silva AMB, de Luce-na Alves CP, de Melo Silva R, Câmara M, Browne RAV, Costa EC, Trussardi Fayh AP. Associations of upper- and lower-limb muscle strength, mass, and quality with health-related quality of life in community-dwelling older adults. *Geriatr Gerontol Int*. 2024; 24: 683-692.
- Kowalewska K. The image of old age and old people among primary school level pupils. *Studium Vilnense A*. 2018; 15: 146-151.
- Ylönien M, Stolt M, Kohanová D, Suhonen R. Older individuals’ perspectives on the prerequisites for living at home: a mixed-methods systematic review. *Int J Older People Nurs*. 2024; 19: e12603.

Address for correspondence

Bożena K. Kowalczyk
Faculty of Physical Education
and Security Sciences
University of Applied Sciences
Kościszki 2
33-300 Nowy Sącz, Poland
E-mail: kowalczyk-bożena@wp.pl

Received: 12.12.2024

Accepted: 28.04.2025

Online publication: 16.12.2025