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Determinants of self-rated health by patients aged above 80 suffering from coronary artery disease

Czynniki warunkujące samoocenę stanu zdrowia chorych z chorobą niedokrwienną serca po 80. roku życia

Grażyna Puto[1], Beata Tobiasz-Adamczyk[2], Katarzyna Zawisza[2], Tomasz Grodzicki[3]

[1] Clinical Nursing Unit, Nursing and Obstetrics Institute Faculty of Health Sciences
Jagiellonian University Medical College

[2] Department of Medical Sociology Chair of Epidemiology and Preventive Medicine Faculty of Medicine
Jagiellonian University Medical College

[3] Clinic of Internal Diseases and Geriatrics, Department of Internal Diseases and Gerontology Faculty of Medicine
Jagiellonian University Medical College

Abstract

Introduction. *Coronary artery disease, due to its prevalence and atypical symptoms in older people, exerts a significant impact on self-rated health.* ***Aim.*** *The aim of the study was to determine the role and importance of health and non-health determinants in the self-assessment of health status in men and women with coronary artery disease aged above 80.* ***Material and methods****. The study group comprised 150 patients with coronary artery disease. The structured questionnaire included sociodemographic characteristics of respondents, Canadian Cardiovascular Society (CCS) functional classification of coronary artery disease, EASY-Care questionnaire, and Visual Analogue Scale (VAS).* ***Results.*** *In CCS functional classification of coronary artery disease it was observed that CCS grade IV occurred more often in women than in men (33% vs. 26.7%), over a half of the studied men experienced CCS grade III (56.7%). Disability increased with the progression of coronary artery disease according to CCS, in women with regard to preparing meals, shopping, drug ingestion, moving around home and outside, taking stairs, managing a bathtub/shower, and in men in drug ingestion, moving around home and outside, transferring from a bed to an armchair, using toilet/commode. Self-rated health status among women was significantly related to functional disability, cognitive functions disorders, depression, reduced ability to speak, and in men to hearing disorders. Housing structure was found to be a significant determinant of self-rated health for both sexes.* ***Conclusions.*** *Different determinants for self-rated health were found across genders, thus different approach in the planning of social and health care should be considered for men and women. (Gerontol Pol 2016, 24, 227-234)*

Key words*: coronary artery disease, people above 80, self-rated health, activities of daily living*

Streszczenie

Wstęp. *Choroba niedokrwienna serca ze względu na częstość występowania i nietypową symptomatologię u osób starszych ma istotny wpływ na samoocenę stanu zdrowia.* ***Cel.*** *Celem podjętych badań było określenie, jaką rolę i znaczenie odgrywają uwarunkowania zdrowotne i pozazdrowotne w samoocenie stanu zdrowia kobiet i mężczyzn z chorobą niedokrwienną serca po 80. roku życia.* ***Materiał i metody****. Badanie przeprowadzono wśród 150 chorych z chorobą niedokrwienną serca. W badaniu posłużono się metryczką pytań demograficzno-społecznych, klasyfikacją czynnościową dusznicy bolesnej wg Canadian Cardiovascular Society (CCS), kwestionariuszem EASY-Care oraz Visual Analogue Scale (VAS).* ***Wyniki.*** *W klasyfikacji czynnościowej dusznicy bolesnej wg CCS, zaobserwowano, że IV stopień CCS częściej występował u kobiet niż u mężczyzn (33% vs. 26,7%), natomiast ponad połowa badanych mężczyzn odczuwała III (56.7%)****.*** *Niesprawność funkcjonalna w zakresie wykonywania czynności dnia codziennego wzrastała wraz z zaawansowaniem choroby niedokrwiennej serca wg CCS, u kobiet w zakresie: przygotowania posiłków, chodzenia po zakupy, przyjmowania lekarstw, chodzenia poza domem, po mieszkaniu i po schodach, natomiast u mężczyzn w zakresie: przyjmowania lekarstw oraz poruszania się po mieszkaniu i chodzenia poza domem ($p < 0,05$). Samoocena stanu zdrowia kobiet była uwarunkowana niepełnosprawnością funkcjonalną, upośledzeniem funkcji poznawczych, poczuciem depresji oraz*

Correspondence address: Grażyna Puto, Zakład Pielęgniarstwa Klinicznego, Instytut Pielęgniarstwa i Położnictwa, Wydział Nauk o Zdrowiu, Uniwersytet Jagielloński, *Collegium Medicum*; ul. Kopernika 25, 31-501 Kraków (+48) 607 455 551 ; grazynaputo@plusnet.pl

upośledzeniem sprawności mowy, wśród mężczyzn upośledzeniem słuchu. Struktura zamieszkania była znaczącym czynnikiem warunkującym samoocenę stanu zdrowia obu płci. ***Wnioski.*** *Wykazano różne determinanty samooceny stanu zdrowia w grupie kobiet i mężczyzn. Fakt ten sugeruje odmienne podejście w planowaniu opieki zdrowotnej i społecznej dla kobiet i mężczyzn z chorobą niedokrwienną serca po 80. roku życia. (Gerontol Pol 2016, 24, 227-234)*

Słowa kluczowe: *choroba niedokrwienna serca, osoby po 80 roku życia, samoocena stanu zdrowia, czynności dnia codziennego*

Introduction

As the aging process among Polish and other European populations progresses, a systematic increase in the percentage of people above 80 is observed. The need for self-rated health in this age group arises, on account of both health and non-health factors related to the aging process and the limitations triggered by illnesses.

Self-rated health assessment, recognised in older people as one of the main dimensions of health along with physio-psycho-social status, completes medical evaluation as a source of valuable information about the subjects' subconscious needs and real feelings [1-3]. With age, the boundary between a disease and the natural aging process becomes blurred, which makes it extremely difficult to describe the health of the older by means of traditional objective indicators based on multimorbidity and disability criteria. It becomes necessary to refer to the self-assessment of health status [3].

Due to its prevalence and atypical symptoms in older people, coronary artery disease has a significant impact on self-rated health. Ischemia resulting from insufficient supply of oxygen and energy compounds to the heart muscle causes physical, mental and social limitations. It thus impairs daily activity and functioning, which significantly influences self-rated health of older people [4,5].

Self-rated health in patients with coronary artery disease is worse in comparison with a control group of healthy people in all age groups. Poorer self-rated health status correlates with age and disease duration. Differences in self-rated health status, dependent on the unmodified risk factor (sex), were noted in all female age groups suffering from a coronary artery disease [4,6,7]. Worse self-rated health in women with this disease is related to the reduction of daily activity which aggravates faster as the disease progresses. Studies prove that in women a negative perception of health status and negative beliefs about the illness lead to even worse health self-assessment, both in mental and physical domain [4,6]. In the group of the older subjected to a 12-year follow-up, women displayed 3 times lower level of performance than men, despite the fact that they presented higher functional activity on the day of the test than men [7].

An important non-health factor contributing to worse self-rated health in patients with coronary artery disease is the low level of social support. Poor social support on both material and emotional level, regardless of sex, age and disease severity, strongly correlates with the occurrence of depression and an increased level of hostility [6,9].

The aim of the study was to determine the role and importance of health and non-health determinants in the self-assessment of health status in men and women with coronary artery disease aged above 80.

Material and methods

The study group comprised 150 patients aged 80 and above and capable of maintaining verbal communication, who were diagnosed with a stable stage of coronary artery disease (ICD 10: I 20–I 25) and hospitalised in the Department of Internal Diseases and Gerontology at Jagiellonian University Medical College.

The structured questionnaire consisted of socio-demographic characteristics of respondents, CCS functional classification of coronary artery disease, and EASY-Care questionnaire (Polish version 1999–2002)[1].

EASY-Care questionnaire was used to assess functional state of patients in terms of Personal Activities of Daily Living (P-ADL) and Instrumental Activities of Daily Living (I-ADL). The questionnaire contained single-item questions concerning visual, hearing, chewing or speaking difficulties, global health, feeling of loneliness and housing conditions. Geriatric Depression Screening Scale (GSOD) and R. Katzman's cognitive functions impairment test were also applied [10].

According to Activities of Daily Living (ADL) scale (P-ADL and I-ADL), there was an assumed number of activities that subjects could not perform on their own.

[1] Due to the copyright of the authors developing EASY-Care questionnaire, with the recommendation of Prof. Iana Philp, PhD, Sheffield University (UK), we kindly asked for a permission to make use of the Polish version of the EASY-care questionnaire v. 1999–2002 in the study entitled "Health-related quality of life in coronary artery disease patients aged 80 and over". We were granted permission from Prof. Barbara Bień, PhD who is entitled to issue such permissions in Poland.

Individuals capable of undertaking all activities within ADL, as well as those whose only impairment was occasional urinary inconsistence (i.e. less frequent than once a day) were considered fully active [9].

In order to select a group with suspected severe impairment of cognitive functions (Katzman), the study was based on tercile division: 0 to 10 points – normal or minor impairment; 11 to 17 points – medium impairment; 18 to 28 points – severe impairment. Following the author's recommendation, individuals suspected of severe cognitive impairment were excluded from the study.

Self-assessment of health was based on the visual analogue scale (VAS), in which the subject indicates his/her self-rated health on a scale from 0 (worst imaginable health) to 100 (best imaginable health) [11].

Statistical analysis

Statistical analysis was based on IBM SPSS Statistics v. 19.0 programme. Differences between the groups were detected by means of the Chi-squared test or the Fisher's exact test. Due to the incoherence between the distribution of investigated variables and the normal distribution (tested by the Shapiro-Wilk test), the Mann-Whitney U test or Kruskal-Wallis test were used where appropriate.

Determinants of self-rated health, measured by the VAS scale (the higher half of data set separated by the median – higher self-rated health, the lower half of data set separated by the median – lower self-rated health) were detected by means of logistic regression models. The level of $P < 0.05$ was considered statistically significant.

Results

In the group of 150 patients with coronary artery disease, the percentage of women outnumbered the percentage of men (60% *vs.* 40%). The average age of women was 84.7 years (SD = 3.6) and in men it was 84.3 years of age (SD = 3.3). Table I presents socio-demographic features of the tested group.

Table I. Socio-demographic characteristics of the group tested
Tabela I. Charakterystyka demograficzno – społeczna badanej grupy

Socio-demographics:		Women N (%)	Men N (%)	p^{chi2}
Marital status	single	6 (6.6)	1 (1.7)	0.001
	married	10 (11.1)	4 (6.7)	
	widowed	64 (71.1)	29 (48.3)	
	divorced/separated	10 (11.1)	26 (43.3)	
Education	primary/basic	37 (41.1)	8 (13.3)	0.001
	vocational education	14 (15.5)	18 (30)	
	secondary	34 (37.7)	16 (26.7)	
	university	5 (5.7)	18 (30)	
Professional activity	manual worker	41 (45.5)	26 (43.3)	0.03
	white-collar worker	28 (31.1)	19 (31.7)	
	manual-clerical worker	14 (15.6)	15 (25)	
	profesionally inactive	7 (7.8)	0 (0)	
Housing structure	living alone	32 (35.5)	4 (6.7)	0.001
	living with a spouse	7 (7.8)	11 (18.3)	
	living with family	51 (56.7)	45 (75)	

The value of p^{Chi2} for the test Chi^2; N – number of patients tested

Table II. The number of comorbidities of coronary artery disease (according to CCS) among women and men
Tabela II. Liczba chorób współistniejących chorobie niedokrwiennej serca (wg CCS) wśród kobiet i mężczyzn

CCS	Women		Men	
	Mean ± SD	Median (Q1–Q3)	Mean ± SD	Median (Q1–Q3)
II	3.2 ± 1.8	3 (2–5)	3.9 ± 2.3	4.5 (2.5–5)
III	4.8 ± 1.7	4 (4–5.7)	4 ± 1.5	4 (3–5)
IV	4.3 ± 1.6	4.5 (3–5)	4.5 ± 1.7	5 (4–6)
pK-W	0.012		SI	

The value p^{K-W} for the Kruskal-Wallis; SI – statistically insignificant

After applying the CCS functional classification of coronary artery disease it was observed that grade IV was more common in women than in men (33% *vs.* 26.7%) and 50% of men self-reported CCS grade III (56.7%). Women self-reported CCS grade II more frequently than men (22.2% *vs.* 16.7%). In none of the patients normal/everyday activity produced symptoms of coronary artery disease (CCS grade I).

Most frequently, the number of comorbidities of coronary artery disease ranged from 4 to 6 (61.3%). The

Table III. I-ADL functional impairment *vs.* stage of coronary artery disease (according to CCS) in women and men
Tabela III. Niesprawność funkcjonalna w zakresie I-ADL a zaawansowanie choroby niedokrwiennej serca (wg CCS) wśród kobiet i mężczyzn

I-ADL impairment:	Women			Men		
	II % (N)	III % (N)	IV % (N)	II % (N)	III % (N)	IV % (N)
chores	70 (14)	82.5 (33)	93.3 (28)	60 (6)	76.5 (26)	81.3 (13)
p^F	> 0.05			> 0.05		
preparation of meals	25 (5)	62.5 (25)	73.3 (22)	70 (7)	70.6 (24)	93.8 (15)
p^{Chi2}	0.002			> 0.05		
shopping	65 (13)	80 (32)	96.7 (29)	70 (7)	79.4 (27)	87.5 (14)
p^F	0.01			> 0.05		
personal budget management	20 (4)	27.5 (11)	33.3 (10)	30 (3)	32.4 (11)	31.3 (5)
p^{Chi2}	> 0.05			> 0.05		
use of mobile phone	15 (3)	17.5 (7)	36.7 (11)	10 (1)	17.6 (6)	18.8 (3)
p^F	> 0.05			> 0.05		
ingestion of drugs,	25 (5)	47.5 (19)	63.3 (19)	20 (2)	29.4 (10)	75 (12)
p^{Chi2}	0.03			0.003		
walking outside of the household	50 (10)	75 (30)	90 (27)	30 (3)	58.8 (20)	81.3 (13)
p^{Chi2}	0.006			0.04		
walking around the house	5 (1)	17.5 (7)	50 (15)	0 (0)	17.6 (6)	37.5 (6)
p^{Chi2}	0.00			0.06		
taking stairs	30 (6)	65 (26)	86.7 (26)	50 (5)	64.7 (22)	81.3 (13)
p^{Chi2}	0.00			> 0.05		

The value of p^F for the exact Fisher's test; The value of p^{Chi2} for the test Chi^2

Table IV. P-ADL impairment *vs.* stage of coronary artery disease (according to CCS) in women and men
Tabela IV. Niesprawność funkcjonalna w zakresie P-ADL a zaawansowanie choroby niedokrwiennej serca (wg CCS) wśród kobiet i mężczyzn

P-ADL impairment:	Women			Men		
	II % (N)	III % (N)	IV % (N)	II % (N)	III % (N)	IV %(N)
moving between bed/armchair	5 (1)	7.5 (3)	16.7 (5)	0 (0)	8.8 (3)	50 (8)
p^F	> 0.05			0.001		
using the toilet/commode	10 (2)	10 (4)	26.7 (8)	0 (0)	11.8 (4)	50 (8)
p^F	> 0.05			0.002		
managing bathtub/shower	20 (4)	30 (12)	73.3 (22)	20 (2)	32.4 (11)	50 (8)
p^{Chi2}	0.00			> 0.05		
taking care of one's appearance	10 (2)	7.5 (3)	16.7 (5)	0 (0)	5.9 (2)	18.8 (3)
p^F	> 0.05			> 0.05		
putting one's clothes on	10 (2)	7.5 (3)	20 (6)	0 (0)	5.9 (2)	25 (4)
p^F	> 0.05			> 0.05		
having meals	0 (0)	5 (2)	10 (3)	0 (0)	2.9 (1)	6.3 (1)
p^F	>0.05			>0.05		
controlling urinary continence	5 (1)	2.5 (1)	3.3 (1)	0 (0)	8.8 (3)	6.3 (1)
p^F	> 0.05			> 0.05		
controlling faeces continence	15 (3)	22.5 (9)	30 (9)	20 (2)	20.6 (7)	31.3 (5)
p^F	> 0.05			> 0.05		

The value of p^F for the exact Fisher's test; The value of p^{Chi2} for the test Chi^2

highest number was reported in women with CCS grade III (4.8 ± 1.7) and the lowest in women with CCS grade II (3.2 ± 1.8) and IV (4.3 ± 1.6) ($p^{K-W} = 0.01$) - Table II.

Disability to perform I-ADL activities in women increases significantly along with a higher CCS grade of coronary artery disease in the following areas: preparing meals, shopping, taking medicine, moving around the house and outside, taking stairs. In men it referred to drug ingestion, moving around the house and outside - Table III.

P-ADL impairments in women increased in the area of managing a bathtub/shower while in men a greater impairment was observed in transferring from a bed to an armchair and using a toilet/commode -Table IV.

The impairment of visual perception was reported by 65.3% of the subjects and 3.3% of all the tested patients were blind. Over 50% of the subjects (54%) reported difficulties in hearing, more frequently women than men (65.7% *vs.* 44.4%). The impairment of mastication and biting was more frequently experienced by men than women, while there was no patient who would display a total inability to masticate or bite food. Difficulties with speaking that prevented the speakers from being understood were reported more frequently by men than women (39.4% *vs.* 31.3%). An approximately equal percentage of women and men (1.1% *vs.* 1.7%) reported major difficulties in speaking.

The evaluation of cognitive functions showed that 28.7% of the subjects displayed normal_or mild impairment and 34.7% developed medium impairment. Suspected severe impairment of cognitive functions was indicated in 41.7% of men and 33.3% of women.

The GSOD analysis encompassed 95 patients and they did not display any symptoms of cognitive functions impairment. When compared to men, women felt depressed more frequently than men (70% *vs.* 60%).

Family members constituted the main source of support both for women and men (73.2% *vs.* 67.3%). Men frequently received help from a spouse (23.6%) and women were provided with support from a family member (73.2%), while a friend/neighbour/other was indicated as a principal help provider in everyday activities more frequently by women than by men (7.3% *vs.* 1.8%, $p^F = 0.031$).

Women who suffered from the symptoms of coronary artery disease resulting from any physical activity (CCS grade IV) faced over fifteen times higher risk of lower self-rated health than women with minor physical activity deficit (CCS grade II), while women with significant physical activity deficit (CCS grade III) were at an almost five times higher risk of displaying lower self-rated health than women suffering from minor impairment of physical activity (CCS grade II, p = 0.05).

Men who experienced significant problems with normal physical activity (CCS grade III) faced over six times higher risk of reporting lower self-rated health and men who could not undertake any physical activity at all (CCS grade IV) were at an almost seven times higher risk of lower health self-assessment than men who displayed minor physical activity deficit (CCS grade II) - Table V.

The analysis of socio-demographic features as health determinants of self-rated health showed that women living alone were at a lower risk of experiencing worse self-rated health than women living with a family, whereas men living only with a spouse were at a lower risk of displaying poorer self-rated health than men living with a family - Table VI.

Moreover, personal and instrumental activity of daily living was found among significant determinants of self-rated health status in women. The risk of worse self-rated health rises along with the increase in the level of impairment – 1.60 times (for ADL); 2.42 times (for I-ADL) and 1.77 times (for P-ADL). An over fourfold risk of reporting lower self-rated health status was observed in women with medium impairment and over nine times higher risk was observed for women with severe impairment in comparison with women with normal or mild impairment of cognitive functions. The feeling of depression increased the risk of lower self-rated health status ten times. Finally, women who had difficulties or significant difficulties in understanding some of the speakers were at almost ten times higher risk of displaying worse self-rated health.

Table V. CCS grade of coronary artery disease as a determinant of self-rated health for women and men- logistic regression models

Tabela V. Stopień zaawansowania choroby niedokrwiennej serca wg CCS jako determinant jakości życia kobiet i mężczyzn w oparciu o modele regresji logistycznej

CCS classification	Women			Men		
	OR	95% CI		OR	95% CI	
III *vs.* II	4.85	0.98	23.97	6.46**	1.19	35.26
IV *vs.* II	15.54***	3.02	80.04	6.67*	1.05	42.43

OR – odds ratio; 95% CI – 95% confidence interval for OR; *p < 0.05; **p < 0.01; ***p < 0.001

Table VI. Socio-demographic variables determining self-rated health for women and men – logistic regression models

Tabela VI. Zmienne demograficzno-społeczne warunkujące jakość życia kobiet i mężczyzn w oparciu o modele regresji logistycznej

Factors:	Women			Men		
	OR	95% CI		OR	95% CI	
Marital status						
single *vs.* widow	0.22	0.01	2.61	–	–	–
married *vs.* widow	0.86	0.19	3.97	0.30	0.03	3.17
divorced/ separated *vs.* widow	0.16	0.01	1.67	0.45	0.12	1.75
Education						
secondary/university *vs.* primary/vocational	1.55	0.55	4.38	3.07	0.73	12.85
Housing structure						
living alone *vs.* with family	0.12**	0.03	0.47	3.96	0.21	72.90
living with a spouse *vs.* with family	0.98	0.17	5.68	0.11**	0.02	0.58
Professional activity						
white-collar worker *vs.* manual worker	0.81	0.26	2.50	2.61	0.67	10.09
manual-clerical worker *vs.* manual worker	1.80	0.40	8.01	0.95	0.22	3.79
professionally inactive *vs.* manual worker	0.63	0.08	4.74	–	–	–

OR – odds ratio; 95% CI – 95% confidence interval for OR; *p < 0.05; ** p < 0.01; *** p < 0.001
Models adjusted for: age (continuous variable), number of diseases (continuous variable) and CCS classification

Table VII. Other determinants of self-rated health – logistic regression models

Tabela VII. Czynniki determinujące jakości życia kobiet i mężczyzn w oparciu o modele regresji logistycznej

Determinants:	Women			Men		
	OR	95% CI		OR	95% CI	
ADL impairment	1.60***	1.28	1.99	1.05	0.93	1.19
I-ADL impairment	2.42***	1.63	3.60	1.16	0.90	1.50
P-ADL impairment	1.77**	1.15	2.71	1.04	0.87	1.25
Cognitive functions test						
medium *vs.* normal/minor impairment	4.35*	1.09	7.40	1.46	0.31	6.87
severe *vs.* normal/minor impairment	9.21**	2.20	38.48	1.21	0.25	5.79
GSOD test results						
feeling depressed *vs.* normal	10.04*	1.13	89.52	3.22	0.66	15.67
Feeling of loneliness						
sometimes *vs.* never	2.51	0.71	8.88	1.56	0.43	5.65
frequently *vs.* never	2.13	0.46	9.94	3.50	0.79	15.57
Auto-evaluation visual perception						
cannot see/difficulties	1.77	0.57	5.47	2.11	0.67	6.66
Auto-evaluation auditory perception						
difficulties/cannot hear *vs.* can hear	1.85	0.65	5.27	3.71*	1.06	12.97
Auto-evaluation food mastication						
certain difficulties/cannot masticate *vs.* no difficulties	2.08	0.77	5.57	1.45	0.47	4.50
Auto-evaluation speaking						
difficulties/significant problems *vs.* no problems with understanding	9.83**	2.18	44.28	0.94	0.28	3.16
Source of support						
friend/neighbour/other/public health carer/ hired assistant/no help *vs.* spouse/family member	2.86	0.66	12.35	0.22	0.02	2.69

OR – odds ratio; 95% CI – 95% confidence interval for OR; *p < 0.05; ** p < 0.01; *** p < 0.001
Models adjusted for: age (continuous variable), number of diseases (continuous variable) and CCS classification

In men, those who experienced hearing difficulties or could not hear at all were at almost fourfold a risk (OR=3.71) of lower self-rated health in comparison with men who did not develop hearing deficit - Table VII.

Discussion

The results of the study confirm that the stage of coronary artery disease differentiates self-assessment of health in patients above 80 according to gender. Along

with the progress of coronary artery disease evaluated on the basis of CCS classification, both female and male self-rated health measured by the VAS scale is lower in higher grades of coronary artery disease. The presented results are coherent with the results of a study conducted by B. Ruo, et al. (2006), in which it was demonstrated that the lower self-rated health the higher the grade of coronary artery disease according to CCS classification [4].

The results of the present study show that functional impairment is a key determinant of lower self-rated health in women. This finding is consistent with other studies in which functional condition of women with coronary artery disease was a factor that determined their self-rated health [4,8,12]. Furthermore, the study shows that men with auditory perception disorder and women with speaking disorder evaluate their self-rated health lower than the subjects who are free of these ailments. A study conducted by H. L. Vreeken et al. (2013) confirmed that auditory and visual perception impairment lowers the quality of life in the older people [13].

The study shows that severe cognitive functions impairment is more likely to appear in men and depression - in women. The results demonstrate that lower evaluation of self-rated health in women is accompanied by an increase in cognitive functions impairment. Similar results were provided by a study conducted by A. Kiessling and P. Henriksson (2004) who demonstrated that the most powerful determinant of self-rated health in a group of 253 seniors was cognitive functions impairment. In the study group cognitive functions disorder exerted a stronger influence on health self- evaluation than physical, mental and social functioning disorders. The present study shows the connection between depression and self-rated health in a female group, which is not the case in the male group (14). In a cross-sectional study conducted by B. Ruo, et al (2003) in a group of 1024 seniors suffering from coronary artery disease, the correlation between depression and self-rated health was observed both in women and men [15].

The achieved results demonstrate that family members constitute the main source of support for the subjects. In the past in Poland families were the principal source of support for the older and this is still the case in the country. Neighbours or friends take care of seniors less frequently, which was confirmed in a longitudinal panel study conducted by Z. B. Wojszel (2009) in a group of individuals above 75 years of age. Children were the primary assistants for the majority of the subjects and a spouse was a secondary carer [16]. Similar tendencies were observed also in the present study – family members are a fundamental source of support for the seniors above 80 and men receive help more frequently from a spouse, whilst women are usually assisted by a family member. Women indicated a friend/neighbour/other as a principal help provider in everyday activities more frequently than men. In the conducted study, there is no correlation between the source of social support and self-rated health.

Interestingly, the study conducted by Staniute et al. (2013) in a group of 560 patients suffering from coronary artery disease showed that poor social assistance leads to lower self-assessment of health both in women and men and thus contributes to higher mortality rate and a greater number of patients in need of hospitalisation [17].

The present study has several limitations: the group of the subjects was small, thus the results and conclusions drawn here should be treated with great caution when referring to the general population of all the patients with coronary artery disease above 80 years of age. As the cross-sectional design was implemented in the study, it is difficult to make causal inference. However, the presented results of the study can set a course for further exploration.

In conclusion self-rated health status among women with coronary artery disease aged 80 and above is significantly related to functional disability, cognitive functions disorders, depression, reduced ability to speak,

whereas in men to hearing impairment. Additionally, housing structure is found to constitute a significant determinant of health status self-assessment for both sexes.

Conflict of interest

None

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