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Perceived health status among middle-aged Polish people in relation to selected demographic and social factors

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Abstract: Self-rated health is an important measure of health status and outcomes and plays a significant role in the quality of life. The main purpose of the study was to estimate selected demographic and socio-economic factors associated with perceived health status among middle-aged Polish people. The sample being studied consisted of 5,776 women and 2,191 men aged 35–65 years, participants of two nation-wide cross-sectional surveys: the survey on middle-aged women's health and quality of life (WOMID) and the survey on men's health and quality of life, both conducted in 2000–2004. Participants were administered a gender-specific questionnaire on demographic, socio-economic status, lifestyle behaviours and self-rated health. The subjectively evaluated health status was then correlated with sex, age, marital status, place of residence, education level, financial situation, types of leisure time and the tobacco use. Data were processed using uni- and multivariate statistical procedures including the logistic regression models LOGITs and multiple correspondence analysis (MCA). It was found that the perceived health status was associated with women's and men's age, and in women with their menopausal status. Women were likely to evaluate their health significantly worse than men. It was found that marital status, educational attainment and financial well-off were the factors significantly associated with perceived health status in both women and men. In concluding remarks it should be stated that the health perception of women and men in mid-life is significantly related to their socio-economic status.

Key words: self-rated health, men, women, age, menopausal status, marital status, socio-economic status

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"Health is created and lived by people within the settings of their everyday life, where they live, love, work, and play"

WHO 1998

The concept of health defined in the quoted statement appears to be interesting for two reasons. First, it assumes that people themselves shape their health by the way they live their lives. Second, with health thus understood, it rates subjective perception of one's health equally with objective health indicators.

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Self-rated health is an important measure of health status and outcomes. It is based on the knowledge of diseases and their effects that an individual obtains from various sources, e.g. from doctors or by observing his or her level of fitness in performing everyday activities. Such information is affected by subjective impressions and perceptions of one's body and mind, e.g. pain or fatigue (John 2005; Jylhä et al. 2006; Svedberg et al. 2006).

The idea of self-evaluation of health has been investigated since the 1950s. The first studies on self-rated health status (questions about general health status following those about long-term limiting illness) were integrated into the British government's "Surveys of Sickness" programme in 1943–1952. In the 1950s, an occupational retirement study and the US Federal Civil Defence Administration Survey were carried out in the US (Bowling 2005). It is the recent twenty-five years, however, that seen a particular growth of interest in the issue of self-rated health status (Svedberg et al. 2005). Health has ceased to be viewed solely as a physical condition, as researchers have begun to highlight also its mental, social and spiritual dimensions. This recognition was reflected in the preamble to the Constitution of the World Health Organisation adopted at the International Health Conference held in New York in June 1946 attended by participants from 61 countries. In addition, the discrepancy between high global rates of economic growth and low level of social well-being and mortality have induced the need to determine health status as perceived by an individual. This disparity could be observed in the USA where high mortality and suicide rates remained despite to strong economic performance and a steadily improving health care system (welfare was rising but quality of life was not).

The subjective view of one's health changes in the course of life. As indicated by many studies, significant changes in self-rated health status are associated with aging, gender, body fitness, specific health problems, and socio-economic status (Svedberg 2005; Ruo et al. 2006). In the case of old and senile individuals, rather than on biomedical health indicators, strong emphasis is put on a functional examination to determine physical, psychological and social abilities to perform activities which are necessary to attain a state of well-being (Halicka, Pędich 1999; Stathi et al. 2003). Longitudinal US studies have shown that an individual perception of life and health tends to be a better predictor of longevity than measurable health status parameters, such as blood pressure or cholesterol level. People who rated their health as very good displayed a significantly lower risk of death within 5 years than those rating their health as good (1.8 times), fair (3.2 times) and poor (7.5 times). Once adjusted for body mass, blood pressure, glucose and albumin concentration, calendar age, socio-economic factors, lifestyle, heart diseases, and disability, the risk of death remained the highest for individuals with poor self-rated health (Fried et al. 1998). Jylhä et al. (2006) revealed in their cross-sectional research that biochemical markers, such as hemoglobin, albumin, creatinine, HDL-cholesterol and leukocyte concentrations, varied between patients holding different self-reported views of their health. The values of those markers, although not exceeding normal levels, tended to deteriorate with self-evaluation of health becoming lower. For example, subjects with fair or poor self-rated health status

showed lower haemoglobin, albumin and HDL-cholesterol concentrations and higher creatinine and leukocyte concentrations than those rating their health as good or very good. Similar results were achieved from analyses using parameters based on calendar age, gender, place of residence, health status, everyday physical activity, smoking habit, and level of education.

In view of the facts cited above, this paper aims to examine if and to what extent a subjective self-evaluation of health status of men and women stems from their age, marital status, and socio-economic status.

Materials and methods

Data used in this work come from two nation-wide cross-sectional surveys: the survey on middle-aged women's health and quality of life (WOMID) and the survey on men's health and quality of life, both conducted in 2000–2004 and described in detail in the authors' earlier studies (Kaczmarek and Skrzypczak 2002a,b; Skrzypczak 2005; Kaczmarek 2007a,b). The participating men and women completed a questionnaire on various aspects of their lives. Their contributions were then used to retrieve demographic data concerning socio-economic status, lifestyle, health status parameters, and self-rated health.

The sample under examination consisted of 5,776 women and 2,191 men aged 35–65.

The outcome of interest was the self-rated health (SRH) and its covariates. The present general health status was self-rated on a five-point Lickert-type scale, where 1) represented a very poor self-rated health, 2) poor, 3) fair, 4) good, 5) very good and/or excellent.

Participants' age at examination was taken as either a continuous variable or categorized into two groups, the younger than or equal to 50 years and older than 50 years. Male andropause was matched to a critical point of 50 years of age thus males were stratified in the said two age groups. Women were stratified by their menopausal status. Only those women who went through natural menopause were included in this study. Menopausal status was assessed based on the WHO recommendations (1981). The premenopausal status included still and regular menstruating women. The postmenopausal status was defined as amenorrhea for 12 or more months as dating from the last menstrual period (LMP), for which there was no other obvious pathological or physiological causes of cessation the menses.

Selected demographic and socio-economic coviariates matched for the SRH were all but chronological age, categorical. Categorical variables were categorized as binary or multistate data and expressed as percentages. They included dummy variables for place of residence, marital status, educational attainment, financial situation, leisure-time activity, and smoking status. Place of residence was categorized as: 1) village (referent), 2) small-sized city up to 20,000 people, 3) medium-sized city up to 100,000 people and 4) large city over 100,000 people. Marital status was reported in four categories: 1) married/partnered (referent), 2) never married/partnered, 3) widowed, 4) divorced/separated. Educational attainment was reported in terms of educational years completed which correspond to specific level of education system in Poland. It was reported in three categories: 1) <12 years which corresponds to basic primary and

apprenticeship levels (referent), 2) 12 years, that is, a medium level of educational attainment which corresponds to secondary level of education, 3) more than 12 years corresponding to a high level of education with university degree.

Financial strain was evaluated based on a respondent's report on difficulties with respect to affording food, clothing, housing, car, furniture, leisure activities, and money owned. Items were rated on a binary scale as: 1) difficulty yes (referent), 2) difficulty no. Leisure activities were evaluated on a binary scale whether the time was spent on activities related to 1) passive (referent) or 2) active energy expenditure. Smoking status was reported in three categories: 1) never smoked (referent), 2) former smoker, 3) current smoker and the latter reported the nuber of cigarettes smoked daily 3a) ten or more cigarettes per day.

Descriptive statistics were obtained using univariate approach with χ^2 test for categorical variables and the Student *t* or Mann-Whitney *U* tests for continuous distributions.

Data were processed using uni- and multivariate statistical procedures including the logistic regression models LOGITs and multiple correspondence analysis (MCA). All calculations were made using STATISTICA 10.0 data analysis software system (StatSoft, Inc. Tulsa, OK USA). All significance tests were two sided. A value of $p<0.05$ was considered statistically significant.

Results

The men's and women's characteristics in relation to self-rated health, selected demographic and social backgrounds are shown in Table 1.

The average age of the participating men was 50.3 years, SD=6.1 years. They were almost equally stratified in two age group, the younger and the older one (≤50 years 47.2%; >50 years 52.8%, respectively). The vast majority of the men (nearly 90% in both groups) were married or cohabiting. Both groups did not differ in terms of the share of single individuals, particularly widowers (3.1% and 2.9% respectively). The difference in this respect results from lower female mortality before 65 years of age which is the upper age limit for the sample. The younger men were slightly higher educated than the older ones in such a way that fewer of them had primary education only (4.9% and 8.7% respectively), whereas a little more of tha latter had secondary and higher education 58.8% and 56.9% respectively). The groups differed as regards place of residence, with higher representation of small towns and rural areas among the younger respondents (53.4% vs. 46.8%). The lifestyle as defined by leisure-time activities did not vary between the age groups, yet it differentiated the cohorts to a small extent in respect of smoking habits, with more younger men addicted to tobacco (44.6% vs 37.6%; ten or more cigarettes smoked daily). Both groups differed slightly in their self-reported financial standing. Almost half (48%) of the men from the younger age group claimed to have insufficient funds to meet their life needs versus 42% of the older group.

The premenopausal women constituted a slight majority (54.6%) of the sample. They were, on average, ten years younger than the postmenopausal subjects (mean age of the premenopausal participants was 44.7 years, SD=4.8 years, mean age of the postmenopausal participants was 55.3 years, SD=4.9

Table 1. Baseline characteristics of study population: men stratified by the two age cohorts and women stratified by menopausal status

Variable	Males		Females	
	< 50 years N=1033	> 50 years N=1158	Premenop N=3153	Postmenop N=2623
	n (%)	n (%)	n (%)	n (%)
Place of residence				
Village	229 (22.3)	219 (18.9)	602 (19.1)	551 (21.0)
Small-to-medium city	482 (46.8)	514 (43.5)	1867 (59.2)	1497 (57.1)
Large city	318 (30.9)	435 (37.6)	684 (21.7)	574 (21.9)
Marital status				
Married/Partnered	916 (90.7)	1017 (89.0)	2663 (84.4)	1899 (72.4)
Never Married/Partnered	10 (1.0)	44 (3.8)	179 (5.7)	144 (5.5)
Widowed	31 (3.1)	33 (2.9)	137 (4.4)	420 (16.0)
Separated/Divorced	53 (5.2)	49 (4.3)	174 (5.5)	160 (6.1)
Education (years attained)				
<12 (primary/vocational)	424 (41.2)	497 (43.1)	819 (26.0)	1005 (38.3)
12 (secondary)	385 (37.4)	387 (33.5)	1559 (49.4)	1082 (41.3)
>12 (high/academic)	220 (21.4)	271 (23.4)	775 (24.6)	536 (20.4)
Financial strain				
Yes	477 (47.6)	461 (41.7)	501 (15.9)	1285 (49.0)
No	522 (52.4)	644 (58.3)	2652 (84.1)	1338 (51.0)
Leisure time				
Passive	2423 (76.8)	2052 (78.2)	842 (82.5)	970 (84.8)
Active	730 (23.2)	571 (21.8)	179 (17.5)	174 (15.2)
Smoking status				
Never smoked	303 (30.8)	364 (33.6)	856 (27.2)	957 (36.5)
Former smoker	242 (24.6)	313 (28.8)	817 (25.9)	714 (27.2)
Current smoker	438 (44.6)	408 (37.6)	1480 (46.9)	952 (36.3)
Smoked >10 cig./daily	279 (28.4)	226 (20.8)	1121 (35.5)	747 (28.5)
Self-Rated Health				
Very poor	14 (1.4)	48 (4.3)	48 (1.5)	84 (3.2)
Poor	99 (10.0)	216 (19.4)	405 (12.8)	527 (20.1)
Fair	334 (33.8)	462 (41.5)	1306 (41.4)	1162 (44.3)
Good	441 (44.7)	333 (29.9)	1297 (41.1)	803 (30.6)
Very goof/Excellent	99 (10.1)	55 (4.9)	97 (3.1)	47 (1.8)

years). A vast majority of the women were married (84.4% and 72.4% respectively). The percentage of widows in the postmenopausal group was four times higher (16%) than in the premenopausal group (4.4%), this being a well-known cohort effect. Both groups did not differ in terms of place of residence or leisure-time activities. There was, however, a difference in their levels of education, financial standing and smoking habits. The pre-menopausal women were slightly better educated than their post-menopausal counterparts, respondents with secondary and higher education representing 74% of the group vs. 61.7% in

the postmenopausal group. Both groups varied significantly in their self-reported financial standing. Only 15.9% of the premenopausal women claimed to have insufficient funds to meet their life needs versus 49% in the postmenopausal group.

Nearly half of the women of premenopausal status (44.6%) were addicted smokers smoking 10 or more cigarettes a day, compared to 36.3% addicted smokers in the post-menopausal group. This difference proved statistically significant.

As far as self-rated health is concerned, the younger men were significantly more likely to view their health as good or very good (54.8%) than the older ones (34.8%). Equally significant were disparities in self-rated health in women of different menopausal status. Those in their premenopausal period differed significantly from those of post-menopausal status (χ^2=132,4; df=5; p=0) in the way they viewed their health. The postmenopausal women were twice less likely to report very good self-rated health status (1.8% as compared to 3.2% in the premenopausal group). At the same time, twice as many postmenopausal women evaluated their health status as poor or very poor (20.1% women evaluated their health as poor and 3.2% as very poor as compared to respective 12.8% and 1.4% in the premenopausal group).

This outcome is shown even more clearly by the multiple correspondence analysis (MCA) based on the Burt's table for males (Fig. 1) and females (Fig. 2).

Correlations were determined among levels of self-rated health and the set of covariates including the menopausal status (for women) and calendar age (for men), place of residence and education levels. Out of all the characteristics, three dimensions were selected for analysis represented by interacting variables. The dimensions explained 37.8% in men ($\chi^{2=}$25075; df=169; p=0) and 36.2% in women ($\chi^{2=}$69352; df=169; p=0) of the total inertion.

For the male sample (Fig. 1), "very good/excellent" ratings corresponded to a group of younger men, residents of small cities. The ratings "poor", "fair" and "good" were almost evenly distributed within the group of older men. The residents of village and those men who rated their health "very poor" outstanded from other variables indicating particularity of these relations. The MCA analysis also revealed a well known phenomenon of tendency to be educated on higher level among residents of large cities.

As for the women (Fig. 2), 'very good and or excellent' ratings corresponded to the premenopausal women, residents of small to medium-sized cities. The postmenopausal women were likely to rate their health "fair". The female residents of rural area, educated on a basic level were likely to rate their health "poor". In the female cohort alike to males, the residents or large cities were likely to attained higher educational level.

In order to determine a structure of demographic, social and age-related variables affecting the self-reted health status of the participating men and women, a logistic regression analysis (LOGIT) was applied. The subjective health evaluation categories were transformed so as to achieve a dichotomic distribution of the variable thus making two categories of self-rated health: "high" (including SRH very good/excellent, good and fair) and "low" (including poor and very poor). Backward stepwise logistic regression models constructed for the men and women of varied marital and

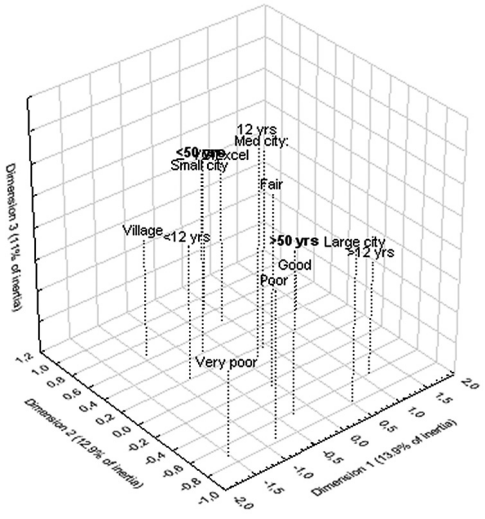

Fig. 1. The MCA for self-rated health and selected demographic and social variables in males. Three-dimensional plot of column coordinates: dimensions 1 × 2 × 3. Input Table (rows*columns): 16 × 16 (Burt's Table) of the following variables: self-rated health, age cohorts, place of residents, educational attainments. The following labels are used in this figure: age cohorts:<50 yrs, >50 yrs; place of residents: Village, Small city, Med city, Large city; educational attainments: >12 yrs, 12 yrs, >12 yrs; self-rated health: Very poor, Poor, Fair, Good, Very good/Excel

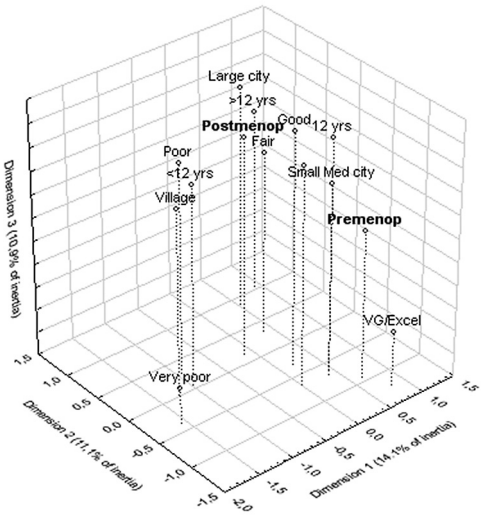

Fig. 2. The MCA for self-rated health and selected demographic and social variables in females. Three-dimensional plot of column coordinates: dimensions 1 × 2 × 3. Input Table (rows*columns): 16 × 16 (Burt's Table) of the following variables: self-rated health, age cohorts, place of residents, educational attainments. The following labels are used in this figure: Premenop, Postmenop; place of residents: Village, Small city, Med city, Large city; educational attainments: >12 yrs, 12 yrs, >12 yrs; self-rated health: Very poor, Poor, Fair, Good, Very good/Excel

Table 2. Factors contributing to self-rated health in middle-aged Polish men and women[a]. The final model of logistic regression (OR – odds ratio. 95% CI – 95% confidence interval)

Variables	β	SE	Wald's chi-square	p	OR	95% CI
			Females $\chi2=297.9$ df=3 p=0.000			
Menopausal status	–0.30	0.07	20.34	0.000	0.74	0.65–0.84
Financial strain	0.61	0.07	69.06	0.000	1.83	1.59–2.11
Education level	0.51	0.05	99.20	0.000	1.67	1.51–1.84
			Males $\chi2=96.17$ df=4 p=0.000			
Chronological age	–0.10	0.01	91.63	0.000	0.90	0.88–0.92
Financial strain	0.75	0.12	33.44	0.000	2.11	1.64–2.71
Education level	0.39	0.07	28.30	0.000	1.47	1.28–1.70
Marital status	–0.29	0.08	11.52	0.000	0.74	0.63–0.88

[a]Women split by their menopausal status: premenopausal and postmenopausal; men in two age-determined cohorts: <50 years and >50 years.

socio-economic status, controlled in relation to menopausal status and calendar age, generated a similar picture of how environmental variables affect self-rated health. Using the logistic model, the odds ratio (OR) was established to quantify the chance for a high self-evaluation of health across independent variable levels. LOGIT results of the final model are shown in Table 2.

Menopausal status, calendar age, financial standing, and education level of the sampled men and women, and additionally marital status for the men, were significant differentiators of the self-evaluation. Good financial standing doubled the chance for better self-rated health status (women OR=1.83; men OR=2.11). Higher education level multiplied the chance of better self-rated health by one and a half (women OR=1.67; men OR=1.47). Married or cohabiting males were more likely to be satisfied with their health (OR=0.74) as were the premenopausal women and the younger men (women OR=0.74; men OR=0.90).

Discussion

This work has demonstrated a correlation between self-rated health and men's and women's age, women's menopausal status and certain social variables. There are studies that question the usefulness and quality of self-evaluation of health. It needs to be stressed, however, that subjective assessment of one's health is a measure in itself, but a complementation of objective parameters which may also be erroneous. It is a subjective indicator that researchers by no means ignore. They even go as far as to emphasize it.

Over the recent ten years self-rated health in Poland has changed for the better. The improvement in Poland is accounted for by lower morbidity (e.g. 50% fall in mortalities caused by cardiovascular diseases, heart attacks, and neoplasms), better identification of risk factors, such as smoking, hyper pressure or cholesterol, and lower stress levels related to social, economic and political developments.

Research into self-rated health conducted in Poland by such institutions as the Central Statistical Office (GUS), the Public Opinion Research Centre (CBOS), and other governmental or scientific bodies have proved that over the recent ten years Polish adults have changed in the way they view their health status. In 2009, 12.8% of people aged 15 plus rated their health status as very good; 40.5% as good, 31.3% as so-so; 12.3% as poor; and 2.6% as very poor (GUS 2011). This means a substantial improvement in self-rated health status as in 1996 almost 20% of adult Polish people assessed their health as poor or very poor. The frequency of lowest ratings has been found to grow with age (Fig. 3).

Recent CBOS (2011) statistics have shown that 49% of Polish females and 41% of Polish males perceived their health status below good. This self-evaluation worsens with age with as much 82% of women aged 45–64 and 93% aged 65 perceived their health below good (for men, 75% and 87% respectively).

Self-evaluation of health changes and modifies with age. This work confirms this thesis by showing a significant correlation between age and self-rated health. A subjective view of one's health, a resultant of many subjective and objective factors, depends on an individual's approach towards his or hear health condition, that is on the psychological factors, e.g. personality traits, and is further

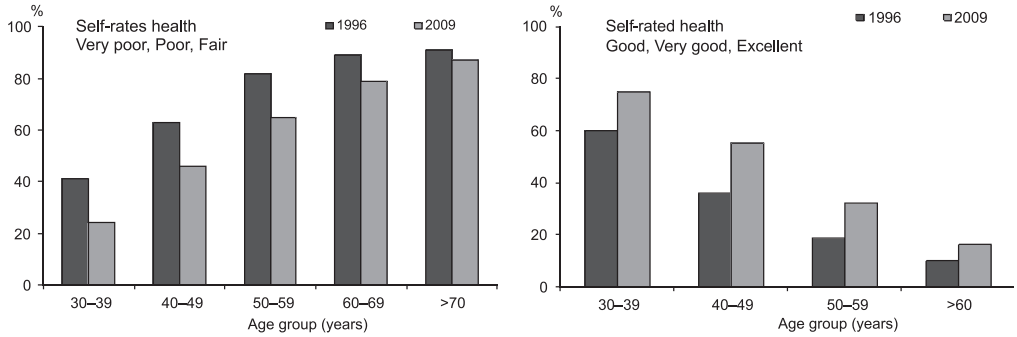

Fig. 3. Compared data for 1996 and 2009 ratio in self-rated health. Left – worse than good rating. Right – better than good rating. Pooled sex. See text for details

modified by his or her social status and lifestyle.

Self-rated health is clearly differentiated by gender, irrespective of age, with females tending to evaluate their health lower. Results of Kaczmarek's study on the quality of life in middle aged people (2004) provide further evidence that men assess their health as better (4.8) than women do (4.5). In Finland, until 1977, there was also a disparity in self-evaluation of health between men and women, but it was women who viewed their health more positively. Women made a better use of information on health status and health care. Furthermore, risk factors of cardio-vascular diseases, such as blood pressure and cholesterol emerged slower with women than with men. It needs also to be stressed that Finnish women earn very well, thus enjoying full independence and well-being, both physical and mental (Heistaro et al. 1996).

Of all female respondents with good and very good self-rated health, 52.7% were pre-menopausal, whereas of 36.5% of respondents with poor self-rated health were post-menopausal. Self-evaluation of health in women depends on their menopausal status which in turn is linked with the age (Kaczmarek 2007a). Diverse self-evaluations might have also been affected by social and economic status and better self-care, particularly in the menopause period. Cooper and Sandler (1998) observed that women who underwent menopause before 40 years of age were characterised by higher mortality. Postmenopausal women's worsened well-being may also be associated with adverse clinical symptoms which accompany menopause, particularly those of vasomotoric nature (Dennerstein et al. 2000).

Kumpsalo et al. (1992) argued that self-rated health in women is related to pain symptoms, while in men it is related to physical functionality.

Self-rated health correlates with objective health status, as established by a doctor basing on chronic diseases or somatic problems originating, for example, in musculoskeletal system disorders (Emptage et al. 2005; Fylkesnes and Førde 1991).

Socio-economic factors, especially the level of education and income, strongly influence morbidity, mortality and functionality at any age. However, differences between younger individuals representing different socio-economic statuses are less pronounced than between mid-

dle-aged or elderly people (Svedberg et al. 2005). Representatives of different age groups are not compared (a definition of good health differs across age groups, prevalence of illnesses growing with age). In general terms, younger people are healthier and differences occur later. Elderly people think a lot about their health problems, while younger ones seem to take their for granted, without paying much attention to it.

Cross-sectional studies on diverse populations show that growing older people develop increasing numbers of health problems, and long-lasting or new diseases, which significantly affects their self-rated health. Health status established by doctors, although verifiable with number of objective measures, is also criticised for its failing to identify a general ability to cope with life problems. Longitudinal studies conducted in Sweden and Finland have demonstrated, however, that over recent ten years people from the 60–67 age category have not displayed any general change in their self-evaluation of health (Heistaro et al. 1996; Svedberg et al. 2005)

Some study results from the USA have also confirmed that health status (diabetes, cardiovascular, heart attack, neoplasm), everyday activity, and level of education were of high relevance for satisfactory and poor self-rated health status, notwithstanding other variables employed by the models.

Finnish research has shown that education and income levels have a significant impact on self-rated health both in both men and in women. The rising education level has also been pointed out as the reason for the improvement in self-rated health over the years. Better education has lead to higher living standards, physical work has become less strenuous, and people have gained more free time to be spent on activities other than earning their living. Similar results have been achieved for men.

US studies have provided evidence that individuals with a lower education level, smokers, and those having problems with everyday activity rated their health as worse (fair or poor) than others.

To conclude, longitudinal and cross-sectional studies have revealed that age-determined variations in self-rated health status are not large, neither are the differences related to socio-economic factors which have also been ignored and neglected by researchers On the other hand, men's and women's self-perceived health has been found to be significantly affected by their income or, to put it more strictly, the amount sufficient to meet their life needs. It needs to be stressed at this point that this study has not elaborated on the issue of men's income, relying in this respect on respondents' subjective needs and expectations. In Poland at the turn of centuries, with unemployment rate reaching 20%, regular income and financial safety remain very valuable assets. Kaczmarek (2004) showed in her study that earnings, living standards and living conditions were the least satisfactory aspects in the lives of adult Polish men and women. This was reconfirmed by governemental analyses proving that unemployment and low social and economic statuses are strongly related with self-reported low quality of life. The differences in self-rated health status, which shows a strong correlation with Polish men's well-being may be caused by a difficult position of Polish men in the productive age in recent 15 years, heavier stress induced by socio-economic developments of the transformation pe-

riod (high unemployment and insecure financial position). Current social and economic conditions in Poland generate the sense of dissatisfaction with one's life and health, particularly with men below 50 years of age, urban, employed or jobless (Kaczmarek et al. 2006).

Education and marital status were relevant for self-rated health in men aged 50–60, being positively correlated with the gradients of both social factors. A social environment has been increasingly emphasized as the most vital determinant of individual well-being. This result has certainly been affected the fact that higher educated men supported by a close family are more aware and active in the approach towards their own health (Shi et al. 2004; Kolip 2005). The lack of social support (resulting from single marital status and low seniority at work) has been found to correlate strongly with depression, with the middle-aged more affected than older ones.

In terms of lifestyle, self-evaluation in the younger age-group was strongly influenced by physical activity, defined as a way of spending leisure time, which positively correlated with better mental well-being. Many studies underline that elderly people who do not live very actively report poor or fair health status and are at greater risk of developing depressive symptoms (Stathi et al. 2002; Meyer 2005). The way of spending free time is particularly important people over 60 years of age as the lack of physical activity may deepen their social isolation. Physical activity is promoted in many countries as a factor contributing to successful ageing. The study conducted by Lee (2000) also demonstrate that physical activity (defined as "as much as I need" or "less than I need") had a significant impact on self-evaluation of elderly (70 plus) urban residents.

Conclusion

In conclusion of this study, it needs to be pointed out that the role of socio-economic status in middle-aged men's and women's self-rated health has been confirmed. The results received warrant the conclusions that self-rated health is a gender-specific phenomenon, clearly differentiated between men and women in that women rate their health as much worse than men do. Factors related to middle-aged men's and women's self-rated health include primarily education level and financial standing.

Authors' contribution

The authors equally contributed to this paper; MK approved final version of the manuscript.

Conflicting interests

The authors declare that they have no conflicts of interest in the research.

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