

HEALTH-RELATED QUALITY OF LIFE AND SOCIO-ECONOMIC STATUS OF THE UNEMPLOYED

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Abstract: Unemployment has a number of negative, economic, social and psychological effects on unemployed people and their families. Lowered household income leads to a constrained fulfilment of individual and collective needs, which has a significant impact on the quality of life and perceived health condition of the unemployed. The aim of this study is the identification of relationships between the quality of life and socio-economic status of unemployed persons. The study was carried out among 403 registered unemployed persons (246 women, 157 men) from Wrocław, Poland. The main method used in the study was the diagnostic questionnaire survey. Respondents' quality of life was assessed using the World Health Organization Quality of Life (WHOQOL-BREF) questionnaire, and their socio-economic status with author's own S-ESQ questionnaire. Arithmetic means and standard deviation were calculated. Correlations between respondents' quality of life and socio-economic status were checked with the Kruskal-Wallis one-way analysis of variance and Dunn's post-hoc tests. The ex-ante level of statistical significance was set at $\alpha < 0.05$. The mean health-related quality of life score of the unemployed respondents under study was higher than the mean perceived health condition score. As for the four quality of life domains, the respondents reported the highest scores in the social domain and psychological domain, followed by the physical and environmental domains. The analysis of mean scores of overall quality of life of the unemployed revealed statistically significant differences between groups of jobless Wrocław residents with regard to such factors as age, number of household members, and per capita income. Respondents' age, education, marital status, persons per household, per capital income, and having savings were also significant differentiating factors of perceived health condition. The results of the study can be significant for public health policies in Poland and other countries at a similar level of economic development.

Keywords: Quality of life, WHO, unemployed.

JEL Classification: I31, J10, J60.

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Introduction

Unemployment was the greatest social problem faced by the Poles during the political transformation and the transition from a centrally planned to a free market economy. The average unemployment rate in Poland was higher than in most other countries of Central and Eastern Europe. In the studied period, the unemployment rate amounted to 11.5% in 2014 and 9.7% in 2015, respectively (<https://bdm.stat.gov.pl>). However, there is a large regional variation in the unemployment rate, which means that despite the dynamic economic growth, the problem of unemployment still affects representatives of many social groups in Poland.

Unemployment, in particular long-term unemployment, has a number of negative, economic, social, and psychological effects on jobless people and their families. Reduced household income leads to various constraints of fulfillment of individual and collective needs. Joblessness results in a decline of professional skills and qualifications, which often hinders or even prevents a successful return to work (Zhang & de Figueiredo, 2018). A decline in social relationships can be observed as well as conflicts in families, sense of social exclusion, and loss of social standing (Vossemer et al., 2018). The costs are the highest for the unemployed individuals who experience emotional disorders, low life satisfaction, and higher susceptibility to diseases (Tøge, 2016).

Numerous studies have indicated the negative impact of unemployment on mental health. Buffel, Missinne and Bracke (2017), observed such symptoms as helplessness, frustration, low self-esteem, increased stress, and depression in jobless people. The unemployed also experience a higher incidence of psychosomatic disorders, e.g. heart diseases or tumors, than the employed (Meneton et al., 2017). Clemens, Popham and Boyle (2015), noted that the all-cause mortality risk was nearly twice as high for the unemployed as for the employed. A meta-analysis by Milner, Page and LaMontagne (2014) revealed that unemployment is significantly correlated with a higher relative risk of suicide. This observation was also shared by Meneton et al. (2017). Long-term structural unemployment was considered exceptionally hazardous by Blomgren and Valkonen (2007), late-career unemployment by Voss et al. (2018), and unemployment of young

people by Kawada (2018). Madureira-Lima et al. (2018) revealed an increased negative impact of unemployment on health status during the Great Recession, and Heggebo (2016), during an economic downturn.

The potential relationships between health and unemployment can be associated not only with the negative, indirect impact of joblessness on health condition, but also with the impact of poor health on unemployment. These relationships were examined by Van Zon et al. (2017). Leonardi et al. (2018) in their studies of Polish, Spanish and Finnish populations concluded that factors related to unemployment included physical disability, mental issues, and poor eyesight and hearing.

In this context not only is an objective health status important but also self-perceived health-related quality of life. Earlier studies indicated that a lower quality of life index is often associated with the incidence of motor function disorders and worse social functioning (Lee et al., 2005).

A key research issue is the impact of the socio-economic situation of unemployed people on their perception of health condition and quality of life. While researchers have previously examined this problem in relation to total working-age populations (Réklaityienė, Bacevičienė, & Andrijauskas, 2009; Huang et al., 2015; Zhang et al., 2015) and patients (Kokaliari, 2016; Opoku-Boateng et al., 2017; Raymakers et al., 2018), there have been relatively few studies concerning the unemployed (Chinweuba et al., 2018; Yang et al., 2016). So far no socio-economic factors, such as the number of persons per household, work-unrelated income (e.g. alimony benefits, child allowance, or financial assistance from family members), savings, or indebtedness, have been considered in assessments of health-related quality of life. The present study attempts to address this research gap.

1. Theoretical Background

Researchers have noted a worse health condition among the unemployed than among the employed (Tran, Canfield, & Chan, 2016). In Øverland et al. (2006), jobless respondents rated their health as worse than the employed. In a male Finnish population Griep et al. (2016) noted better perceived health condition among insecure permanent employees than among the short-term unemployed, and in particular,

than among the long-term unemployed. A study of an Italian unemployed population as well as first-job seekers and insecure temporary workers showed that all of them reported a worse perceived health status than secure permanent employees (Minelli et al., 2014).

Sołtysik et al. (2017), found a lower quality of life in the unemployed than in manual and white-collar workers. Czekirda et al. (2017) indicated, however, more complex associations between unemployment and quality of life. A comparison between the quality of life of working and jobless nurses and midwives showed that the working nurses perceived their quality of life better than their unemployed counterparts. However, jobless midwives assessed their quality of life higher than their working counterparts. Michalos and Orlando (2006) showed that unemployed working-age individuals rated their quality of life lower than the pre-working-age unemployed. A lower assessment of quality of life of the unemployed than of the employed was also observed by Worach-Kardas and Kostrzewski (2013) in an urban population aged more than 45 years. Carlier et al. (2013) also showed that re-employment significantly improved the self-rated health of unemployed respondents.

There have been rather few population-based studies regarding the links between the quality of life and socio-economic status of healthy persons. In a study of Chinese population Zhang et al. (2015), showed low income, older age, and unemployment to be significant factors of lower quality of life assessment. Huang et al. (2017) in their research on a Chinese population showed that lower quality of life (QoL) index scores were associated with older age, low levels of education, temporary accommodation, poverty, and unemployment. Studies of Lithuanians indicated associations between higher quality of life scores, higher education and income levels, and occupation. Unemployed and retired Lithuanians attained lower quality of life index scores than their working counterparts (Rėklaitienė, Bacevičienė, & Andrijauskas, 2009).

Kokaliari (2016) analyzed associations between quality of life and socio-economic status in Greece following the austerity measures imposed after the financial crisis. She recorded lower quality of life scores in women, single parents, low income workers, and the unemployed. In an interesting study of postpartum women Chinweuba et al. (2018),

showed that women with higher levels of education and income rated their quality of life better than women with lower education and income levels. Moreover, the quality of life assessment deteriorated with the studied women's age and was higher in working women than in non-working women. Yang et al. (2016) evaluated the quality of life in its physical and mental domains among 1,825 unemployed respondents from China, and examined the relationships between their quality of life and socio-economic status. Higher mean QoL physical domain scores were shown to be related with the male sex, younger age, and higher income. Single unemployed persons under 25 years of age, whose monthly income exceeded 2,000 yuans perceived their quality of life as the highest in the mental domain. The perception of quality of life in the physical and psychological domains also depended on employment length, and it was significantly worse among people who remained unemployed for longer than 6 months.

Earlier research also pointed to the impact of socio-economic status on perceived health condition. Janković, Janević and Knesebeck (2012) in their study of a Serbian population concluded that the odds of assessing their health as poor were four-times higher in individuals with a low education than with a higher education. The odds of poor self-perceived health by the unemployed was, however, about 1.5 times higher than by the employed. Griep et al. (2016) found statistically significant correlations between perceived health condition and such variables as age, education, having children, income, and place of residence. Negative correlations of self-rated health with age, and positive correlations with education, number of children under 18 years of age in the family, and place of residence were also found. Minelli et al. (2014), confirmed that young people with high incomes did rate their perceived health condition most highly.

In view of the above considerations the aim of this study is the identification and assessment of potential correlations between health-related quality of life and socio-economic status in unemployed individuals. Two specific research problems have been formulated:

1. What is the assessment of the quality of life of the unemployed from Wrocław?
2. Are gender, age and such factors of socio-economic status as: level of education,

marital status, household size, income per capita, savings and debt related to the assessment of the quality of life of the respondents?

2. Research Methodology

The survey was of a cross-sectional nature and was conducted from October 2014 to March 2015, in Wrocław, Poland. The study sample comprised 4,332 persons (2,276 women, 2,056 men) aged 18–64 years, i.e. about 1% of all working-age residents of Wrocław. The minimum sample size was calculated using the formula below (Brzeziński, 2011):

$$n = \frac{N}{1 + \frac{e^2(N-1)}{Z_{\alpha}^2 pq}} \quad (1)$$

where: N – number of Wrocław residents on December 31, 2013 (N = 632,067); p – fraction of working-age Wrocław residents on December 31, 2013 (p = 0.63); q – constant calculated as 1–p (q = 0.37); e – expected estimation error of p (e = 1.5%); Z_{α} = 1.96 for α = 0.05.

The sample selection was random using a three-level stratification. First, with the use of a random number table, ten residential areas were selected from all alphabetically ordered Wrocław areas. Next, three streets from each selected residential area were chosen, whose residents were asked to fill in the questionnaire. The number of respondents from particular residential areas was proportionate to the number of residents of these areas. The respondents were all informed about the purpose and the course of the study, and they expressed their written consent to participate.

403 respondents (246 women, 157 men) were registered unemployed persons, and they were divided into the following age ranges: 18–24 years (21% of women, 28% of men), 25–34 years (18% of women, 26% of men), 35–44 years (8% of women, 10% of men), 45–54 years (13% of women, 17% of men), and 55–64 years (40% of women, 20% of men). The majority of the unemployed respondents (68% of women, 70% of men) had a primary or vocational education; 24% of women and 22% of men – a secondary education, and 8% of both men and women – a higher education. Almost 53% of women and 52% of men among the unemployed under study were married, while 47% of women and 48% of men were

single. 15% percent of women and 13% of men lived alone, 31% of women and 29% of men lived in two-person households, 20% of women and 15% of men in three-person households, 21% of women and 31% of men in four-person households, and about 13% of both men and women in five-and-more person households. The monthly per capita income in a household up to PLN 500 was earned by 23% of women and 44% of men, PLN 501–1,000 by 30% of women and 22% of men, PLN 1,001–1,500 by 28% of women and 25% of men, PLN 1,501–2,000 by 9% of women and by 5% of men, and above PLN 2,000 by 10% of women and 4% of men. Almost 83% of the unemployed women and 95% of unemployed men under study had no savings, and over 82% of women and 81% of men were in debt (Tab. 1).

The main method used in the study was the diagnostic questionnaire survey. Respondents' quality of life was rated with the World Health Organization Quality of Life (WHOQOL-BREF) questionnaire (WHO, 2013) consisting of 26 items assessing: Overall Quality of Life (OQoL), Perceived Health Condition (PHC), and Quality of Life in four domains: Physical Domain (PHYD), Psychological Domain (PSYD), Social Domain (SD), and Environmental Domain (ED). Answers to the items were expressed on a scale: 1 to 5 points where the best score is: 5 and the worst is 1 for OQoL and perceived health condition (PHC); and 4 to 20 points for each of the four quality of life domains where the best score is: 20 and the worst is 4.

The socio-economic status of the unemployed was assessed using author's own socio-economic status questionnaire (S-ESQ), which considered such variables as: gender (female, male), age (18–24, 25–34, 35–44, 45–54, 55–64 years), education (primary and vocational, secondary, higher), marital status (single, married), number of persons per household (1, 2, 3, 4, 5–9), per capita income (\leq 500, 501–1,000, 1,001–1,500, 1,501–2,000, \geq 2,001 Polish zlotys [PLN]), having savings (NO, YES), and indebtedness (NO, YES). Before the application of the S-ESQ questionnaire its reliability was ensured with a test-retest method. To that end a group of 115 people (64 women, 51 men) filled the questionnaire twice, 14 days apart. The collected data were used for test repeatability analysis in order to remove all errors and inaccuracies in the test.

Tab. 1: Number and percentage of unemployed residents of Wrocław with regard to their socio-economic status

Variable	Category	Total (N = 403)		Women (n = 246)		Men (n = 157)	
		n	%	n	%	n	%
Age [years]	18–24	95	23.57	51	20.73	44	28.03
	25–34	85	21.09	44	17.89	41	26.11
	35–44	35	8.68	20	8.13	15	9.55
	45–54	58	14.39	32	13.01	26	16.56
	55–64	130	32.26	99	40.24	31	19.75
Education	Primary	277	68.73	167	67.89	110	70.06
	Secondary	94	23.33	59	23.98	35	22.29
	University	32	7.94	20	8.13	12	7.64
Marital status	Single	190	47.15	115	46.75	75	47.77
	Married	213	52.85	131	53.25	82	52.23
Persons per household	1	56	13.9	36	14.63	20	12.74
	2	121	30.02	76	30.89	45	28.66
	3	74	18.36	50	20.33	24	15.29
	4	99	24.57	51	20.73	48	30.57
	5–9	53	13.15	33	13.41	20	12.74
Per capita income [PLN]	≤ 500	125	31.02	56	22.76	69	43.95
	501–1,000	109	27.05	75	30.49	34	21.66
	1,001–1,500	108	26.8	68	27.64	40	25.48
	1,501–2,000	31	7.69	23	9.35	8	5.10
	≥ 2,001	30	7.44	24	9.76	6	3.82
Savings	No	352	87.34	203	82.52	149	94.90
	Yes	51	12.66	43	17.48	8	5.10
Indebtedness	No	75	18.61	45	18.29	30	19.11
	Yes	328	81.39	201	81.71	127	80.89

Source: own

Notes: n – number of respondents; % – percent of respondents.

The gathered data were ordered and further analyzed in terms of numbers and percentages with regard to respondents' gender, age, and socio-economic variables. Arithmetic means (M) and standard deviation (SD) for health-related quality of life and for perceived health condition in groups of respondents according to gender, age and socio-economic variables were calculated. Correlations between respondents' quality of life and socio-economic status were checked with the Kruskal-Wallis one-way analysis of variance (H) and Dunn's post-hoc tests. The level of statistical significance was

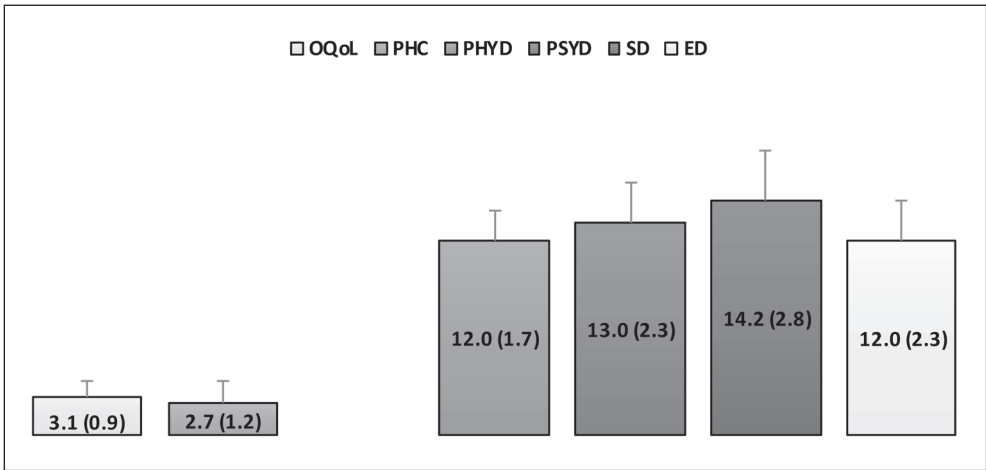
set at $\alpha < 0.05$. All calculations were made with the use of Statistica 13.0 software package (Dell Inc.).

3. Research Results

The mean health-related quality of life score of the unemployed respondents was 3.1 ± 0.9 pts. and was higher than the mean perceived health condition score, i.e. 2.7 ± 1.2 pts. As for the four quality of life domains, the respondents gave their highest scores in the social domain (14.2 ± 2.8 pts.) and psychological domain

Fig. 1:

Quality of life and perceived health condition of unemployed residents of Wrocław (N = 403). Data are mean and standard deviation M (SD)



Source: own

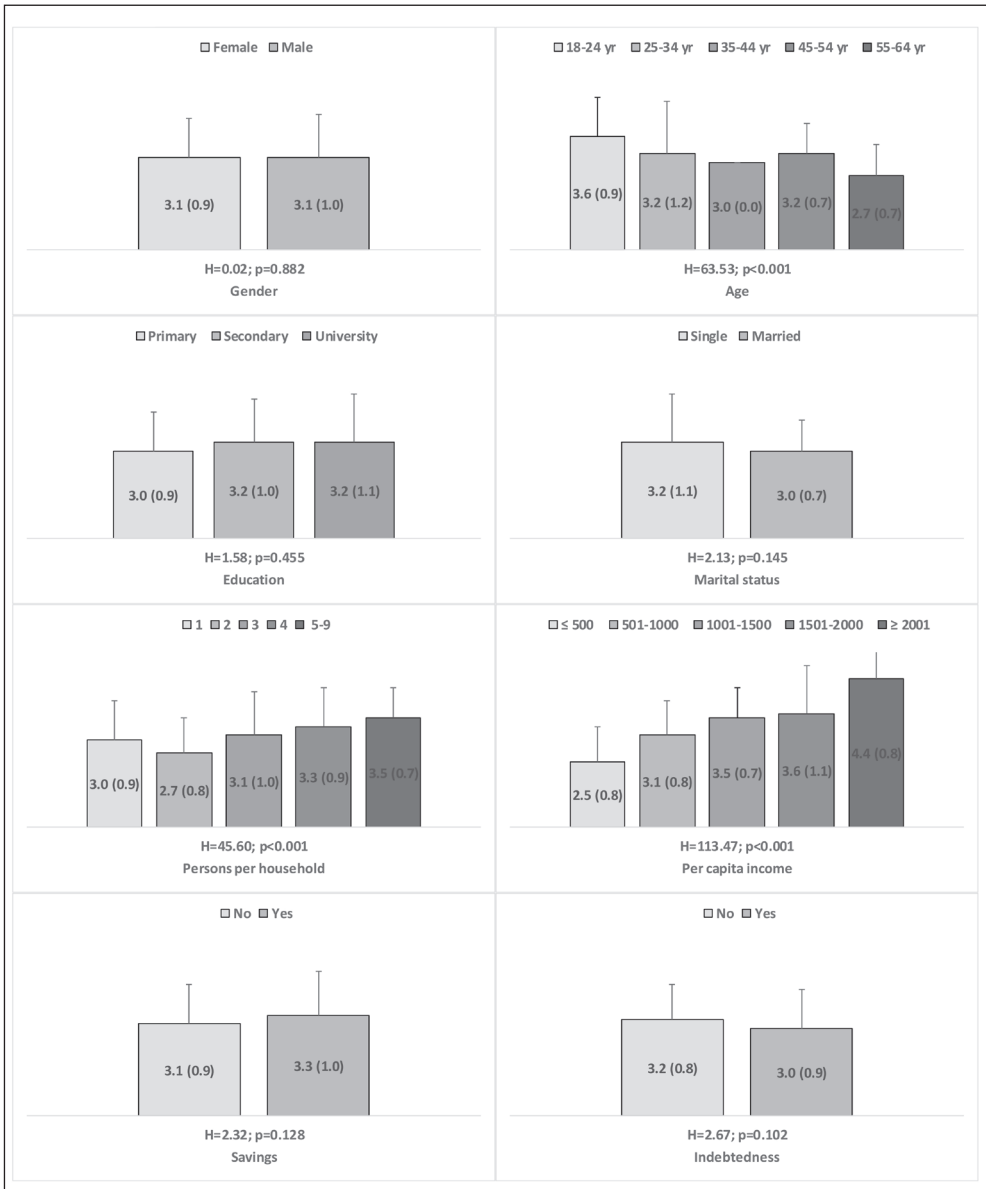
(13.0 ± 2.3 pts.), followed by the physical and environmental domains (12.0 pts. each) (Fig. 1).

The analysis of the mean overall health-related quality of life scores indicates statistically significant differences ($p < 0.001$) in groups of respondents according to age, persons per household, and per capita income (Fig. 2). The highest quality of life scores (3.6 ± 0.9 pts.) were attained by the youngest respondents, and the lowest (2.7 ± 0.7 pts.) by the oldest. The p-values for post-hoc multiple comparisons between mean rank values (\bar{R}) in particular groups point to significant differences in quality of life between respondents aged 18–24 and 55–64 years, 25–34 and 55–64 years, and 45–54 and 55–64 years. The highest quality of life scores were reported by the unemployed living in five-or-more-person households (3.5 ± 0.7 pts.) and four-person households (3.3 ± 0.9 pts.), and the lowest by the unemployed from two-person households (2.7 ± 0.8 pts.). Statistically significant differences in quality of life scores were also found between the unemployed from one-, two-, three-person households and from five- and more-person households, and between the unemployed from two-person households and four-person households. The mean quality of life assessment increased with the growing mean income per capita. The

highest quality of life scores were reported by respondents with an income level above 2,001 Polish zlotys (4.4 ± 0.8 pts.) and between 1,501 and 2,000 zlotys (3.6 ± 1.1 pts.), and the lowest by the unemployed whose income level was under or equal to 500 zlotys (2.5 ± 0.8 pts.). The differences in quality of life between the group of respondents with the income under 500 zlotys and all other income groups were significant. Statistically significant differences were also found between mean overall quality of life scores of respondents with income levels between 501 and 1,000 and 1,501–2,000, and between 501 and 1,000 and 2,000 and more zlotys.

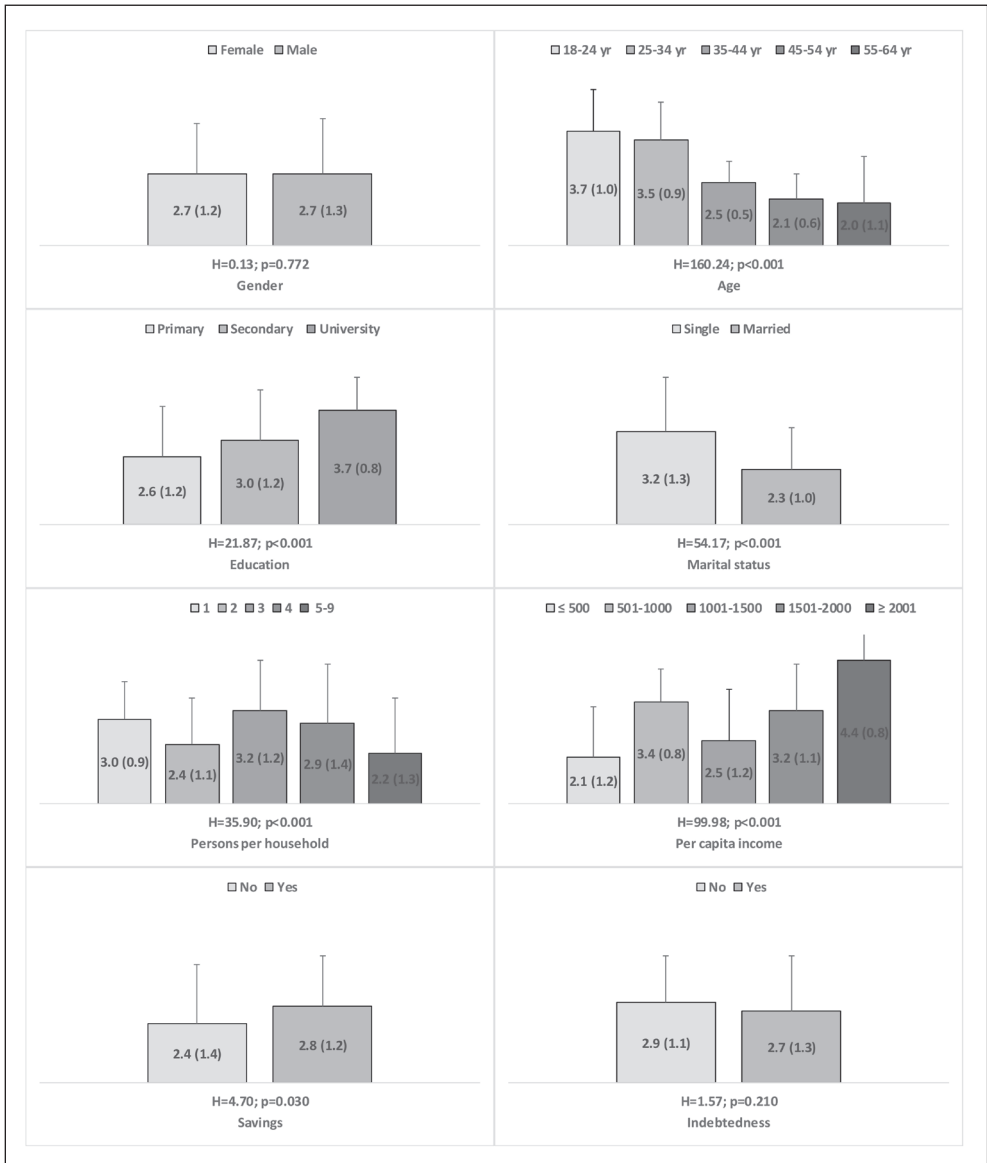
Respondents' age and such socio-economic variables as education, marital status, persons per household, per capital income, and having savings were also significant differentiating factors of perceived health condition (Fig. 3). The highest mean perceived health condition scores were reported by the unemployed aged 18–24 years (3.7 ± 1.0 pts.) and 25–34 years (3.5 ± 0.9 pts.), and the lowest by the unemployed aged 55–64 years (2.0 ± 1.1 pts.), 45–54 years (2.1 ± 0.6 pts.) and 35–44 years (2.5 ± 0.5 pts.). Post hoc comparisons between different age groups revealed statistically significant differences in perceived health condition assessments between the youngest

Fig. 2: Overall quality of life in groups of unemployed residents of Wrocław with regard to gender, age, and socio-economic status (N = 403); date are mean and standard deviation M (SD)



Source: own

Fig. 3: Perceived health condition in groups of unemployed residents of Wrocław with regard to gender, age, and socio-economic status (N = 403); data are mean and standard deviation M (SD)



Source: own

group and the three oldest age groups of unemployed respondents. The Kruskal-Wallis test results ($H = 21.87$, $p < 0.001$) and p post hoc multiple comparisons showed that the mean ranks of perceived health condition between groups of the unemployed according to education differed significantly. A significant determinant of perceived health condition assessment was also the respondents' marital status ($H = 54.17$, $p < 0.001$). Respondents who were single assessed their perceived health condition higher (3.2 ± 1.3 pts.) than respondents who were married (2.3 ± 1.0 pts.). The highest perceived health condition scores were reported by the unemployed respondents from three-person households (3.2 ± 1.2 pts.), one-person households (3.0 ± 0.9 pts.), and four-person households (2.9 ± 1.4 pts.); and the lowest by the respondents from five-and-more-person households (2.2 ± 1.3 pts.) and two-person households (2.4 ± 1.1 pts.). Statistically significant differences in self-rated health were also found between respondents from one-person households and three-, four- and five-and-more-person households, between respondents from two-person households and three- and four-person households, and between respondents from three- and four-person households and five- and more-person households. The mean perceived health condition scores were also significantly different between the per capita income range groups of respondents. The highest scores (4.4 ± 0.8 pts.) were found among the respondents with the highest income, and the lowest scores among the respondents with the lowest income (2.1 ± 1.2 pts.). Inter-group post hoc comparisons revealed significant differences between the group of respondents with the lowest income and the remaining income groups, between those with their income in the 501–1,000 zloty range and 1,001–1,500 range, and between those in the 1,001–1,500 zloty range and those earning more than 2,000 zlotys. Also perceived health condition was assessed significantly higher ($H = 4.70$, $p = 0.03$) by respondents with savings (2.8 ± 1.2 pts.) than by respondents without savings (2.4 ± 1.4 pts.).

4. Discussion

Socio-economic status, also referred to in social sciences as living standards or objective quality of life, constitutes a spectrum of possibilities of needs fulfillment. It also involves

a number of social behaviors considered to have a significant impact on the subjective (perceived) quality of life (Słaby, 2017). One of subjective quality of life categories is health-related quality of life. Consumption shortages affect, in particular, unemployed persons who often experience limited possibilities of fulfillment of their needs, including health-related needs (Sarti & Rodriguez, 2018).

Negative correlations between health-related quality of life and respondents' age have been well documented (Chinweuba et al., 2018; Huang et al., 2017; Yang et al., 2016; Zhang et al., 2015). Also the present study of the unemployed from Wrocław confirms these correlations. The youngest respondents reported the highest quality of life scores, while the oldest got the lowest scores. Similar observations can be made regarding self-perceived health assessment. This confirmation is empirical as objective health status has been proven to deteriorate with age (Sławińska, Połuszny, & Rożek, 2014; Wróblewska et al., 2015).

An important correlate of health-related quality of life is also the marital status. Single unemployed residents of Wrocław rated their quality of life higher than their married counterparts. Results of earlier studies into these correlations had been rather inconclusive. Raymakers et al. (2018) found no significant correlations between quality of life and marital status. In Durmaz et al. (2000) married individuals evaluated their quality of life higher than single individuals. However, Opoku-Boateng et al. (2017) found higher odds of better quality of life scores in single individuals than in married individuals. Few studies (e.g. Kurtinová, 2015) found no significant correlations between self-rated health and marital status. This issue still requires further empirical research.

The results of the present study considering the impact of the number of persons per household showed that the unemployed from households with the largest number of members reported the highest health-related quality of life scores and the lowest perceived health condition scores. The variable of persons per household had not been considered before in earlier studies. Griep et al. (2016) found, however, positive correlations between perceived health condition assessment and the number of children under 18 years of age in the family. It might be assumed that households with

the largest number of members include not only children but also other adults who most likely work or receive social benefits, which increases the overall household income and allows all household members, including the unemployed persons, to fulfill their needs. This can be reflected in the high assessment of quality of life by the unemployed under study. The low perceived health condition scores could have been affected by objective health factors or, as noted by some other authors, deterioration of mental health of the unemployed persons (Buffel, Missinne, & Bracke, 2017).

The level of education of the studied unemployed Wrocław residents was significantly correlated only with perceived health condition. The mean perceived health condition scores were the highest in the most educated and the lowest in the least educated respondents. Similar observations were also made by Griep et al. (2016) and Janković, Janević and Knesebeck (2012). Higher health awareness levels in better educated individuals have been well-documented (Tanvir, Sajjad, & Roshan, 2018). They more often lead a health-oriented lifestyle by undertaking physical activity, following a balanced diet, or avoiding any potential health hazards (Puciato et al., 2013). Better educated persons were also shown to display higher levels of optimism (Krypel, & Henderson-King, 2010), which can be a significant determinant of their health condition perception. Researchers also revealed frequent correlations between respondents' education and length of unemployment (Čabla, 2016; Čabla & Malá, 2017). Statistical data clearly show that better educated persons are less often unemployed and find re-employment sooner than persons with a lower education. At the end of the study period the unemployment rates in Wrocław amounted to 1.6% among people with a higher education, 2.8% – with a secondary education, 7.3% – with a vocational education, and 9.6% – with a primary education (GUS, 2016). Better educated persons also earn higher incomes than less educated persons. In Poland in the study period, the salaries of workers with a secondary education were 16% higher, and with a higher education – 77% higher than the salaries of workers with a vocational and primary education (Sedlak & Sedlak, 2016). Better educated persons who were temporarily unemployed could have had money savings

allowing them to meet their health needs at least partially, and this might have affected their perception of health condition.

The results of the present study concerning respondents' income and savings confirm the significance of financial resources for assessment of health-related quality of life and perceived health condition. The unemployed respondents under study with the highest income per capita assessed their perceived health condition at the highest level.

Among the unemployed residents, despite lack of current work income, the mean per capita income varied for any of these possible reasons:

1. Some remaining members of the household could have had their own sources of income.
2. The unemployed respondents and their families could have received welfare benefits that alleviated the negative consequences of their joblessness.
3. Some of the unemployed residents might have undertaken undeclared work but still declared the unemployed status.
4. Some of the unemployed respondents could have had money savings. In consequence, the actual financial situation of some of households under study might have been good enough to secure the fulfilment of all household members' health needs. Researchers confirmed the significant role of income for quality of life assessment by patients (Durmaz et al., 2000), the employed (Chinweuba et al., 2018; Huang et al., 2017; Kokaliari, 2016; Rėklaitienė, Bacevičienė, & Andrijauskas, 2009; Yang et al., 2016; Zhang et al., 2015), and the unemployed (Griep et al., 2016; Minelli et al., 2014).

An important, although previously empirically unconsidered determinant of perceived health condition by the unemployed is having money savings. Earlier studies did confirm the significance of savings for perceived overall quality of life (Oana & Cosmin, 2017). Moreover, following Kahneman and Tversky's loss aversion theory (1979), losses hurt more than gains feel good. Losing savings is hurtful and associated with lower self-perceived quality of life. For the unemployed respondents under study their savings could have been a "safety buffer" to ensure the fulfilment of their needs without current income. The correlations between having savings and the sense of safety

were confirmed before (Tovar & Urrutia, 2017). It should also be kept in mind that savings behaviors are culturally determined, e.g. the Dutch save money more often than Americans (De Graaf, 2010). In Poland, at the end of 2015, the savings rate, calculated as gross saving divided by gross disposable income, was only 1.6%. In terms of savings Poland ranked 39th place in the world (Kolasa & Premik, 2016). Furthermore, the distribution of savings in the Polish society is rather asymmetrical. According to *Diagnoza Społeczna 2015* (Czapiński & Panek, 2015), only 45% of Poles had any savings, and the majority of these savings were equivalent to one- to three-month salaries. In the Polish economic reality having savings is thus relatively rare, which can explain the role of this factor in perceived health condition assessment by the unemployed respondents.

Conclusions

The study results indicate the existence of correlations between health-related quality of life and such factors as age, household situation, education, income, and savings. These observations can be significant for public health policies in Poland and countries at a similar level of economic development.

According to Sarti and Rodriguez Espinola (2018), health inequalities are the greatest in countries at low and medium levels of economic development. However, the extent of these inequalities varies significantly in most advanced countries, e.g. within the European Union, and Poland is an example of a country with one of the highest rates of health inequalities (Pacáková & Kopecká, 2018). Shahidi, Siddiqi and Muntaner (2016) also showed that health inequalities occur within particular countries, between different social groups, e.g. the employed and the unemployed. Inequalities can be observed in terms of objective health status predictors as well as perceived health condition factors. These observations are confirmed by the results of the present study of unemployed residents of the city of Wrocław. The study indicates that health inequalities among the unemployed result from supranational differences in social security services and public welfare aid for the unemployed.

Recommendations should be made to the public authorities at different administrative levels to undertake actions aimed at reducing

unemployment-related health inequalities. Such actions should be direct, involving a wider availability of medical products and services, and indirect, aiming at improving the education and affluence levels of unemployed persons (Krupka et al., 2010). The authorities should become engaged in the development of the role of external environment as an objectivized measure for individual life satisfaction (Cernakova & Hudec, 2012). More and more often researchers discuss the notion of quality-of-life management in patients (Lewis, Pihlak, & McNamara, 2018), and healthy persons (Bucur, 2017), including employees (Bugdol & Jedynak, 2015). These activities are crucial as Yang et al. (2016) revealed in their studies that better quality of life and perceived health status are associated with enhanced stress management, mobility, and self-efficacy. These activities can improve the effectiveness of the job-seeking process. Public authorities' actions related to combating unemployment are also necessary. Particular attention should be paid to improving professional qualifications of the unemployed, their adaptation to the contemporary labor market, and supporting the unemployed in the process of relocation to places with a high demand for labour. This is important not only in the context of unemployed individuals but also national economies. An insufficient use of labor force is associated with limited production levels and, in consequence, with a gap between the potential GDP at full employment and the actual GDP in a given time period.

The present study has its strong and weak points. A strong point of the study is the character of the study group since the unemployed are not often a subject to research. Previous research did not consider such variables as the number of persons per household, savings and indebtedness as potential determinants of health-related quality of life and perceived health condition of the unemployed. The study results proved these determinants to be significant thus they should be considered in future research in addition to such factors as household structure and amounts of savings and debt. A weak point of the present study is the confinement of the study area to a single city. Future research should definitely cover the entire territory of Poland, or even the whole region of Central Europe. Prospective studies could also focus on the impact of socio-economic factors on each domain of health-

related quality of life: physical, psychological, social, and environmental. Such an analytical approach would permit identification of correlations between particular quality of life components and socio-economic factors.

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