

University of Groningen

Socio-economic health differences among the elderly population in Krakow, Poland

Knurowski, T.; van Dijk, J.P.; Geckova, A.M.; Brzyski, P.; Tobiasz-Adamczyk, B.; van den Heuvel, W.J.

Published in:
Sozial-und Praventivmedizin

DOI:
[10.1007/s00038-005-2051-8](https://doi.org/10.1007/s00038-005-2051-8)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2005

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Knurowski, T., van Dijk, J. P., Geckova, A. M., Brzyski, P., Tobiasz-Adamczyk, B., & van den Heuvel, W. J. (2005). Socio-economic health differences among the elderly population in Krakow, Poland. *Sozial-und Praventivmedizin*, 50(3), 177-185. <https://doi.org/10.1007/s00038-005-2051-8>

Copyright

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

¹ Department of Medical Sociology, Chair of Epidemiology and Preventive Medicine,
Faculty of Medicine, Jagiellonian University, Krakow, Poland

² Department of Social Medicine, University of Groningen, The Netherlands

³ Institute of Social Sciences, Faculty of Science, University of P. J. Safarik, Kosice, Slovakia

⁴ Institute of Rehabilitation Research, Hoensbroek, The Netherlands

Socio-economic health differences among the elderly population in Krakow, Poland

Submitted: 1 May 2002

Accepted: 20 February 2005

Summary

Objectives: To assess whether socio-economic health differences persist into old age in Poland and if there are SES-related differences in health by age group and gender.

Methods: 528 randomly chosen, not institutionalized elderly people aged 65–85 living in Krakow were interviewed about their socio-economic status (occupation, education, income, house ownership), health status (self-rated health) and quality of life (Cantril's ladder).

Results: People with higher level of education and higher occupational status reported significantly better health and better quality of life compared to people who were not as well off. Income level and house ownership had a significant influence on the quality of life of elderly people. In addition, some findings indicate differences in the patterning of health inequalities across particular age and gender groups.

Conclusion: There are socio-economic differences in health and quality of life among the urban elderly population in Poland which are unfavourable for lower social strata.

Keywords: Socio-economic status – Health inequalities – Elderly – Poland.

Health status of the elderly in Poland has been of great scientific interest during recent decades. In particular the elderly and problems related to age concern general practitioners, planners and policy-makers. The population of elderly people (65 years and older) constitutes 12% of the Polish population and the prognoses are of about 17% in

2020 (GUS 2002). With the increasing proportion of elderly people, more attention has to be directed to this group in Polish society. We have therefore to pursue the factors which have an impact on the health of the elderly. Gender inequalities in health in the Polish elderly were reported recently by Tobiasz-Adamczyk and Brzyski (2002) and Halik (2000). The pattern of gender inequalities in health is similar to Western European countries and the United States: men generally perceive better health status but have higher mortality rates than females (Kaplan et al. 1987; Arber & Ginn 1993; Koskinen & Martelin 1994; Mackenbach et al. 1999). Among other factors, socio-economic status (SES) has considerable impact on health status. The degree to which socio-economic status influences health varies greatly during a person's lifetime. The differences in health between socio-economic groups are significant in childhood (Van der Lucht & Groothoff 1995), but they diminish during adolescence (West et al. 1990). Later these differences become larger again during adulthood (Kaplan et al. 1996; Kunst 1997; Power et al. 1998) but again they diminish or even become non-existent at older ages (Kaplan et al. 1987). However, there is also evidence of persistence of socio-economic health differences (SEHD) among vulnerable age groups such as adolescents (Halldórsson et al. 2000; Piko & Fitzpatrick 2002; Madarasova Geckova et al. 2004) or the elderly (House et al. 2002; Huisman et al. 2003; Robert & House 2002).

We expect those differences to be revealed in Poland, for the elderly as one of the most vulnerable groups have suffered substantial changes during the transition period. Reforms affecting different branches of the Polish economy and the encroaching free market have caused many years of

economic depression in Poland. The transitional process that started in the late 1980s in Poland has also brought about many changes in the existing organizational structures within the country. The health care system has been going through a continuing process of transformation which has not been completed, mostly due to state delays in legislative proceedings. Ongoing changes have prevented the realization of many social policies, raised the unemployment rate, increased the percentage of people taking early retirement (very often under poor financial conditions) and exacerbated dissatisfaction with the health services. Income inequalities have deepened in the whole Polish population, and overall life stability and safety have diminished (Włodarczyk 2001). Exaggerated priority has been given to protecting the poorest groups in society (e.g. unemployed), neglecting the needs of the elderly. The elderly generally suffer from a number of chronic conditions, and together with increasing life expectancy this is associated with a greater number of disabled people. The elderly who are used to wait passively for services are an especially vulnerable group of Polish society (Bien et al. 2001). They have limited resources to adapt to changes and their socio-economic status is diminishing as a rule. These psychosocial conditions and limitations of the elderly together with transitional changes have taken away any feeling of stability and led to neglect of their increasing needs.

The phenomenon of persistence of socio-economic health differences into older age has been reported in some countries, but it may be particularly stimulated by the transition period of reforms and changes in Central and Eastern European countries (Kaplan et al. 1996; Kunst 1997). Socio-economic differences have grown in the whole of society, also in the elderly, but even so only a few Polish studies can be found on inequalities in health (Duch & Sokolowska 1990; Wnuk-Lipinski 1990; Wnuk-Lipinski & Illsley 1990; Wroblewska 2002). The present study therefore explores SEHD among the elderly in Poland using an extended framework of measurement instruments: four SES indicators (education, occupation, income and housing) and two subjective measures of health.

Gender issues concerning health inequalities are of special interest particularly in transitional countries where the traditional model of the family and female roles are changing. The findings related to the pattern of SEHD in gender are inconsistent. Balabanova (2000) found greater health inequalities among females compared with males in Bulgaria, but on the other hand they were smaller for females as reported by Koskinen and Martelin (1994), Stronks et al. (1997), MacIntyre and Hunt (1997) and Valkonen et al. (2000). The recent study by Huisman et al. (2003) presented

results from several European countries, where greater inequalities in morbidity were found among females in Greece, Ireland and Spain, but larger inequalities were found in Dutch males.

As mentioned earlier, it is worth exploring SEHD among the elderly from transitional countries like Poland using subjective measures (self-rated health and quality of life) with regard to gender specific aspects. The present study aims to answer two research questions:

Are there differences in self-rated health and quality of life between the socio-economical strata among the elderly in Poland?

Are there different patterns in SEHD by age group and by gender among the elderly in Poland?

Methods

Sample: procedure and respondents

Data were collected in a cross-sectional study conducted in Krakow (ca. 750000 inhabitants), a city located in the south of Poland. The research project is part of a broader comparative international study on "Health status and the quality of life of the elderly in Central European countries and the Netherlands". The sample of 1000 community dwelling elderly (aged 65–85) was randomly chosen in 1998 from the register of residents within the city borders of Krakow. The major part of the questionnaire used in this study was originally in English, and a small part was originally in Dutch. The questionnaire was translated by two independent translators and adapted to Polish conditions. Then it was translated back into English in each participating country to assure that its content was comparable in international study. Interviews were carried out face-to-face in the respondents' households by two trained interviewers (a physician and a sociologist) between May 1999 and April 2001. Out of the 1000 chosen, 552 interviews were conducted. A number of persons were not interviewed due to the following reasons: death between the time of sampling and the date of interview (9.6% of the whole sampled group), refusal (18.2%), change of address (8.8%) and lack of contact in spite of repeated attempts (8.2%). Additionally 23 respondents were excluded from this analysis because of their low score – 16 points or less on the cognitive function test – Mini Mental State Examination (Folstein et al. 1975) and through failure to complete the whole questionnaire. Thus the database consists of 528 interviews of respondents aged 65–85 from the city of Krakow. About 60% of our sample is female; the mean age is 72.7 years. According to age and gender the chosen group is comparable with the Polish urban elderly (GUS

1999; GUS 2002). The gross domestic product per capita and average income were higher in Krakow compared with Poland, and the unemployment rate was lower in Krakow compared with the whole country in the years the study was conducted. The sample was over-represented by elderly with higher levels of education in comparison with the Polish urban elderly in general. Given this fact, we might expect that if SEHD are present for the better-off elderly population in Krakow, they would be similar or greater for the Polish urban elderly in general.

Measurements

In the present paper two forms of health are considered: self-rated health and quality of life. Self-rated health was measured using one question derived from the MOS-20 (Steward et al. 1988), where respondents were asked to evaluate their health as excellent, very good, good, average or poor. This variable was used in analysis as a continuous but also as a dichotomized measurement for logistic regression analysis ("good" consisting of excellent, very good or good health; "poor" consisting of the remaining two answers), not only to evaluate the relationship between SES and self-rated health as a scale, but also to establish the differences in health by SES between people with good and poor self-rated health. Quality of life was measured using Cantril's ladder (Cantril 1965); respondents were asked to rank themselves on one step of the ladder from 0 meaning the worst life a person can imagine up to 10 for the best life according to each respondent.

Four indicators measured SES, i.e. educational level, occupational level, income, and house ownership. The educational level was stratified into three groups: 1: university education with or without bachelor degree and post-secondary education (22%), 2: persons with lower and upper secondary education (46%), 3: the lowest level comprising persons who had finished only elementary education (32% of our sample). The occupational level was divided into four categories, coded based on the ISCO classification (ILO 1988): 1: the highest occupational group consisting of I and II ISCO groups (26% of our respondents), 2: III, IV, V by ISCO (23%), 3: VI, VII by ISCO (19%) and 4: the lowest group – VIII, IX by ISCO (32%). Respondents were asked about the longest occupation they had had in their lives. Females who had not worked during their life were classified according to their spouse/partner's occupation. The income level measure was constructed based on the information on the income after tax of a respondent and spouse (if the respondent was married or living together with a partner), adjusted for living arrangements (for those living with a partner/spouse, reported income was divided by 2). Then the income per capita was calculated and divided into two categories:

above the average national retirement pension payment (49% of our sample) and below the average national retirement pension payment (51%) in 2000 (GUS 2002). The house ownership measure was created on the basis of owning a flat or a house (divided into owners, 66%, and non-owners, 34%). To be able to answer the question whether SEHD diminish substantially in more advanced age, we divided our study group into two groups according to age (65–74 years, 63% of the sample, and 75–85 years, 37%).

Statistical analysis

The analyses were done using the statistical software package SPSS 10. Significance of differences in the distribution of good self-rated health and mean quality of life among age, gender and socio-economic groups was evaluated by χ^2 , Mann-Whitney and Kruskal-Wallis tests. The effects of SES, gender and age on health were explored using general linear modeling procedure and logistic regression. The analyses were done in models with and without interactions. The post hoc test (Scheffe) was used for evaluating differences in health among occupational groups and educational levels. Analyses were done separately for each of the two indicators (self-rated health and quality of life) and each of the four SES indicators (occupational level, educational level, income, housing ownership).

Results

Table 1 describes the health status and quality of life of our sample. Good (after dichotomizing) self-rated health characterized 31% of elderly. With regard to self-rated health the elderly rarely tend to choose extremely positive alternatives, while with regard to quality of life they rarely choose extremely negative alternatives, as can be seen in Table 1. The mean quality of life score was 5.85 and the most frequent answers were 4–6 (average on Cantril's ladder 0–10 scale).

There are similar trends in relations between age, gender and SES indicators for both self-rated health and quality of life, as shown in Table 2. More males and elderly from the

Table 1 Distribution of self-rated health and quality of life within elderly population in Krakow (N = 528)

	Self-rated health		Quality of life		
	N	%	N	%	
Excellent	3	0.6	The best: 10	31	5.9
Very good	19	3.6	7–9	145	27.5
Good	142	26.9	Average: 4–6	302	57.2
Average	228	43.2	1–3	38	7.2
Poor	136	25.8	The worst: 0	12	2.3

Table 2 Self-rated health and quality of life in gender, age, and socio-economic groups

		Self-rated health		Quality of Life	
		Good health ^a	Stat. Sign.	Mean	Stat. Sign.
Gender	Male (N = 214)	36.9	0.016 ^b	6.06	0.007 ^c
	Female (N = 314)	27.1		5.71	
Age	65–74 (N = 344)	28.2	0.052 ^b	5.76	0.164 ^c
	75–85 (N = 184)	36.4		6.03	
Education	University level (N = 116)	45.7	0.001 ^b	6.41	< 0.001 ^d
	Secondary (vocational) (N = 241)	27.0		5.93	
	Basic or lower (N = 171)	26.9		5.36	
Occupation	I (high occup. group) (N = 116)	37.9	0.124 ^b	6.27	0.003 ^d
	II (N = 136)	34.6		6.09	
	III (N = 103)	25.2		5.68	
	IV (low occup. group) (N = 169)	27.8		5.45	
Income per capita	Above mean country retirement pension payment (N = 249)	32.4	0.390 ^b	6.10	0.001 ^c
	Below mean country retirement pension payment (N = 259)	28.9		5.58	
House ownership	Owners (N = 349)	31.8	0.606 ^b	6.00	0.024 ^c
	Non-owners (N = 179)	29.6		5.55	

^a percentage of respondents reporting good health (comprised of excellent, very good and good self-rated health) in each category

^b statistical significance (p value) measured using chi² test

^c statistical significance (p value) measured using Mann-Whitney U test

^d statistical significance (p value) measured using Kruskal-Wallis H test

older age group reported better health and higher quality of life in comparison with females and the younger age group, respectively. People with higher occupational status, higher level of education, higher proxy income and house owners reported better health and better quality of life in comparison with people who were not so well off. Only education level made a significant difference to the positive evaluation of self-rated health, while a significant influence on the qual-

ity of life was revealed with regard to education, occupation, income and house ownership.

Differences in self-rated health were confirmed by two of the four indicators of SES, by education and occupational position (Tab. 3). All four indicators of SES significantly affected the quality of life. In analyses models with and without the effect of interaction of gender, age and SES on self-rated health and quality of life were explored. However,

Table 3 Socio-economic health differences among the elderly. Results show statistical significance (p value) of relation between independent and dependant variables in general linear modeling and logistic regression procedures, respectively (only significant interactions are presented)

		Education N = 528	Occupation N = 524	Income N = 508	House ownership N = 528
Self-rated health (continuous) General linear modeling ^b	SES	0.012 ^a	0.029 ^a	0.161	0.828
	Gender	0.014	0.001	0.009	0.007
	Age	0.005	0.002	0.001	0.000
	Age/gender interaction			0.023	
	Age/gender/SES interaction	0.020			0.023
	Model fit (R squared)	0.086	0.067	0.041	0.041
Self-rated health (dichotomous) Logistic regression ^c	SES	0.532	0.406	0.372	0.956
	Gender	0.407	0.076	0.015	0.096
	Age	0.832	0.264	0.864	0.497
	Age/gender/SES interaction	0.039			
		Model fit (Nagelkerke R squared)	0.093	0.073	0.037
Quality of life (continuous) General linear modeling ^b	SES	0.002 ^a	0.004 ^a	0.021	0.040
	Gender	0.110	0.023	0.149	0.095
	Age	0.185	0.086	0.221	0.123
		Model fit (R squared)	0.052	0.055	0.028

^a post hoc test was done to explore significant relations among educational levels and occupational groups and self-rated health and quality of life (results are presented in Table 4)

^b univariate General Linear Modeling analyses – full factorial models

^c logistic regression analyses, models with all possible interaction presented
SES particular indicator of socio-economic status

when SEHD were explored with regard to dichotomously-measured self-rated health in models with all possible interactions, no significant relationship was found. In the models without interactions, only one relationship between educational levels and dichotomously-measured self-rated health was significant (not shown in the table).

Table 4 shows the results of the post hoc test (Scheffe) for self-rated health and quality of life with regard to the differences between the subgroups of educational level and occupational groups. Significant differences in self-rated health were observed between basic and university education and also between secondary and university education. In our analysis of the quality of life data, the difference was significant between basic and secondary levels as well as between basic and university education. As for the relationship between occupational groups and the quality of life, significant differences were observed between the highest (I, II by ISCO classification) and the lowest (VIII, IX by ISCO classification) occupational groups. No significant differences were found between occupational groups with regard to self-rated health.

Few significant interactions in full factorial models of general linear modeling were found. Only one of these models with any significant interaction showed a significant pattern of SES-related differences in health by age groups and by

Table 4 Post hoc test (Scheffe) for occupational and educational differences in self-rated health and quality of life (p-values are presented)

	Self-rated health	Quality of life
Educational level N = 528		
Basic vs. secondary	0.450	0.019
Basic vs. University	< 0.001	< 0.001
Secondary vs. University	0.002	0.108
Occupational group N = 524		
I vs. II	0.893	0.922
I vs. III	0.179	0.210
I (the highest) vs. IV (the lowest)	0.073	0.012
II vs. III	0.500	0.501
II vs. IV	0.303	0.061
III vs. IV	0.999	0.846

gender (see Tab. 3). Figure 1 shows the interaction between age, gender and education with regard to their influence on self-rated health. In both males and females there are steeper differences in self-rated health within the younger in comparison with the older age group between basic and university levels of education. We also observed greater differences in health between secondary and highest educational levels among younger males compared with females in both age groups. An adverse pattern of SEHD can be seen among older males. Socio-economic inequalities in health are clearer among females.

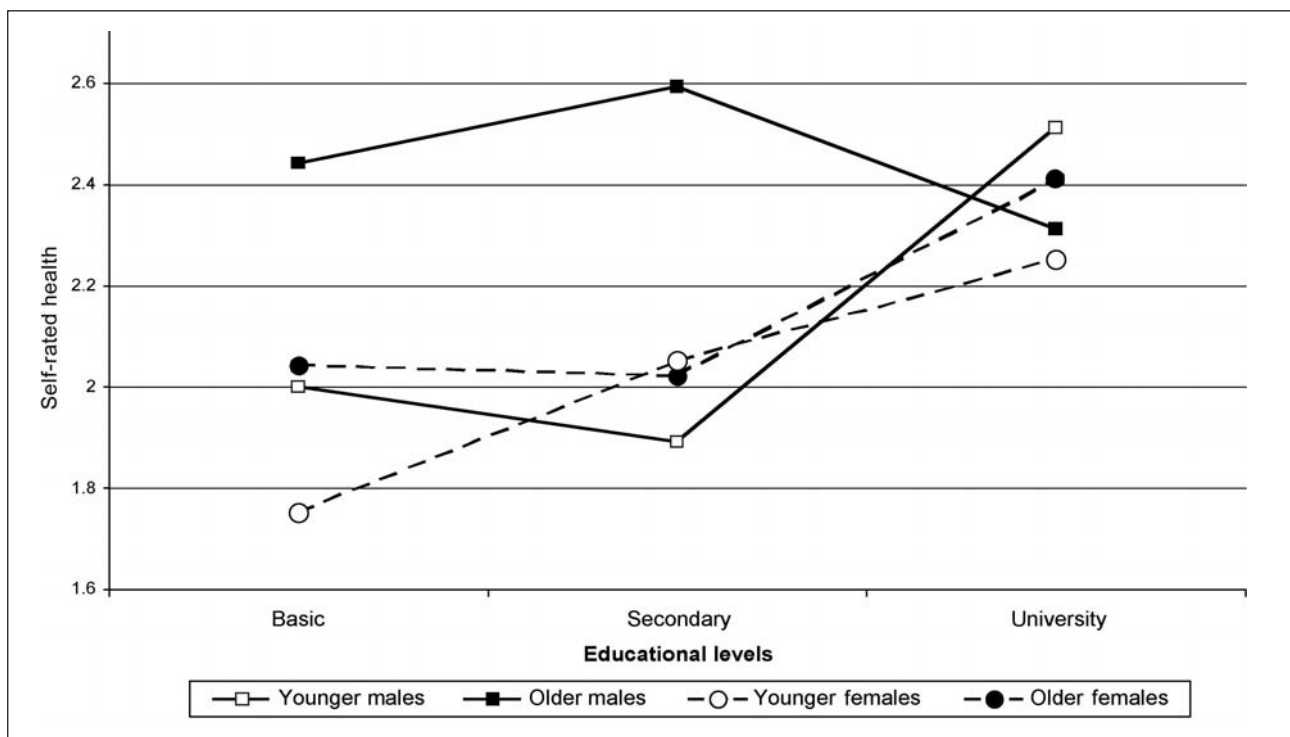


Figure 1 Self-rated health (mean values) in relation to educational levels among age and gender groups (N = 528)

Discussion

The results confirm the presence of SEHD in the sample of elderly from Krakow (aged 65–85) with regard to self-rated health as well as to quality of life. Two out of four indicators of SES (education and occupation) were found significant in assessing inequalities within both indicators of health among the elderly. Additionally, income and an indirect indicator of SES (house ownership) were found to be related to the quality of life. Previous research from the United States and West European countries documented that SEHD are still present in old age (House et al 2002; Robert & House 2002; Huisman et al. 2003). Some research has suggested that they start to diminish and disappear after the age of 75. Our findings do not support this hypothesis, confirming the persistence of SEHD among the Polish elderly in both age groups under and over 75 years of age, although they generally have a tendency to diminish with age. Perhaps the specific situation in each country along with increasing life expectancy influence the threshold of diminution of these differences with age, which may be different for the Polish elderly.

The present findings regarding interaction effects of age, gender and SES on self-rated health are not clear. For both males and females we found greater differences between basic and university educational levels among the younger in comparison with the older respondents. This finding supports the view that SEHD diminish with age among the elderly. However it does not support the recent results of Huisman et al. (2003), where inequalities in morbidity declined among females, but not always among males. We also found greater differences in self-rated health between secondary and higher educational levels among younger males in comparison with females, which supports most of the findings from Western European countries (Koskinen & Martelin 1994; Stronks et al. 1997; MacIntyre & Hunt 1997; Valkonen et al. 2000). Huisman et al. (2003) revealed differentiating results concerning several Western European countries, where in some countries females had larger inequalities in health, while in others more differences were found among males. The present study also shows that older males have an adverse pattern of SEHD, which may be the result of mortality patterns among males and females in Poland.

Analysis of the relationship between self-rated health and two of the four social status measures, and between quality of life and all four measures in Poland is very important. Each of them measures a different dimension of SES and may indicate indirectly that SEHD are present among the Polish elderly to a great extent. In Poland people with higher occupational status and higher level of education reported better health in comparison with people who are not so well

off. Better quality of life was reported by people with higher educational and occupational status, higher income and house owners. There are significant SEHD among the elderly that are unfavourable for lower SES groups. Self-rated health is widely used as a continuous as well as dichotomous measure, while it is difficult to define arbitrarily the division of any continuous measure of quality of life. For this reason we have explored inequalities in self-rated health using both types of measures, and the quality of life only as a continuous index. The continuous measure of self-rated health seems to be more appropriate for the purpose of this study than the dichotomous one, because the distribution of possible answers varies widely among the elderly compared with other age groups. Inequalities in self-rated health divided into five categories were more significant when compared with the two-category division. Moreover the pattern of self-rated health is different. In adolescents about 60% report excellent or very good health (Madarasova Geckova et al. 2004); in our sample of the elderly only a few percent report very good health, 27% report good, 43% average and 26% poor health. Results showing a higher percentage of good self-rated health and better quality of life in the older age group (75–85), although not statistically significant, are nevertheless interesting to discuss. Beckett (2000) presents possible mechanisms explaining this phenomenon. Firstly, the mortality effect could have an impact on the sample structure, as older people with worse health die off, so there is only a relatively healthy sample in the older age group. Secondly, sample structure might be influenced by the fact that older (disabled, lonely) people may more often be institutionalized and therefore not chosen for the sample.

Among many indicators of health status we have chosen self-rated health, as it has been found earlier to be a very robust, comprehensive and comparative measure that encompasses physical, psychological and personality features. Quality of life measured with the self-anchoring ladder is the only one we have included in our questionnaire. The question whether it is better to study objective measures like mortality (with relation to gender differences) or morbidity or other subjective indicators of health remains open. Increasing life expectancy means living with disability for most of the Polish elderly, so we also need to include some subjective evaluation of people living with their disabilities. Thus, a longitudinal study that would also allow investigating mortality figures will be prepared in the near future.

In particular countries different indicators are appropriate for measuring SES of the elderly (Abramson et al. 1982; Wagstaff & Doorslaer 2002). Single item indices are related to different features concerning resources and benefits. Education is one of the most frequently used in most countries,

and it continues to be the best indicator of the social position of individuals and groups in Poland (Duch & Sokolowska 1990). It has advantages over other measures of SES, being more stable over time; it determines attitudes, aspirations and lifestyles of individuals, which are connected with health behaviours. It is also a better indicator for groups of people that are no longer employed (like females) (Wroblewska 2002). Occupation and income are also used very often. The educational level however determines access to information and its use in order to benefit from knowledge, while occupation determines access to amenities and besides can give additional privileges specific for particular occupations. House ownership, similarly to the above-mentioned two instruments, results from whole life experience and is indirectly a measure of stability as a socio-economic indicator. The income level has different characteristics because for the elderly it means mainly their retirement pension payments and has a narrower scope than income during lifetime. Substantial attrition we faced in this study has been caused by factors that would not necessarily be related to the sample structure or results. Almost 10% of the study sample died in the time before the interview was done, which is a random occurrence. Change of address might also be considered random. Refusals (18%) were caused most frequently by the fear of letting unknown people inside the house typical for the elderly. The cross-sectional design of this study could reflect cohort effects (especially in that the youngest age group were born just before World War II). However, as already mentioned, future studies are needed to support our findings, and further explore causality of relationships and cohort effects.

It is a matter of interest why we would expect to find inequalities in health in a previously “classless” society as was the case in Poland. We may expect these differences mostly due to the knowledge of effects of transformation on different dimensions of life in the Polish population. As mentioned in the introduction, many years of economic depression and system changes have brought socio-economic stresses to elderly people, who form one of the most vulnerable groups in the transitional countries. Among many changes, in our opinion three mechanisms are especially important. Firstly, changes in the health care system negatively affect the most frequent users of this system, namely the elderly. Secondly, exaggerated priority given by the state to

the poorest groups like the unemployed leads to neglect of the elderly and increased negative feelings of the lack of the “social umbrella” they were used to in earlier decades. Thirdly, the chaos of changes (lack of clear end points of reforms) and the pace of the reforms have been especially difficult for the elderly, who very often have limitations in adapting to ongoing transitional processes (they were used to wait passively). We may even hypothesize that SEHD should be more pronounced among the elderly in Poland in comparison with Western Europe, due to the mentioned changes evoked by transitional processes. Additional research should be performed in a wider scale of age groups in order to answer this question.

Reducing health inequalities between countries and particular groups within countries is one of the first targets for WHO (1999). There may be a few ways of diminishing health inequalities among the elderly. Political forces should not be underestimated, as they can have great influence on reducing inequalities through different channels, e.g. health care policies (Navarro & Shi 2001). Officially the access to health care is equally distributed, but in transitional countries lower socio-economic groups will encounter difficulties in accessing care. This is a matter of equal distribution and access to equal effectiveness (reduction of the unequal distribution of incidence of ill health, of the outcomes of health care, health promotion, disease prevention) (Duch & Sokolowska 1990; Wnuk-Lipinski & Illsley 1990; Wlodarczyk 2001). It would be especially important for the Polish elderly facing another year of health care reform, because it is related to the issue of the decreasing socio-economic status of the elderly. Moreover social status as a direct factor could be modified, since being “silent poor” is important. This is the issue of the purchasing power of retirement pension payments, which has decreased rapidly over the last few years. The economic difficulties experienced by the state have directed increased state financial support predominantly at the poorest groups in society (mainly unemployed and homeless people), whereas the proportion of older people among those receiving welfare benefits has declined in relative terms (Bien et al. 2001).

Social reforms should therefore pay special attention to vulnerable social groups like the elderly, a group which will inevitably grow, because their ability to adjust to on-going transitional changes is limited.

Zusammenfassung**Unterschiede im Gesundheitszustand bedingt durch sozioökonomischen Status der Älteren in Krakau, Polen**

Fragestellung: Überprüfen, ob sozioökonomische Gesundheitsunterschiede in Polen bis zum hohen Alter überdauern und wie sie sich zwischen den einzelnen Altersgruppen und Geschlechtern ausdifferenzieren.

Methode: 528 zufällig ausgewählte, nicht-institutionisierte und in Krakau lebende Personen im Alter von 65–85 Jahren wurden nach ihrem sozioökonomischen Status (Beruf, Ausbildung, Einkommen, Eigentumswohnung), Gesundheitszustand (Selbstbeurteilung des Gesundheitszustands) sowie nach Lebensqualität (Cantril-Leiter) befragt.

Ergebnisse: Die aus statushöheren Berufsgruppen stammenden Personen und Personen mit Hochschulausbildung haben einen besseren Gesundheitszustand und eine bessere Lebensqualität angegeben als Personen mit niedrigerem sozioökonomischem Status. Die Höhe des Einkommens und Hausbesitz hatten einen signifikanten Einfluss auf die Lebensqualität der älteren Personen. Einige Ergebnisse bestätigen Unterschiede im Muster der gesundheitlichen Ungleichheit zwischen den einzelnen Alters- und Geschlechts-Gruppen.

Schlussfolgerung: Im Gesundheitszustand sowie in der Lebensqualität der älteren städtischen Bevölkerung Polens wurden Unterschiede festgestellt, die durch sozioökonomischen Status bedingt sind und negative Auswirkungen auf die niedrigeren Schichten der Gesellschaft haben.

Résumé**Santé des personnes âgées et statut socio-économique à Cracovie, Pologne**

Objectifs: Vérifier la persistance des différences socio-économiques à un âge avancé et en vérifier les éventuels effets sur l'état de santé des personnes âgées, selon l'âge et le sexe.

Méthodes: Interviews d'un échantillon aléatoire de 528 personnes âgées de 65 à 85 ans, non institutionnalisées, et vivant à Cracovie (Pologne). Indicateurs utilisés: statut socio-économique (profession, formation, revenu, propriété de son logement), état de santé (auto évalué), qualité de vie (échelle de Cantril).

Résultats: Les personnes bénéficiant d'un statut professionnel élevé ainsi que celles ayant une formation poussée ont rapporté un meilleur état de santé et une qualité de vie plus élevée que les personnes ayant un statut socio-économique inférieur. Le niveau de revenu ainsi que le fait d'être propriétaire de son logement exercent une influence significativement positive sur la qualité de vie des personnes âgées. De plus, certains résultats suggèrent que les inégalités de santé varient selon les groupes d'âge et de sexe.

Conclusions: Des différences existent au niveau de l'état de santé et de la qualité de vie des populations âgées vivant en milieu urbain en Pologne. Ces différences sont en lien avec le statut socio-économique et exercent une influence négative sur les couches inférieures de la société.

References

Abramson JH, Gofin R, Habib J, Pridan H, Gofin J (1982). Indicators of social class: a comparative appraisal of measures for use in epidemiological studies. *Soc Sci Med* 16: 1739–46.

Arber S, Ginn J (1993). Gender and inequalities in health in later life. *Soc Sci Med* 36: 33–46.

Balabanova D (2000). Self-rated health in Bulgaria: levels and determinants. In: Brodin M, ed. *Health inequalities in Europe*. Paris: European Public Health Association: 180.

Beckett M (2000). Converging health inequalities in later life: an artifact of mortality selection? *J Health Soc Behav* 41: 106–19.

Bien B, Wojszel B, Politynska B, Wilmanska J (2001). Poland (September 1998). In: Philp I, ed. *Family care of older people in Europe*. Amsterdam: IOS Press: 161–87.

Cantril H (1965). *The pattern of human concern*. New Brunswick, NJ: Rutgers University Press.

Duch D, Sokolowska M (1990). Health inequalities in Poland. *Soc Sci Med* 31: 343–50.

Folstein MF, Folstein SE, McHugh PR (1975). Mini Mental State: a practical method for grading the cognitive state of patients for the clinician. *J Psych Res* 12: 189–98.

GUS, Central Statistical Office (1999). *Elderly in Polish society*. Warsaw: Statistical Publications House.

GUS, Central Statistical Office (2002). *Statistical yearbook of the Republic of Poland*. Warsaw: Statistical Publications House.

Halik J (2000). Spoleczne roznicze w stanie zdrowia i dostepie do swiadczen medycznych-glowne mechanizmy i uwarunkowania [Social differences in health and access to health care – main mechanisms and conditions] *Promocja Zdrowia. Nauki Spoleczne i Medycyna* VII: 19: 103–12.

Halldórsson M, Kunst AE, Kohler L, Mackenbach JP (2000). Socio-economic inequalities in the health of children and adolescents: a comparative study of the five Nordic countries. *Eur J Public Health* 10: 281–8.

House JS, Kessler RC, Herzog AR, Mero RP, Kinney AM, Breslow MJ (2002). Age, socioeconomic status, and health. *J Health Soc Behav* 35: 213–34.

Huisman M, Kunst AE, Mackenbach JP (2003). Socio-economic inequalities in morbidity among the elderly: a European overview. *Soc Sci Med* 57: 861–73.

- ILO, International Labour Office (1988). Revised International Standard Classification of Occupation (ISCO-88) with references to the ISCO-68. Geneva: ILO.
- Kaplan GA, Seeman TE, Cohen RD, Knudsen LP, Guralnik J (1987). Mortality among the elderly in the Alameda County Study: behavioural and demographic risk factors. *Am J Pub Health* 77: 307–12.
- Kaplan GA, Pamuk ER, Lynch JW, Cohen RD, Balfour L (1996). Inequality in income and mortality in the United States: analysis of mortality and potential pathways. *BMJ* 312: 999–1003.
- Koskinen S, Martelin T (1994). Why are socio-economic mortality differences smaller among women than among men? *Soc Sci Med* 38: 1385–96.
- Kunst AE (1997). Cross-national comparisons of socio-economic differences in mortality [Ph.D. thesis]. Rotterdam: Erasmus Universiteit.
- Macintyre S, Hunt K (1997). Socio-economic position, gender and health. How do they interact? *J Health Psychol* 2: 315–34.
- Mackenbach JP, Kunst AE, Groenhouf F, et al. (1999). Socio-economic inequalities in mortality among women and among men: an international study. *Am J Public Health* 89: 1800–6.
- Madarasova Geckova A, van Dijk JP, Zezula I, Tuinstra J, Groothoff JW, Post D (2004). Socio-economic differences in health among Slovak adolescents. *Soz Praventiv Med* 49: 26–35.
- Navarro V, Shi L (2001). The political context of social inequalities and health. *Soc Sci Med* 52: 481–91.
- Piko B, Fitzpatrick KM (2002). Does class matter? SES and psychosocial health among Hungarian adolescents. *Soc Sci Med* 53: 817–30.
- Power C, Matthews S, Manor O (1998). Inequalities in self-rated health: explanations from different stages of life. *Lancet* 351: 1009–14.
- Robert S, House JS (2002). SES differentials in health by age and alternative indicators of SES. *J Aging Health* 8: 359–88.
- Steward AL, Hays RD, Ware JE (1988). The MOS short-form general health survey: reliability and validity in a patient population. *Med Care* 26: 724–35.
- Stronks K (1997). Socio-economic inequalities in health: individual choice or social circumstances? [Ph.D. thesis]. Rotterdam: Erasmus Universiteit.
- Tobiasz-Adamczyk B, Brzyski P (2002). Czynniki warunkujące zmiany w stanie funkcjonalnym w wieku starszym na podstawie 12-letniej obserwacji [Factors influencing changes in functional status in elderly based on 12 year observation]. *Gerontologia Polska* 10: 23–9.
- Van der Lucht F, Groothoff JW (1995). Social inequalities and health among children aged 10–11 in The Netherlands: causes and consequences. *Soc Sci Med* 40: 1305–11.
- Valkonen T, Martikainen P, Jalovaara M, Koskinen S, Martelin T, Mäkelä P (2000). Changes in socioeconomic inequalities in mortality during and economic boom and recession among middle-aged men and women in Finland. *Eur J Public Health* 10: 274–80.
- Wagstaff A, van Doorslaer E (2002). Income inequality and health: what does the literature tell us? *Ann Rev Public Health* 21: 543–67.
- West P, Macintyre S, Annandale E, Hunt K (1990). Social class and health in youth: findings from the West of Scotland Twenty-07 Study. *Soc Sci Med* 30: 665–73.
- WHO (1999). Health 21: the health for all in the 21 century. Copenhagen: WHO Regional Office for Europe.
- Włodarczyk C (2001). Wazne problemy polityki zdrowotnej [Important problems of health policy]. *Promocja Zdrowia. Nauki Społeczne i Medycyna VIII: 21: 7–33.*
- Wnuk-Lipinski E (1990). The Polish country profile: economic crisis and inequalities in health. *Soc Sci Med* 31: 859–66.
- Wnuk-Lipinski E, Illsley R (1990). Non-market economies in health: introduction. *Soc Sci Med* 31: 833–6.
- Wroblewska W (2002). Women's health status in Poland in the transition to a market economy. *Soc Sci Med* 54: 707–26.

Address for correspondence

Tomasz Knurowski, MD
Department of Medical Sociology
Chair of Epidemiology and Preventive
Medicine
Jagiellonian University
Kopernika 7 St.
31-034 Krakow
Poland
e-mail: myknurow@cyf-kr.edu.pl



To access this journal online:
<http://www.birkhauser.ch>
