

PRACE NAUKOWE
Uniwersytetu Ekonomicznego we Wrocławiu nr 308
RESEARCH PAPERS
of Wrocław University of Economics No. 308

Quality of Life and Sustainable Development

edited by
Zofia Rusnak
Katarzyna Ostasiewicz



Publishing House of Wrocław University of Economics
Wrocław 2013

Copy-editing: Agnieszka Flasińska

Layout: Barbara Łopusiewicz

Proof-reading: Barbara Łopusiewicz

Typesetting: Adam Dębski

Cover design: Beata Dębska

This publication is available at www.ibuk.pl, www.ebscohost.com,
and in The Central and Eastern European Online Library www.ceeol.com
as well as in the annotated bibliography of economic issues of BazEkon
http://kangur.uek.krakow.pl/bazy_ae/bazekon/nowy/index.php

Information on submitting and reviewing papers is available
on the Publishing House's website
www.wydawnictwo.ue.wroc.pl

All rights reserved. No part of this book may be reproduced in any form
or in any means without the prior written permission of the Publisher

© Copyright by Wrocław University of Economics
Wrocław 2013

ISSN 1899-3192

ISBN 978-83-7695-394-6

The original version: printed

Printing: Printing House TOTEM

Contents

Preface.....	7
Katarzyna Ostasiewicz: Quality of life and sustainable development.....	9
Arkadiusz Barczak: Quality of life – subjective and intersubjective approaches	27
Wolfgang Glatzer: Worries and dissatisfaction. Structural challenges for future development.....	40
Jennifer Gulyas: Hopes and fears – components of subjective well-being	57
Renata Tomaszewska-Lipiec: Relations between work and life as a way to the sustainable development.....	69
Katarzyna Czesak-Woytala: Psychic welfare of Poles depending on their educational level in 2003–2011.....	83
Danuta Bogocz: The poor, the deprived, the excluded – how to measure peoples’ misfortunes.....	100
Jolanta Perek-Bialas: Quality of life in old age in the Central and Eastern European countries.....	113
Hanna Dudek: Equivalence scales for Poland – new evidence using complete demand systems approach.....	128
Jerzy Śleszyński: Synthetic sustainable development indicators: Past experience and guidelines	144
Anna Doś: Catastrophic risk financing models for sustainable development .	165
Edyta Mazurek: Measures of reranking of taxpayers in income distribution caused by the tax system	180

Streszczenia

Katarzyna Ostasiewicz: Jakość życia a zrównoważony rozwój	26
Arkadiusz Barczak: Jakość życia – podejścia subiektywne i intersubiektywne	39
Wolfgang Glatzer: Obawy i niezadowolenie. Strukturalne wyzwania dla dalszego rozwoju	56
Jennifer Gulyas: Nadzieje i obawy – składowe subiektywnej jakości życia..	68
Renata Tomaszewska-Lipiec: Relacje praca–życie pozazawodowe drogą do zrównoważonego rozwoju	81
Katarzyna Czesak-Woytala: Wpływ wykształcenia na psychiczny dobrostan Polaków w latach 2003–2011	99
Danuta Bogocz: Bieda, ubóstwo, wykluczenie społeczne – jak mierzyć ludzkie niepowodzenia	112

Jolanta Perek-Bialas: Jakość życia w starszym wieku w krajach Europy Środkowej i Wschodniej	127
Hanna Dudek: Skale ekwiwalentności dla Polski – nowe oszacowania uzyskane na podstawie kompletnych modeli popytu	141
Jerzy Śleszyński: Syntetyczne wskaźniki rozwoju trwałego i zrównoważonego – zdobyte doświadczenia i zalecenia na przyszłość	163
Anna Doś: Modele finansowania ryzyka katastroficznego na ścieżce rozwoju zrównoważonego	179
Edyta Mazurek: Pomiar zmiany kolejności podatkników w rozkładzie dochodów spowodowanej systemem podatkowym.....	188

Jolanta Perek-Białas

Warsaw School of Economics

QUALITY OF LIFE IN OLD AGE IN THE CENTRAL AND EASTERN EUROPEAN COUNTRIES

Abstract: There are numerous publications which focus on showing the socio-economic situations of older generations in Europe, however, they primarily concern industrialized Western European countries. This paper presents an overview and comparison of information based on various indicators (recommended by the WHO) which were used in analysis of measuring the quality of life of senior citizens in some countries of Central and Eastern Europe (CEE), i.e. Poland, Lithuania, Hungary, the Czech Republic, Slovakia, Latvia and Estonia. The whole analysis is crucial not only for assessing the quality of life in old age, but also demonstrating a possible use of this quality of life concept in the senior policy planning, making and implementation for the Central and Eastern European countries.

Keywords: Quality of life, older persons, old age, older generation, EU-SILC, Central and Eastern European countries.

1. Introduction

The concept of the quality of life is central in various definitions of social indicators used to describe socio-economic situation of a given society. It may be found in many definitions of indicators, including those suggested by Polish researchers (i.e. [Słaby 2004; Szatur-Jaworska 2005]). However, the precise definition of the quality of life represents a challenge, as it covers a multidimensional concept without common agreement on what should be included to measure it in an adequate way.

In this paper the author will attempt to show whether – and how – the quality of life could be measured for a specific age subpopulation, namely the older generation – older persons in the selected countries of Central and Eastern Europe.¹

There are numerous publications which focus on showing the socio-economic situations of older generations in Europe, however, they primarily concern industrialized Western European countries [Mollenkopf, Walker 2007]. Available analyses study the topic of quality of life of older persons, but usually only in one country (like Poland [Tobiasz-Adamczyk, Brzyski 2006]) and they do not facilitate performance of comparative overview for other countries. Thus there are no easily

¹ Hereinafter referred to as the CEE.

available options to evaluate the quality of life of old age citizens in different Central and Eastern European countries.

This paper presents an overview and comparison of information based on various indicators which can be used in measuring the quality of life of senior citizens in some countries of Central and Eastern Europe (CEE), Poland, Lithuania, Hungary, Czech Republic, Slovakia, Latvia and Estonia, i.e. the countries which joined the EU in 2004.

The issue of quality of life for old age starts with the World Health Organization's approach which promotes the idea of: "active ageing by optimizing opportunities for health, participation and security in order to enhance quality of life as people age" [World Health Organization 2002, p. 12]. However, already in 2007 the World Health Organization [2007] identified eight key areas which could be used as a guide for analysis of the quality of life in old age: 1) outdoor spaces and buildings, 2) transport, 3) housing (public and private), 4) social participation, 5) respect and social inclusion, 6) civic participation and employment, 7) communication and information, 8) community support and health services. They could be treated as an "ideal" set of domains that could be used to evaluate the quality of life of older persons.

The aim of this paper is to show the possibilities of using various indicators to evaluate the quality of life of older persons in the selected countries mentioned above, which can include aspects from the above-mentioned eight domains. In the paper the data from the European Union Survey of Income and Living Conditions (EU-SILC) will be used, with the focus not only on the presentation of the results, but primarily on identification of the gaps in data by offering recommendations for data collection systems to facilitate future international comparisons. In this respect, the whole analysis is crucial not only in terms of assessing the quality of life in old age but also showing possible uses of this concept in planning, and implementing policies addressed to the older people of the Central and Eastern European countries.

2. Defining the quality of life in old age

In ageing studies the topic of quality of life (QoL) is situated in the current debate about relation between life and old age in two paradigms: utilitarian axiology of quality of life (*quality of life*) and theological axiology of sanctity of life (*sanctity of life*) [Gałuszka 2006]. The observed context of changes includes more relation of the quality of life with medical studies. However, this concept should be seen in more holistic approach with different sociological, psychological and cultural factors affecting life in old age. For this paper, we will accept the definition which is related to the WHO definition of the age-friendly place, where the quality of life is a central issue. In fact, it is due to attempt to check if there are places (at local levels, like city level) where "in an age-friendly city, policies, services, settings and structures support and enable people to age actively by: recognizing the wide range of capacities

Table 1. Areas and specific issues which are included in measuring the elderly friendly place of living

Areas	More detailed description of areas
Outdoor spaces and buildings (public areas and buildings)	pleasant and clean environment, green spaces, places to rest, age-friendly pavements, safe pedestrian crossings, accessibility to buildings and public spaces, a secure environment, walkways and cycle paths, elderly-friendly buildings, adequate public toilets
Transport	availability, affordability, reliability and frequency, travel destinations, age-friendly vehicles, specialised services for older people, priority seating, courtesy transport drivers, safety and comfort, transport stops and stations, taxis, community transport, provision of information, driving conditions, courtesy towards older drivers, options for parking
Housing (public and private)	affordability, essential services, adequate design, options for modifications, maintenance (e.g. home maintenance service), access to services, community and family connections, housing options, living environment (e.g. sufficient space, privacy, feeling safe)
Social participation	accessibility to various events, affordable activities, range of opportunities, awareness of activities and events, encouraging participation and address isolation, integrating generations, cultures and communities
Respect and social inclusion	respectful behaviour, positive ageism, intergenerational interactions and public education, place within the community, helpfulness of the community, the role of the elderly with the family, economic inclusion
Civic participation and employment	volunteering options for older people, better employment options and more opportunities, flexibility to accommodate older workers and volunteers, encourage civic participation, training, entrepreneurial opportunities, valuing older peoples' contributions
Communication and information	widespread distribution, the right information at the right time, will someone speak to me, age-friendly formats and design, information technology, a personal and collective responsibility
Community support and health services	accessible care, a wide range of health services, ageing well services, home care, residential facilities for people unable to live at home (e.g. nursing homes), a network of community services (e.g. coordination among services), volunteers (e.g. intergenerational volunteering)

Source: based on WHO and OECD adopted approach.

and resources among older people, anticipating and responding flexibly to ageing-related needs and preferences, respecting their decisions and lifestyle choices, protecting those who are most vulnerable; and promoting their inclusion in and contribution to all areas of community life [World Health Organization 2007, p. 5]. The World Health Organization [2007] identified thus eight key areas for a city's age-friendliness which could be used as a guide for everyone who would like to measure the quality of life, see Table 1 with approach called "Elderly Friendly Places to Live". This approach is also used by OECD.² As it could be found in Table 1, the included issues perfectly fit the holistic and comprehensive analysis of life via key

² I.e. in the project OECD/LEED "Local scenarios for demographic change" carried out in Poland in 2012–2013 this approach was used.

and important for better quality of life issues. As it is shown, depending on the age, some issues could have more weights than the others, therefore WHO suggests they are not universal – for everyone the same concept with certain items – but more tailor-made, adjusted to the specific age group, in this case to the older population.

3. EU-SILC and measuring the quality of life

Unfortunately, there is not enough data in all the countries including information about the quality of life of older persons that could be used instantly. In order to compare various situations in the international context, and to include these aspects that are directly related to the quality of life of older persons listed in Table 1, we can use the data available in the Eurostat database (see [Perek-Białas, Mjelde-Mossey 2012]). Eurostat database contains indicators including age (thus the information about older generations) which are mainly used to design, monitor and evaluate public policy programs (such as Europe 2020 Strategy). There is an easy and readily available access to the Eurostat database for monitoring the situation of older generations, however, there are not many opportunities of obtaining comparable exactly the same information which would allow to present the quality of life of this age group in the way described above. Searching for the data on the older generation in Eurostat database enables to gather results by age, e.g. 65+, or by type of households, thus on older persons, e.g. single households of persons aged 65+ or two adults, no dependent children, where at least one is 65+.

Many data on various aspects of living and evaluating the quality of life kept in the Eurostat database is based on the EU-SILC³ survey (European Union – Survey of Income and Living Conditions). The survey is focused on income, socio-economic and financial situation, and living conditions of Europeans. Poland as well as other selected CEE countries which will be analysed in this paper, have participated in this project since 2005. Each year additional aspects of living conditions of European households are studied, i.e. housing (2007), financial situation (2008), and intergenerational transfers (2009). Based on this survey, many social inclusion/exclusion indicators have been calculated, which indicates that the EU-SILC is the reference information source for structural indicators used for instance in various European strategies, such as Europe 2020 Strategy [European Commission 2010; European Union 2011]).

The EU-SILC currently is the only source of secondary data which offers opportunities of performing comparative analyses of older generations for the above-mentioned countries.⁴ Even so, analysis based on the EU-SILC for particular

³ In this publication EU-SILC microdata are used thanks to the contract with the Eurostat (EU-SILC/2009/30, J. Perek-Białas, Institute of Statistics and Demography, Warsaw School of Economics) and to the author's participation in the project "Generations in Dialogue", ERSTE Foundation, Vienna, Austria 2009–2011.

⁴ However, the Survey of Health, Retirement and Ageing (SHARE) should be mentioned as well but not in all countries from this study this survey is conducted.

countries could be found more often than comparative analysis of socio-economic situations for particular subpopulations (including older persons) performed for the CEE countries [Perek-Białas, Mjelde-Mossey 2012]. However, many interesting papers could be found in [Atkinson, Marlier (Eds.) 2010], such as the ones on characteristics of the situation in terms of households, including older members [Iacovou, Skew 2010], analysis of social participation and inclusion (with older generations [Lelkes 2010]).

In 2007 in particular, many aspects were added, and they could be used for the purpose of evaluating the quality of life of older persons. For instance the following items were analysed: shortage of space in dwelling, adequate electrical installations, adequate plumbing/water installations, dwelling equipped with heating facilities, dwelling comfortably warm during winter time, dwelling equipped with air conditioning facilities, dwelling comfortably cool during summer time, overall satisfaction with dwelling, accessibility of grocery services, accessibility of banking services, accessibility of postal services, accessibility of public transport, accessibility of primary health care services, accessibility of school (not used in the analysis of quality of life in old age), change of dwelling and if so, main reasons for this change. Some of these items will be presented in greater detail in the analytical part of this paper.

The survey sample consists of the households and individual persons aged 16+ as required by Eurostat. There is also a household panel which is sampled under a 4-year survey. In case of some countries in this part of Europe, households are sampled based on stratification (Estonia, Lithuania, Slovakia), while for the others the complex two-stage stratified samples were applied (Poland, Hungary, the Czech Republic, Latvia, information for 2008). The number of households surveyed in Poland under the EU-SILC in 2007 reached 14 286, with 42 852 persons, while the number of persons surveyed at the age of 16 years and more reached 32 801 (based on the sample calculation, see [GUS 2009b, p. 70]. Moreover, the share of households with persons aged 65+ reached 13.4%.

In the next part of this paper, the possibilities of analysis based on the Eurostat database will be presented to demonstrate what kind of information is available to analyse the quality of life in old age. Then a more detailed analysis based on the microdata of the EU-SILC from 2007 will also be presented. It will demonstrate how the EU-SILC could be used in such analysis, instead of giving all the possible results, as it is beyond the scope of this paper.

Methodology used for the purpose of analysis. It is worth highlighting that in some countries the EU-SILC is a complex designed sample. In this context, an appropriate methodological approach of providing the complex sample analysis (as recommended by the survey statisticians, see [Kish 1965]) should be applied. However, in case of working with the EU-SILC microdata for 2007 it is not possible to use direct information allowing for conducting complex sample analysis for all analysed countries. Further information on this problem and the types of solutions

that could be applied by the EU-SILC users may be found in [Goedemé 2010]. One of the solutions in order to calculate standard errors resulting from complex sample surveys is the bootstrap method. It is a method used to derive robust estimates of standard errors and confidence intervals for estimates such as the mean and proportion, as well as other measures (see [Davison, Hinkley 2006; Shao, Tu 1995]). In the analysis, estimation of standard errors was based on a resampling (500 times). The bootstrap method is used in analysis of EU-SILC data by the Central Statistical Office of Poland (see i.e. [GUS 2009a]). In each stratum a multiple resampling (500 times) takes place with replacement of $n_h - 1$ subsamples out of n_h PSUs (primary sampling units) selected for the survey in the h -th stratum according to the McCarthy and Snowden [1985] method. After resampling the original weights for sampling units are properly rescaled and bootstrap variance estimate of the corresponding indicator is obtained by the usual Monte Carlo approximation based on the independent bootstrap replicates [GUS 2009a].⁵

Table 2. Variables from EU-SILC which could be used in (at least some) measuring the elderly friendly place of living (2007)

Areas	Information from EU-SILC 2007 which could be used in describing a certain area of quality of life indicator based on WHO approach
Outdoor spaces and buildings (public areas and buildings)	Problems with the dwelling: too dark, not enough light Noise from neighbours or from the street Pollution, grime or other environmental problems Crime violence or vandalism in the area
Transport	Accessibility of public transport
Housing (public and private)	Shortage of space in dwelling Adequate electrical installations Adequate plumbing/water installations Dwelling equipped with heating facilities Dwelling comfortably warm during winter time Dwelling equipped with air conditioning facilities Dwelling comfortably cool during summer time Overall satisfaction with dwelling Accessibility of grocery services Accessibility of banking services Accessibility of postal services
Community support and health services	Accessibility of primary health care services

Source: own preparation.

⁵ In case of EU-SILC, as certain information was available – it was indicated that additionally, besides the bootstrap methods – the linearization method of variance estimation for selected indicators was implemented (here for the poverty indicators), and the results of comparisons with those obtained by the bootstrap method showed they were very similar.

In fact, each subsequent EU-SILC survey includes an additional topic which can be used in the analysis of the quality of life: e.g. intergenerational transmission of poverty (2005), social participation (2006), housing conditions (2007), over-indebtedness and financial exclusion (2008), material deprivation (2009), intra-household sharing of resources (2010), intergenerational transmission of disadvantages (2011), and housing conditions (2012). In 2013, there is a special module on well-being, which will definitely provide an interesting source of data for all researchers of the quality of life.

4. Evaluation of various aspects of life by older persons in the selected Central and Eastern European countries

Results of some analysis of older generations' evaluation concerning some aspects of quality of life for the selected CEE countries are presented below.

Outdoor spaces and buildings (public areas and buildings)

Objective indicators, such as surface (in square km) of green areas, parks and other age-friendly spaces could be presented and evaluated under this domain. This data is easily available in various statistical databases. Additionally, based on the EU-SILC, some variables, which should provide insight into the opinions of senior citizens from the respective countries on indoor and outdoor space, where applicable, could be used (see Table 3a–d). In general, not many respondents 65+ were of the opinion that they had problems with their dwelling. The few dissatisfied respondents were from Latvia and Hungary. On the other hand, it seems that there is a relatively better situation in the Czech Republic. Older people representing all countries see the issue of noise from neighbours or from the street in a very similar way – almost the same share of older persons perceive it as a problem. The major differences could be found in the opinions on pollution and other environmental problems (the highest values in Latvia and Estonia), as well as on crime, violence and vandalism (the highest number of negative opinions in Latvia).

Table 3a. Bootstrap estimates for declaring that there are “problems with the dwelling: too dark, not enough light” according to 65+ persons in the selected CEE countries

Country	Estimate	Bootstrap for 95%		
		Bias	Lower	Upper
Czech Republic	3.7	.3	3.0	4.3
Estonia	6.9	.7	5.6	8.3
Hungary	10.9	.6	9.6	12.0
Lithuania	11.1	.8	9.4	12.6
Latvia	8.4	.7	7.0	9.9
Poland	10.0	.5	9.1	10.9
Slovakia	5.2	.6	4.0	6.4

Source: own calculation based on the EU-SILC microdata, 2007.

Table 3b. Bootstrap estimates for declaring that there is “noise from neighbours or from the street” according to 65+ persons in the selected CEE countries

Country	Estimate	Bootstrap for 95%		
		Bias	Lower	Upper
Czech Republic	17.2	.7	16.0	18.6
Estonia	16.4	1.0	14.3	18.3
Hungary	16.6	.8	15.2	18.1
Lithuania	17.9	.9	16.0	20.0
Latvia	18.7	1.0	16.6	20.6
Poland	19.7	.7	18.4	21.0
Slovakia	20.5	1.1	18.5	22.8

Source: own calculation based on the EU-SILC microdata, 2007.

Table 3c. Bootstrap estimates for declaring that there is “pollution, grime or other environmental problems” according to 65+ persons in the selected CEE countries

Country	Estimate	Bootstrap for 95%		
		Bias	Lower	Upper
Czech Republic	14.1	.7	12.8	15.5
Estonia	20.1	1.1	17.7	22.1
Hungary	15.1	.7	13.7	16.4
Lithuania	15.1	.9	13.1	17.1
Latvia	30.5	1.1	28.2	33.0
Poland	12.5	.5	11.5	13.5
Slovakia	18.6	1.1	16.6	20.8

Source: own calculation based on the EU-SILC microdata, 2007.

Table 3d. Bootstrap estimates for declaring that there is “crime, violence or vandalism in the area” according to 65+ persons in the selected CEE countries

Country	Estimate	Bootstrap for 95%		
		Bias	Lower	Upper
Czech Republic	12.3	.6	11.2	13.6
Estonia	16.3	1.0	14.2	18.1
Hungary	14.7	.7	13.3	16.0
Lithuania	6.3	.6	5.1	7.6
Latvia	25.6	1.0	23.6	27.3
Poland	7.7	.4	6.8	8.6
Slovakia	6.1	.6	4.9	7.4

Source: own calculation based on the EU-SILC microdata, 2007.

Summing up, it seems that in terms of evaluating outdoor spaces and buildings, environmental issues were declared by the respondents from all the countries as the

most unsatisfactory. It also seems that in all the countries the respondents similarly evaluated the problems with noise. It could be treated as a universal problem for older persons. The results also indicate evident differences in perception of crime and vandalism in the area where older persons live.

Transport

The EU-SILC contains limited information on assessment of transport. Table 4 below presents the results of the analysis of the degree of easiness or difficulty of access to public transport. Results received from Hungary, Slovakia and the Czech Republic indicate that in comparison to the other countries, their 65+ citizens consider access to public transport to be very easy, while more Estonian and Latvian respondents declared that this access could be obtained, however, with great difficulty.

Table 4. Bootstrap estimates of evaluation “access to public transport” according to 65+ persons in the selected CEE countries

Country		Estimate	Bootstrap for 95%		
			Bias	Lower	Upper
Czech Republic	with great difficulty	5.1	.4	4.2	5.8
	with some difficulty	16.3	.7	14.9	17.7
	easily	54.1	1.0	52.2	56.1
	very easily	24.5	.8	23.0	26.3
Estonia	with great difficulty	8.9	.8	7.2	10.6
	with some difficulty	21.6	1.2	19.4	24.0
	easily	54.3	1.4	51.5	57.1
	very easily	15.2	1.1	13.1	17.4
Hungary	with great difficulty	4.8	.4	3.9	5.7
	with some difficulty	12.8	.7	11.6	14.2
	easily	53.8	1.0	51.7	55.6
	very easily	28.6	.9	27.0	30.4
Lithuania	with great difficulty	9.8	.8	8.3	11.4
	with some difficulty	27.5	1.1	25.2	29.8
	easily	51.9	1.4	49.3	54.7
	very easily	10.7	.8	9.3	12.5
Latvia	with great difficulty	8.1	.7	6.6	9.7
	with some difficulty	26.3	1.2	23.9	28.8
	easily	56.7	1.4	53.7	59.4
	very easily	8.9	.8	7.3	10.4
Poland	with great difficulty	7.7	.4	6.9	8.7
	with some difficulty	22.7	.7	21.4	24.0
	easily	48.7	.8	47.0	50.3
	very easily	20.8	.7	19.5	22.2
Slovakia	with great difficulty	4.9	.6	3.7	6.1
	with some difficulty	18.6	1.1	16.2	20.6
	easily	52.7	1.4	49.9	55.3
	very easily	23.8	1.1	21.7	26.3

Source: own calculation based on the EU-SILC microdata, 2007.

Housing (public and private)

Data presented in Table 2 demonstrates that there are many options available in the EU-SILC 2007 which allow for verifying housing conditions. However, due to the fact that some of these variables are not adequate for measuring, and performing comparison among the countries (for instance air conditioning is needed more in countries where climate is warm and hot, and similarly, in other countries cold weather requires additional heating during the winter time). Tables below present the indicator which indicates the overall satisfaction with the dwelling (Table 5a) as well as the results of evaluation of access to various services, such as shopping, including grocery stores, post offices or banks (Table 5b–d).

Table 5a. Bootstrap estimates of overall evaluation of dwelling according to 65+ persons in the selected CEE countries

Country		Estimate	Bootstrap for 95%		
			Bias	Lower	Upper
Czech Republic	very dissatisfied	2.4	.3	1.8	3.0
	somewhat dissatisfied	8.3	.5	7.4	9.3
	satisfied	74.4	.8	73.0	76.0
	very satisfied	14.8	.6	13.5	16.1
Estonia	very dissatisfied	2.7	.4	1.9	3.7
	somewhat dissatisfied	16.9	1.0	15.1	18.8
	satisfied	68.9	1.3	66.4	71.2
	very satisfied	11.5	.9	9.8	13.3
Hungary	very dissatisfied	10.3	.6	9.1	11.4
	somewhat dissatisfied	24.7	.8	22.9	26.4
	satisfied	54.7	1.0	52.8	56.8
	very satisfied	10.3	.6	9.1	11.5
Lithuania	very dissatisfied	6.6	.6	5.4	7.9
	somewhat dissatisfied	21.3	1.0	19.4	23.3
	satisfied	64.5	1.2	61.9	66.9
	very satisfied	7.7	.7	6.3	9.0
Latvia	very dissatisfied	5.8	.6	4.7	7.1
	somewhat dissatisfied	20.8	1.0	18.6	22.6
	satisfied	65.3	1.2	62.8	67.6
	very satisfied	8.1	.7	6.8	9.7
Poland	very dissatisfied	4.9	.4	4.2	5.6
	somewhat dissatisfied	15.4	.6	14.2	16.6
	satisfied	72.5	.7	71.0	73.8
	very satisfied	7.3	.4	6.5	8.0
Slovakia	very dissatisfied	3.1	.5	2.2	4.1
	somewhat dissatisfied	15.4	1.0	13.5	17.4
	satisfied	73.4	1.2	70.9	75.8
	very satisfied	8.1	.7	6.8	9.5

Source: own calculation based on the EU-SILC microdata, 2007.

Table 5b. Bootstrap estimates of answers “with great difficulty” of access to grocery services according to 65+ persons in the selected CEE countries

Country	Estimate	Bootstrap for 95%		
		Bias	Lower	Upper
Czech Republic	4.8	.4	4.0	5.8
Estonia	9.4	.9	7.6	11.1
Hungary	2.0	.3	1.5	2.6
Lithuania	7.5	.8	6.0	9.2
Latvia	5.8	.8	4.2	7.3
Poland	4.7	.4	4.1	5.5
Slovakia	3.0	.5	2.0	4.1

Source: own calculation based on the EU-SILC microdata, 2007.

Table 5c. Bootstrap estimates of answers “with great difficulty” of access to banking services according to 65+ persons in the selected CEE countries

Country	Estimate	Bootstrap for 95%		
		Bias	Lower	Upper
Czech Republic	7.4	.6	6.4	8.6
Estonia	12.6	.9	10.7	14.2
Hungary	6.6	.5	5.7	7.5
Lithuania	9.9	1.0	8.1	11.9
Latvia	8.6	1.1	6.6	10.9
Poland	8.7	.5	7.7	9.6
Slovakia	14.5	1.1	12.4	16.6

Source: own calculation based on the EU-SILC microdata, 2007.

Table 5d. Bootstrap estimates of answers “with great difficulty” of access to postal services according to 65+ persons in the selected CEE countries

Country	Estimate	Bootstrap for 95%		
		Bias	Lower	Upper
Czech Republic	5.1	.4	4.2	6.0
Estonia	6.9	.8	5.2	8.3
Hungary	3.7	.4	3.0	4.4
Lithuania	5.4	.7	4.1	6.8
Latvia	5.6	.9	3.9	7.5
Poland	7.4	.4	6.5	8.2
Slovakia	6.4	.8	4.9	8.1

Source: own calculation based on the EU-SILC microdata, 2007.

Summing up this part of analysis, based on its results, it may be observed that in Hungary, in comparison to the other countries, more persons aged 65+ are dissatisfied with their dwelling. Regarding the opinions on access to services, it is interesting that in Estonia, in comparison to other countries, more 65+ citizens have

great difficulty with access to grocery services, while in Slovakia and Estonia to banking services. The situation of access to postal services was declared as relatively better in all the countries.

Community support and health services

The access to health care services for older persons is of special importance. Due to the deteriorating health condition, older persons become increasingly dependent as a result of ageing, so in comparison to younger generation, they more often use health care services. In Table 6 below, bootstrap estimates for the variable which include opinions of the EU-SILC respondents on great difficulty with access to health care services are presented. Quite a similar distribution of answers has been observed in all the countries. However, the lowest number of persons aged 65+ experiencing great difficulty with access to health care services was observed in Hungary. In all other countries about 7–8% of persons 65+ had great difficulty to have an access to primary health care.

Table 6. Bootstrap estimates for access “with great difficulty” to primary health care for 65+ persons in the selected CEE countries.

Country	Estimate “with great difficulty”	Bootstrap		
		Bias	Lower 95%	Upper 95%
Czech Republic	5.9	0.5	4.9	7.0
Estonia	7.9	0.8	6.4	9.7
Hungary	2.6	0.3	2.0	3.3
Lithuania	8.7	0.9	6.9	10.6
Latvia	7.6	1.0	5.6	9.7
Poland	7.7	0.5	6.7	8.6
Slovakia	8.8	0.8	7.2	10.5

Source: own calculation based on the EU-SILC microdata 2007.

5. Conclusions

The topic of the quality of life in old age and its analysis do not represent a new subject to academics interested in the ageing studies. However, it remains relatively new for academics from Central and Eastern Europe. Although this topic has been elaborated by academics in each country selected for the purpose of this analysis, so far joint comparisons have not been possible due to the lack of adequate and comparable data and well designed and representative surveys which would allow discussing this issue properly. Measuring quality of life in old age represents a challenge for the CEE countries, mostly due to the lack of proper surveys (verifying not only opinions of the citizens but also of policy makers).

Nevertheless significant changes are taking place in the CEE countries, not only due to the EU-SILC referred to in this paper. The European Year 2012 of Active Ageing and Solidarity between Generations particularly contributed to the

discussion on the quality of life in old age and to the active ageing policy mentioned at the beginning of the paper [World Health Organization 2002]. In this respect, within the framework of the 2012 European Year on Active Ageing and Solidarity between Generations, the UNECE, the European Commission DG Employment, Social protection and Inclusion and the European Centre undertook a project “Active Ageing Index”.⁶ The aim of this project was to develop and launch an Active Ageing Index that would help to measure national progress in ensuring activity and quality of life of ageing population in the European Union and other UNECE countries. This indicator could be used to monitor active ageing policy and policy for and towards older people in general. However, this discussion probably has to start with the idea of the social indicators being central for defining the quality of life in old age, as well as with the following questions: Have all the key indicators used to measure properly the quality of life in old age been selected? Is it possible to have access to the data which allows to calculate the indicators?

In the coming years, the issue of population ageing and its consequences cannot be treated only as an academic topic in these countries. It creates more challenges to policy makers and politicians who have to tackle the impacts of the issue which concerns all the aspects of the national economy, and directly impacts the quality of life. It is important to highlight these issues at all the levels, including the national, regional and even local levels. The importance of the quality of life for public policy is crucial for planning, monitoring and evaluating policy (see the National Strategy for Old Age in Czech Republic, or recent attempts in Poland to have the senior policy adopted).

The analysis revealed statistically significant differences and similarities among the countries and by household size in measuring various aspects of life. Thus a broader national or even multi-regional investigation into the factors which constitute differences⁷ is necessary. This is especially important in the CEE countries, which cannot be treated as one homogenous group of the countries with similar challenges. The heterogeneity is found not only in the official and available statistical and demographic indicators. It is also indicated by surveys and studies, as well as cultural and public policy differences within and among these countries (see [Perek-Białas, Hoff (Eds.) 2012], for Poland [Abramowska-Kmon et al. 2011]). All these factors should be taken into account.

Finally, some statistics show that there is a need not only to concentrate on some indicators or try to build a synthetic (composite) indicator referred to as “the quality

⁶ See more about the Active Ageing Index at http://www.euro.centre.org/detail.php?xml_id=2004. The index measured the extent to which older people can realize their full potential in terms of total and healthy life expectancy, participation in the economy, in social and cultural life and in terms of independent living.

⁷ The project OECD/LEED Programme on Demographic Change and Local Development in three regions of Poland was carried out in 2012–2013, see more at the web page: <http://www.oecd.org/fr/cfe/leed/demographicchange.htm>.

of life.” The analysis should provide a roadmap for taking actions by different actors (i.e. state, public and private institutions, media, families, friends, neighbours and ourselves) to improve the quality of life of everyone, regardless of age. Although it is focused on the older generation, it is also currently performed for the future older generations which nowadays are young and perceive no need for changes. However, when they reach senior age, these aspects will become very relevant to them with regard to enjoying good quality of life.

Literature

- Abramowska-Kmon A., Kotowska I.E., Panek T., 2011, Osoby starsze w społeczeństwie, [in:] *Diagnoza Społeczna 2011. Warunki i jakość życia Polaków. Raport tematyczny dla MPiPS. Rynek pracy i wykluczenie społeczne w kontekście percepcji Polaków*, Rada Monitoringu Społecznego, Warszawa, pp. 85–138.
- Atkinson A.B., Marlier E. (Eds.), 2010, *Income and Living Conditions in Europe*, Publications Office of the European Union, Luxembourg.
- Davison A.C., Hinkley D.V., 2006, *Bootstrap Methods and Their Application*, Cambridge University Press, Cambridge.
- European Commission, 2010, *Europe 2020: A European strategy for smart, sustainable and inclusive growth*, COM (2010) 2020, Brussels.
- European Union, 2011, *The Social Dimension of the Europe 2020 Strategy: A Report of the Social Protection Committee*, Publications Office of the European Union, Luxembourg.
- Gałuszka M., 2006, Jakość *życia* seniora. Przegląd wybranych koncepcji i metod badania, [in:] Kowaleski J.T., Szukalski P. (Eds.), *Starość i starzenie się jako doświadczenie jednostek i zbiorowości ludzkich*, Zakład Demografii Uniwersytet Łódzki, Łódź, pp. 111–118.
- Goedemé T., 2010, *The Standard Error of Estimates Based on EU-SILC. An Exploration through the Europe 2020 Poverty Indicators*, Working Paper no. 10/9, Centre for Social Policy, Antwerp.
- GUS, 2009a, *Dochody i warunki życia ludności Polski (raport z badania EU-SILC 2007 i 2008)*, Warszawa.
- GUS, 2009b, *Incomes and Living Conditions of the Population in Poland (report from EU-SILC surveys in 2007 and 2008)*, Warszawa.
- Iacovou M., Skew A., 2010, Household structure in the EU, [in:] Atkinson A.B., Marlier E. (Eds.), *Income and Living Conditions in Europe*, Publications Office of the European Union, Luxembourg.
- Kish L., 1965, *Survey Sampling*, Wiley & Sons, New York.
- Lelkes O., 2010, Social participation and social isolation, [in:] Atkinson A.B., Marlier E. (Eds.), *Income and Living Conditions in Europe*, Publication Office of the European Union, Luxembourg.
- McCarthy P.J., Snowden C.B., 1985, The bootstrap and finite population sampling, *Vital and Health Statistics* 2–95, Public Health Service Publication 85-1369, US Government Printing Office, Washington, DC.
- Mollenkopf H., Walker A., 2007, *Quality of Life in Old Age. International and Multi-Disciplinary Perspectives*, Social Indicators Research Series, vol. 31, Springer.
- Perek-Białas J., Hoff A. (Eds.), 2012, *Developing the ‘Sociology of Ageing’ to Tackle the Challenge of Ageing Societies in Central and Eastern Europe*, Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków.

- Perek-Białas J., Mjelde-Mossey L.A., 2012, Older women in Central and Eastern Europe: Economic and health concerns, [in:] Mjelde-Mossey L.A., Chi I. (Eds.), *Women and Aging International: Diversity, Challenges and Contributions*, Routledge Taylor and Francis, 2012.
- Shao J., Tu D., 1995, *The Jackknife and Bootstrap*, Springer, New York.
- Słaby T., 2004, Pomiar i jakość życia, [in:] Panek T., Szulc A. (Eds.), *Statystyka społeczna. Wybrane zagadnienia*, Oficyna Wydawnicza SGH, Warszawa.
- Szatur-Jaworska B., 2005, *Diagnozowanie w polityce społecznej. Materiały do studiowania*, Oficyna Wydawnicza ASPRA-JR, Warszawa.
- Tobiasz-Adamczyk B., Brzyski P., 2006, Uwarunkowania rodzinne jako psychospołeczne zasoby jakości kobiet na początku wieku starszego, [in:] Kowaleski J.T., Szukalski P. (Eds.), *Starość i starzenie się jako doświadczenie jednostek i zbiorowości ludzkich*, Zakład Demografii Uniwersytetu Łódzkiego, Łódź, pp. 119–127.
- World Health Organization, 2002, *Active Ageing: A Policy Framework*, Geneva.
- World Health Organization, 2007, *Global Age-friendly Cities: A Guide*, Geneva.

JAKOŚĆ ŻYCIA W STARSZYM WIEKU W KRAJACH EUROPY ŚRODKOWEJ I WSCHODNIEJ

Streszczenie: Jest wiele publikacji, które dotyczą sytuacji społeczno-ekonomicznej starszych generacji w Europie, ale głównie koncentrują się na pokazaniu jakości życia osób starszych mieszkających w krajach Europy Zachodniej. W artykule pokazano możliwości wykorzystania różnych informacji/wskaźników do pomiaru jakości życia osób starszych, rekomendowanych przez Światową Organizację Zdrowia i które to wskaźniki zastosowano w analizie porównawczej dla Polski, Litwy, Węgier, Czech, Słowacji, Łotwy jak i Estonii. Cała analiza ma na celu nie tylko pokazanie różnic w poziomie jakości życia osób starszych między wybranymi krajami, ale także zwrócenie uwagi na konieczność uwzględniania poziomu jakości życia w planowaniu, tworzeniu i wdrażaniu polityki senioralnej w krajach Europy Środkowo-Wschodniej.

Słowa kluczowe: jakość życia, osoby starsze, starość, EU-SILC, kraje Europy Środkowo-Wschodniej.