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# How Does the Household Economic Status Affect the Quality of Life of Older People in the Different EU Countries?

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## Abstract

One of the main indicators for the well-being of older people is their quality of life. Measuring the quality of life and identifying the factors of quality of life is becoming important in order to develop adequate policies to ensure successful ageing. The aim of this research is to compare the Quality of life in the ageing people (65+) in the EU countries and to examine how the economic disparities affect the quality of life in different countries. The data used in the study are from the eighth wave of the Survey of Health, Ageing and Retirement in Europe (SHARE). Several socio-demographic characteristics, self-reported household economic status, as well as the CASP-12 index (measure of Quality of Live) were explored. On a country level, there is a strong relationship between the household economic status and the CASP index, but the four domains of the CASP index are affected in different degrees. For selected countries the analysis is conducted on an individual level and the influence of the self-reported household economic status as a predictor of the CASP-12 is estimated, controlled for gender, years of education, health status, marital status and age.

**Keywords:** Ageing, Quality of Life, CASP Index**,** Economic Disparities, Comparative Research, SHARE

**JEL:** J14, C31, I31

## Introduction

The ageing of the population has been a challenge for almost all societies in countries all around the world for more than 30 years. The share of the population aged 65 or more in the whole world was 6.2% in 1990 and increased by more than 3 p. p. to 9.3% by 2020 (United Nations, 2019). The European countries have been facing the process of ageing most intensively; the increasing life expectancy at birth and declining fertility rates are the main trigger of this process.

In 2021, the share of the population aged 65+ in the EU-27 was 20.8%. There is a noticeable variability of this indicator among the countries – the lowest value is in Ireland 14.8 % aged 65+, and the highest – in Italy 23.5% (Eurostat 2022a). The Eurostat projections reveal that the indicator is increasing and suggest that it will reach 29.5% in 2050 for the EU-27 (Eurostat, 2022b). Increasing longevity is one of humanity's

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greatest achievements. People live longer because of improved nutrition, sanitation, medical advances, health care, education and economic well-being (United Nations Population Fund and HelpAge International, 2012). The ageing of the population affects the societies as well as the individuals in a variety of ways. The main challenges faced by the societies are the ones connected with the labour force and labour productivity, social security and pension systems, health and long-care systems, public expenditures, inequality and poverty, needs of new markets and services (Bussolo et al., 2015).

On an individual level, the phenomena of ageing population affect people's lives in terms of their decisions about labour market exit, bridge employment, flexible retirement, financial security and independency, family intergenerational relations (including supportive exchange between generations), care-giving and care-receiving, voluntary work, social networks and social participation (including political participation, physical and mental health), long life learning, access and use of Information and Communication Technologies.

All these challenges are reflected in the Active Ageing concept. The term "active ageing" was adopted by the World Health Organization (WHO) in the late 1990s. Active ageing is a process of optimising the opportunities of the elderly for health, security and participation in various socio-economic activities. Active ageing applies both to separate individuals and to groups of people. It allows them to realise their potential in terms of physical, mental and social well-being throughout their life, as well as to participate in society according to their needs, desires and capacities. Zaidi et al. (2017) defined active ageing as a concept that captures continued participation in the social, economic, cultural, spiritual and civic life, as well as well-being, autonomy and independence.

One of the main indicators for the well-being of older people is their quality of life. Quality of life (QoL) is defined by the World Health Organization as "individuals' perception of their position in life in the context of the culture and value systems in which they live, and in relation to their goals, expectations, standards and concerns." (WHO 1997).

The aim of this research is to compare the Quality of life of the older people (65+) measured by the CASP-12 index in the EU countries and to examine how the economic disparities affect the quality of life in different countries. The analysis was conducted on a country level and additionally on an individual level for selected countries to explore how the self-reported household economic status affects the quality of life of the elderly.

## Theoretical and empirical considerations

Quality of life is an important clinical and societal outcome. Measuring the quality of life of older people and identifying its determinants is becoming increasingly relevant as a result of both rising life expectancy and growth in the proportion of the elderly population. (Niedzwiedz et al., 2014). The results of research on quality of life are an important background for social and health policies.

QoL is a complex concept that is amorphous, multi-layered, dynamic, and related to a range of interacting components. These components are both objective and subjective, may change over time, and are impacted by lifestyle, deteriorating health, and overall experiences. The components involve multiple domains: environmental,

social, health, and psychological (Lestari et al., 2021). The component definition of QoL emphasises the multidimensional nature of the concept and different individual dimensions of QoL: objective, such as general health and functional status, socio-economic status, quality of environment, and subjective, such as life satisfaction, self-esteem, social integration (Bond & Corner, 2004). Farquhar (1995) concluded that there is more to quality of life for older people than just health and mobility/ability. Social contacts, family and children, material circumstances and activities appear to be as valued components of a good quality of life as health status is. Psychological well-being and a positive outlook, good health and functionality, social relationships, leisure activities, neighbourhood resources, adequate financial circumstances and independence are the main pillars of QoL for older people (Gabriel & Bowling, 2004, Murphy & Kazer, 2015).

Developing specific instruments for quality of life measurement is a complex goal; the high level of abstraction of that phenomenon and its estimation in the surveys brings a lot of theoretical and empirical challenges. The quality of life is a dynamic, multifaceted concept which must reflect the interaction of objective, subjective, macro-, micro-, positive and negative influences. In almost all attempts to measure quality of life, it is operationalised as a series of domains (Walker & Lowenstein, 2009).

Siette et al. (2021) identified 30 QoL instruments and classified them according to the population group for which they were designed: adults, older adults and adults living with dementia. Thirteen instruments were designed for use with adults generally, 10 were designed for use with older adults, and 7 were designed for adults living with dementia. Among the popular QoL instruments for older adults are the CASP index and WHOQOL-OLD. WHOQOL-OLD is an instrument developed by the WHO for use with older adults. The WHOQOL-OLD was derived following standard WHOQOL methodology. The instrument consists of 24 items assigned to 6 facets (sensory abilities; autonomy; past, present and future activities; social participation; death and dying; intimacy) and is a supplementary module of WHOQOL-BREF (shorter version of the WHOQOL-100, developed in 1995).

In 2003, Hyde, Wiggins, Higgs and Blane developed a needs satisfaction measure of QoL in early old age (65–75) called CASP-19. The index is based on a "theory of human need"; this theoretical framework goes back to Maslow's hierarchy of human needs, according to which individuals have an intrinsic motivation to fulfil a common set of needs (Maslow, 1943). CASP-19 comprises four domains of need: control, autonomy, self-realisation, and pleasure. Quality of life is seen as the satisfaction of these needs. The scale consists of 19 Likert-type items reflecting the abovementioned four dimensions and has good internal consistency and validity. All four domains in the scale have respectable internal homogeneity, good inter-domain correlations, and high loadings on a latent factor. One of the most important features of this scale is that the authors wanted to provide a "measure of QoL that didn't use the determinants of QoL as indicators of QoL. For example, health indicators are frequently used as proxies for QoL. However, health is a factor which may influence people's QoL and should therefore not be used as an indicator of QoL." (Borrat-Besson et al., 2015). Two later modifications of this index were developed: CASP-12 (2004)

used by SHARE (Survey of Health, Ageing and Retirement in Europe) and another version of CASP-12 suggested by Wiggins et al. (2008). Both versions comprise 12 items consolidated in the original four domains, but there are some differences in the lists of items (Borrat-Besson et al., 2015).

In some research paper age is analyzed in combination with economic development of countries, quality of life, etc. (Markova, 2021) and in this sense it might be expected that factor influences on quality of life would not overlap completely for different age groups. The determinants of quality of life of the ageing population have been the subject of a number of different publications. To predict the QoL, a variety of factors hasbeen explored: health related factors, socio-demographic factors, labour force participation, social contacts, participation in different activities and economic resources such as income. Moreover, the opportunity for remote work for persons at retirement age which affects positively QoL might be also included among these factors (Yordanova, 2020). Several studies examined the effects of the economic status on the QoL. Knesebeck et al. (2007) performed a study to examine the associations between quality of life and multiple indicators of socio-economic position among people aged 50 or more years in 10 European countries using SHARE data from the first wave (2004) and showed that quality of life was associated with socio-economic position, but the associations varied by country. In a multilevel analysis based on cross-sectional study of data from Wave 5 (2013) of SHARE, it was found that sufficient income as well as greater satisfaction in life, less depression, better subjective health, physical activity, an absence of functional impairment, younger age, and participation in activities were associated with better QoL in all countries (Conde-Sala et al., 2017). The conclusion was that individuals in more generous welfare regimes experienced higher levels of quality of life, as well as narrower socio-economic inequalities in quality of life. Based on the same data, a comparative study between elderly people in Spain and Central and Northern Europe confirmed that the variables most closely associated with a lower QoL were high depression, poor physical health, economic difficulties, and deficits in activities of daily living (Portellano-Ortiz et al., 2018). In Niedzwiedz et al. (2014), SHARE Wave 1 and 2 data were used to assess the overall relationship between socio-economic position and quality of life. Georgieva et al. (2021) conducted a cross-sectional study using data from the sixth wave of SHARE (2018) and concluded that QoL might be predicted unevenly by different factors across the different European regions, but all the abovementioned studies concur in these three main factors: absence of depression, income, and self-perceived health.

In an EU-funded project entitled Ageing Well: European Study of Adult Well-Being (ESAW), the authors of the research discovered that material security was a key component of quality of life along with physical health and functioning, cognitive efficacy (self-resources), social support resources and life activity (Káčerová, M., & Ondačková, J., 2020). Based on data from the same study, the negative impact of inadequate material resources on the psychological well-being of older people was confirmed (Burholt &Windle, 2006), as well as the association of poor financial resources with lower levels of life satisfaction (Fagerström et al., 2007).

In a study based on the English Longitudinal Study of Ageing (ELSA) Waves 1 and 3, it was evaluated that individuals with poor and worsening health and poor and worsening financial circumstances had greater decreases in QoL (Webb et al., 2011). Similar findings were reported by Netuveli et al. (2006): "equally strong was the influence of factors representing material well-being." Perceiving financial circumstances to be poor had a very strong effect of lowering quality of life scores, while owning cars and being on the high end of income distribution improved quality of life scores (data are from ELSA Wave 1).

## Methods

### 1. Data

The analysis used data from Wave 8 of SHARE (Börsch-Supan, 2022, Bergmann, 2021)[1]. SHARE is a unique panel database of micro data on health, socio-economic status and social and family networks covering most of the European Union and Israel (Börsch-Supan et al., 2013). In Wave 8, data are available for all EU countries except Ireland and Portugal. The total number of respondents in SHARE Wave 8 is 46733. A subsample of 29748 respondents aged 65 and more was used for this paper.

### 2. Instruments

The SHARE variables and instruments used in the present study are as follows:

The quality of life is measured by the CASP-12 index. The respondents were asked how often they experienced certain feelings and situations on a 4-point scale: "often" (1), "sometimes" (2), "rarely" (3), "never" (4). The questions are divided into the following four domains and their items:

- Control: "How often do you think your age prevents you from doing the things you would like to do?"; "How often do you feel that what happens to you is out of your control?"; "How often do you feel left out of things?"
- Autonomy: "How often do you think that you can do the things that you want to do?"; "How often do you think that family responsibilities prevent you from doing what you want to do?"; "How often do you think that shortage of money stops you from doing the things you want to do?"
- Self-realisation: "How often do you look forward to each day?"; "How often do you feel that your life has meaning?"; "How often, on balance, do you look back on your life with a sense of happiness?"
- Pleasure: "How often do you feel full of energy these days?"; "How often do you feel that life is full of opportunities?"; "How often do you feel that the future looks good for you?"

For the total score, CASP-12 values range from 12 to 48, with higher scores indicating better quality of life; item 4 and items from 7 to 12 were reversed, thus, lower scores indicate better quality of life. For the aim of the study, additional values for all four domains were calculated. The total score

[1] The fieldwork of the 8th Wave of SHARE started in October 2019 and was interrupted by the outbreak of the COVID-19 pandemic. The outbreak hit SHARE in the middle of its 8th Wave of data collection. The fieldwork had to be suspended in all participating countries in March 2020. At that time, about 70 percent of all expected longitudinal interviews across countries had been conducted. As a reaction, SHARE developed a specific questionnaire covering the same topics as the regular SHARE questionnaire - but considerably shortened and targeted to the living situation of people aged 50 and above during the pandemic.

was calculated if the respondent answered all item-questions.

The household economic status is approximated by the answer to the question "Thinking of your household's total monthly income, would you say that your household is able to make ends meet". The possible answers are: "With great difficulty", "With some difficulty", "Fairly easily" and "Easily". The socio-demographic variables are: gender, years of education, marital status and age. The variable used to measure the health status is self-perceived health aggregated into three categories: "Excellent or Very good", "Good" and "Fair or Poor".

The study has the following limitations: it does not include Romania and Portugal because the data for Portugal are not available in SHARE Wave 8 and CASP-12 for Romania was not estimated due to an unacceptable translation of one of the items in the CASP-12 index in the Romanian Wave 8 questionnaire.

The main characteristics of the sample are presented in Table 1.

**Table 1.** Distribution of the Respondents in the Sample by Socio-demographic Variable

| Sample size (65+) | 29 748 |
|---|---|
| Socio-demographic characteristics | Share % |
| Gender | |
| Male | 43.7 |
| Female | 56.3 |
| Age | |
| 65–69 | 27.8 |
| 70–74 | 25.8 |
| 75–79 | 20.5 |
| 80–84 | 14.8 |
| 85+ | 11.1 |
| Marital status | |
| living with spouse | 63.6 |
| living without spouse | 36.4 |
| Education | |
| lower secondary, primary or lower | 39.5 |
| secondary | 38.0 |
| tertiary | 22.5 |
| Self-perceived health | |
| excellent | 4.3 |
| very good | 13.0 |
| good | 37.0 |
| fair | 33.3 |
| poor | 12.2 |

**Source:** SHARE data, author's estimations

## Statistical Analysis

### 1. Descriptive analysis – CASP index and its four domains by country

The estimated average values for the CASP-12 index by country, as well as the estimated averages for all four domains, are presented in Table 2. Based on Knesebeck et al. (2005), the scores were classified into four levels of QoL: *very high level* (39–41), *high level* (37–38), *moderate level* (35–36) and *low level* (below 35). The aggregated results for all 24 countries (sorted in descending order by the mean of CASP-12) show that there is a significant difference in the scores. There are clear North-South and West-East gradients: the highest scores are in Northwestern countries (Denmark, the Netherlands and Luxembourg), and the lowest in Southeastern countries (Bulgaria, Greece), as well as in some Northeastern countries (Lithuania and Latvia). The share of the respondents with low scores of CASP-12 confirms the differences: in the group of countries with a low level of CASP, more than 50% have scores below 35. In Greece and Bulgaria, the median is respectively 31 and 32. These results, compared to the group of countries with highest level of CASP where the share of respondents who scored below 35 is less than 30%, support the conclusion that there is a vast dispersion among EU countries regarding the quality of life of the elderly.

The ranking of the countries by the scores of different domains does not differ considerably from the general ranking. In Slovenia and Hungary, the average Control domain score is relatively higher, at the expense of a lower Pleasure domain score. The Autonomy domain is higher in Estonia, compensated with a lower Pleasure domain. In Croatia and Italy, the mean Self-realisation is higher and respectively the Pleasure and Autonomy are lower. The differences in the scores of CASP-12 and all its four domains scores between the countries are statistically significant (the hypotheses were tested with the Kruskall-Wallis test).

**Table 2.** CASP-12 Index – Total and by Domain and by Country

| | Mean | Std. Error | Median | Standard Deviation | % of respondents with low level (≤35) | Mean Control Domain | Mean Autonomy Domain | Mean Self-Realisation Domain | Mean Pleasure Domain |
|---|---|---|---|---|---|---|---|---|---|
| Total | 36.86 | 0.04 | 38 | 6.41 | | 8.30 | 9.22 | 10.39 | 8.91 |
| Denmark | 41.18 | 0.13 | 42 | 4.73 | 11.1 | 9.14 | 10.41 | 11.45 | 10.06 |
| Netherlands | 40.52 | 0.13 | 41 | 4.95 | 15.0 | 9.35 | 10.38 | 10.64 | 10.11 |
| Luxembourg | 40.07 | 0.25 | 41 | 5.51 | 14.9 | 9.17 | 10.02 | 10.89 | 9.83 |
| Austria | 39.64 | 0.16 | 40 | 5.38 | 20.1 | 9.43 | 9.91 | 10.90 | 9.38 |
| Germany | 39.38 | 0.12 | 40 | 5.31 | 21.1 | 8.99 | 9.82 | 11.03 | 9.52 |
| Sweden | 39.07 | 0.12 | 40 | 5.04 | 22.3 | 8.73 | 10.10 | 10.75 | 9.46 |
| Belgium | 38.73 | 0.17 | 40 | 5.79 | 25.0 | 8.59 | 9.91 | 10.49 | 9.70 |
| Slovenia | 38.24 | 0.14 | 39 | 5.89 | 27.8 | 8.97 | 9.37 | 10.58 | 9.25 |
| Finland | 37.90 | 0.21 | 38 | 5.41 | 29.4 | 8.23 | 9.78 | 10.52 | 9.34 |
| France | 37.85 | 0.15 | 34 | 6.06 | 31.6 | 8.27 | 9.59 | 10.55 | 9.36 |
| Spain | 37.09 | 0.17 | 38 | 6.55 | 38.8 | 8.61 | 9.13 | 10.28 | 8.93 |

| | Mean | Std. Error | Median | Standard Deviation | % of respondents with low level (≤35) | Mean Control Domain | Mean Autonomy Domain | Mean Self-Realisation Domain | Mean Pleasure Domain |
|---|---|---|---|---|---|---|---|---|---|
| Malta | 36.41 | 0.24 | 36 | 5.23 | 44.7 | 8.22 | 8.76 | 10.32 | 9.11 |
| Czech Republic | 36.30 | 0.12 | 36 | 5.53 | 40.0 | 7.96 | 9.14 | 10.40 | 8.78 |
| Hungary | 35.90 | 0.28 | 36 | 6.67 | 46.9 | 8.64 | 9.08 | 10.08 | 8.03 |
| Poland | 35.85 | 0.19 | 36 | 6.35 | 42.5 | 8.31 | 8.59 | 10.29 | 8.65 |
| Croatia | 35.42 | 0.23 | 36 | 6.11 | 45.4 | 7.89 | 8.88 | 10.48 | 8.16 |
| Estonia | 35.39 | 0.14 | 36 | 6.29 | 45.0 | 8.30 | 9.18 | 9.86 | 7.92 |
| Cyprus | 34.33 | 0.35 | 34 | 6.90 | 50.0 | 7.03 | 8.51 | 10.12 | 8.68 |
| Slovakia | 34.25 | 0.32 | 33 | 6.44 | 58.6 | 7.61 | 8.43 | 9.88 | 8.27 |
| Italy | 34.04 | 0.17 | 34 | 6.33 | 58.2 | 7.34 | 8.01 | 10.30 | 8.37 |
| Latvia | 33.17 | 0.28 | 33 | 5.98 | 62.3 | 7.56 | 8.18 | 9.61 | 7.65 |
| Lithuania | 33.02 | 0.23 | 33 | 6.44 | 61.6 | 6.64 | 8.43 | 9.74 | 8.23 |
| Bulgaria | 32.19 | 0.26 | 32 | 6.26 | 67.3 | 7.10 | 8.18 | 9.30 | 7.57 |
| Greece | 30.89 | 0.12 | 31 | 5.43 | 77.7 | 6.70 | 7.18 | 9.41 | 7.59 |

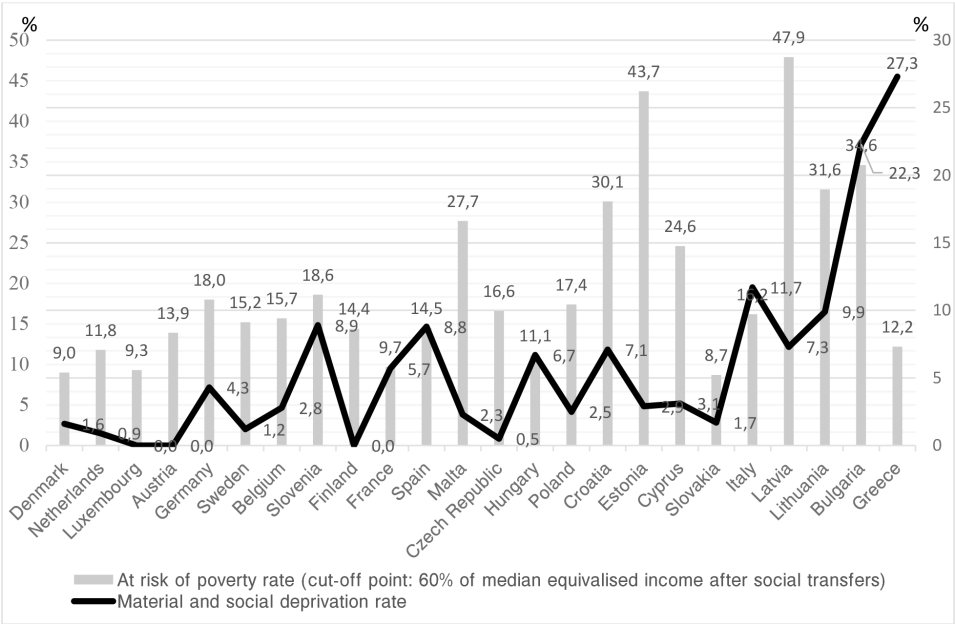
*Source:* SHARE data, author's estimations

## 2. Relationship between quality of life and material status on a country level

Prior theoretical and empirical studies have showed that some of the determinants of quality of life as a whole, and in the population of the elderly in particular, are the material status and the income. Eurostat data for 2019 support the high level of variance among the EU countries in the study regarding the indicators connected with the material status of the population aged 65+: "at-risk-of-poverty rate"[2] and "material and social deprivation"[3]. In Figure 1, the countries are ordered by the CASP-12 average score. The data show that both indicators for material status could not be directly connected with the CASP-12 scores. For example, for Greece, a country from the bottom of the distribution by CASP-12 score, the at-risk-of-poverty rate for the population aged 65+ is only 12%, and this value is comparable with the values of the same indicator for the countries with the highest CASP-12 scores such as the Netherlands and Austria. At the same time, some of the countries with the lowest CASP-12 scores have some of the highest material and social deprivation rates. However, 8-10% rates of this indicator are observed both in countries with low CASP scores (Italy and Lithuania) and in countries with relatively high CASP-12 scores (Spain and Slovenia).

[2] The at-risk-of-poverty rate is the share of people with an equalised disposable income (after social transfer) below the at-risk-of-poverty threshold, which is set at 60 % of the national median equalised disposable income after social transfers (https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:At-risk-of-poverty_rate)

[3] The EU material and social deprivation indicator is defined as the proportion of people living in ordinary housing who are unable to meet the costs of at least five out of thirteen basic necessities of life considered desirable or necessary for an acceptable standard of living (https://www.insee.fr/en/metadonnees/definition/c2244).

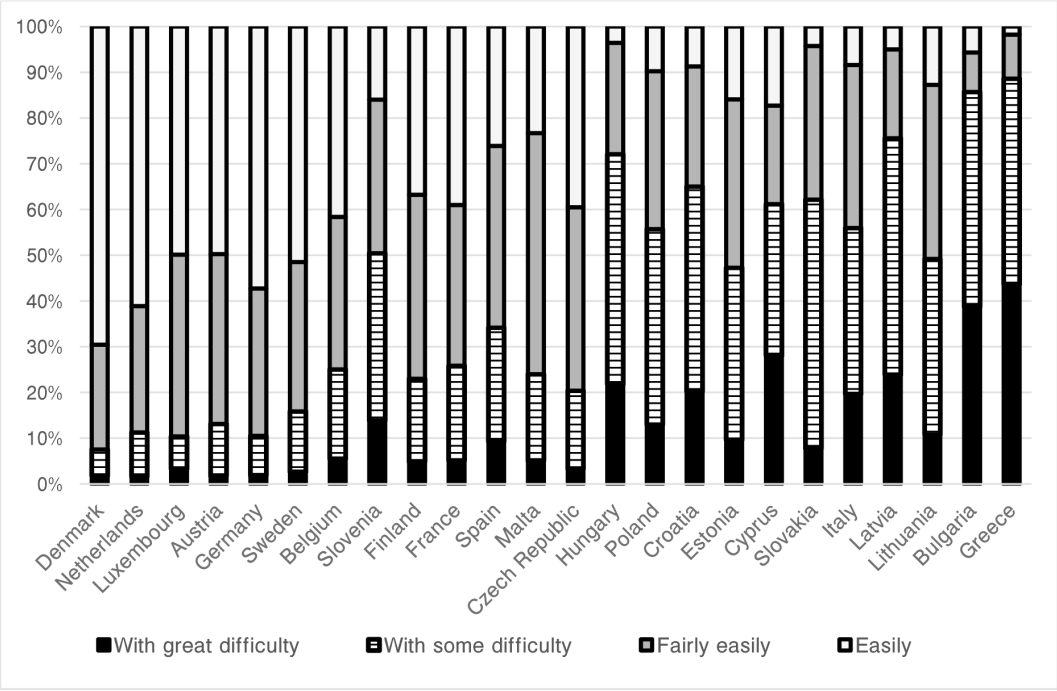



**Source:** Eurostat (data for 2019)

**Figure 1.** Countries by "at-risk-of-poverty rate" and "material and social deprivation" for the population aged 65+

Due to the limitation of these indicators and the fact that the CASP index is based on the subjective judgment of the respondents, an appropriate measure of the household economic status are the answers to the question "Thinking of your household's total monthly income, would you say that your household is able to make ends meet?". These answers can be treated as self-assessment of basic economic status (SABES) of the household. For the total sample, 11% of the respondents declared that their households are able to make ends meet with great difficulty, more than ¼ (26%) – with some difficulty, 32% – fairly easily and 31% – easily. However, the distributions differ vastly among the countries. The data are given in Figure 2. In the Northwestern countries (Denmark, the Netherlands, Sweden, Germany, Luxemburg, Austria) more of the 50% of the elderly aged 65+ in the sample stated the option "easily". On the other side are the Southeastern countries (Italy, Greece, Croatia, Bulgaria, Slovakia, Latvia and Hungary), where less than 10% reported that they were able to make ends meet easily. In Poland, Slovenia, Estonia, Lithuania and Cyprus the share is between 10 and 20%.

On a country level, the relationship between SABES (measured by the share of respondents who are able to make ends meet with great or some difficulties) and the quality of life (CASP-12 index) is visualised in Figure 3. The coefficient of determination $R^2$ indicates a strong relationship: 80% of the variety on the average country level of the CASP-12 index can be explained by the economic status of the respondents. In all countries where the share of elderly people who have economic difficulties is less than




**Source:** SHARE data, author's estimations,

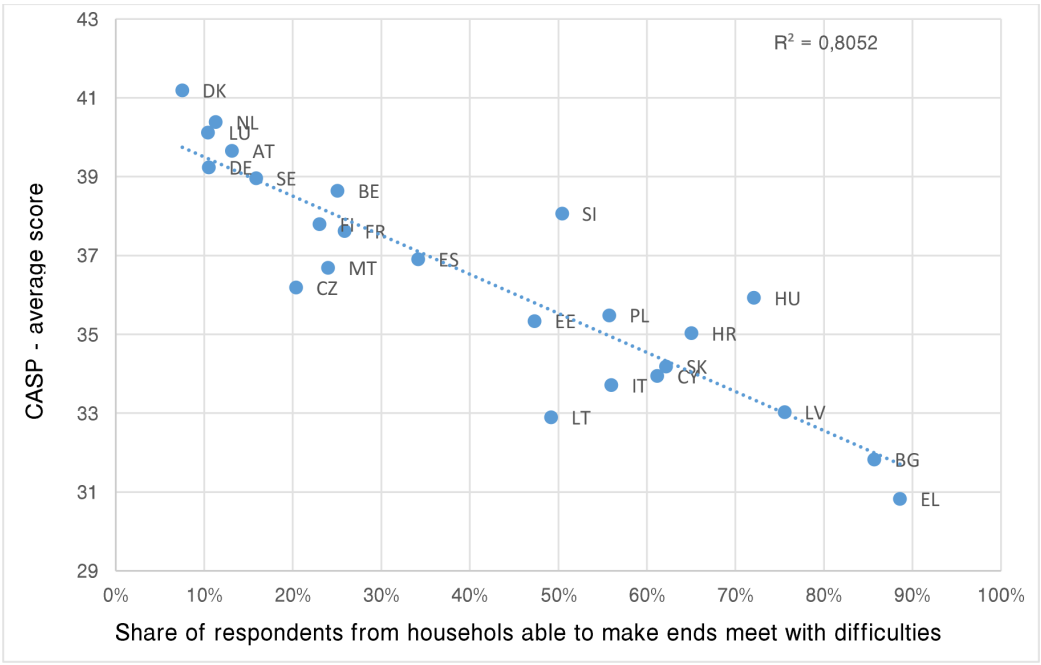
**Figure 2.** Distribution of answers to the question "Thinking of your household's total monthly income, would you say that your household is able to make ends meet?" by country for respondents aged 65+

20%, the CASP is very high (above 39). Where the share of respondents who make ends meet with difficulty is between 20 and 40%, the CASP-12 is high or moderate (Spain, Malta and Czech Republic), but above 36. The biggest variety in CASP-12 values is in countries where the share of elderly with economic difficulties is between 40 and 75%: in Slovenia, Estonia, Poland, Hungary and Croatia the CASP-12 is moderate, compared to Slovakia, Cyprus, Italy and Lithuania where the level of the quality of life is low.

The relationship between SABES and all four domains of CASP-12 is presented in Figure 4. The highest impact is on the Self-realisation domain, although the question "How often do you think that shortage of money stops you from doing the things you want to do?" is included in the Autonomy domain. There is no considerable difference in the relationships regarding the four domains and in the order of the countries.

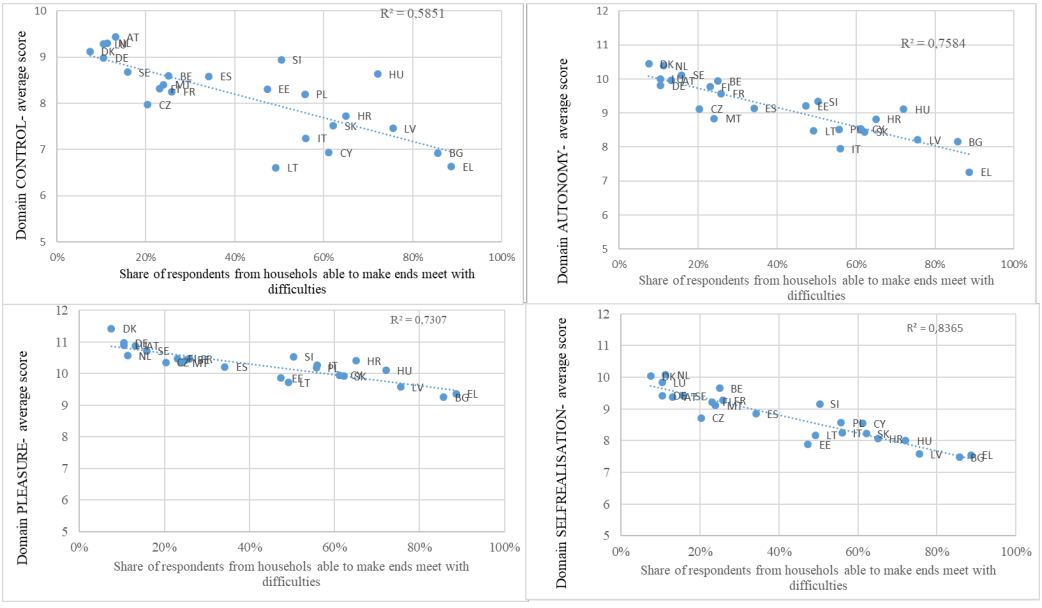
## 3. Quality of life and material status, socio-demographic factors and health factors on an individual level

Using the averages on a country level for exploring correlation type of relationships often tends to overstate the strength of the association (Freedman et al., 1991). Based on the individual data of the sample, linear regression models were calculated to investigate associations between SABES and the quality of life total and for five countries: the Netherlands, France, Italy, Poland and Bulgaria. Three types of models were used.




**Source:** SHARE data, author's estimations

**Figure 3.** Relationship between SABES and the CASP-12 index for respondents aged 65+




**Source:** SHARE data, author's estimations

**Figure 4.** Relationship between SABES and the four domains of the CASP-12 index for respondents aged 65+

The first model is a base model and estimates only the influence of SABES; the second one also includes the socio-demographic factors (gender, living with or without a spouse, education level and age); the third one includes the self-perceived health in addition to the socio-demographic factors. The parameters of those models are shown in Table 3.

The coefficients for the influence of the SABES on the individual CASP-12 score are significantly positive in all three models - total and for each of the five countries. This indicates that the QoL of respondents from households with a better economic status is better than the QoL of respondents from households that make ends meet with difficulty. For the total sample controlled for gender, family status, education level, age and self-perceived health, respondents from households that make ends meet easily have on average a higher CASP-12 index by 7.79 (CI [7.52;8.06]) compared to respondents from households that meet ends with great difficulty. Compared to the base category, the respondents in the category "fairly easily" have on average a higher CASP-12 index by 6.03 (CI [5.7;6.29]). There is a considerable difference between categories "with difficulty" and "with great difficulty": the respondents from the first category have on average a higher CASP-12 index by 3.05 (CI [2.79;3.32]).

The comparison of the coefficients for the five countries included in the analysis is presented in Figure 5. The SABES for the respondents aged 65+ has the highest impact on QoL in Poland, followed by Bulgaria and Italy. The lowest values of the coefficients for all three categories ("easily", "fairly easily" and "with difficulty") compared to the category "with great difficulty" are observed in France. A better household economic status is associated with better QoL for all countries, but the relationship is stronger in countries with moderate or low average CASP scores.

## Conclusions

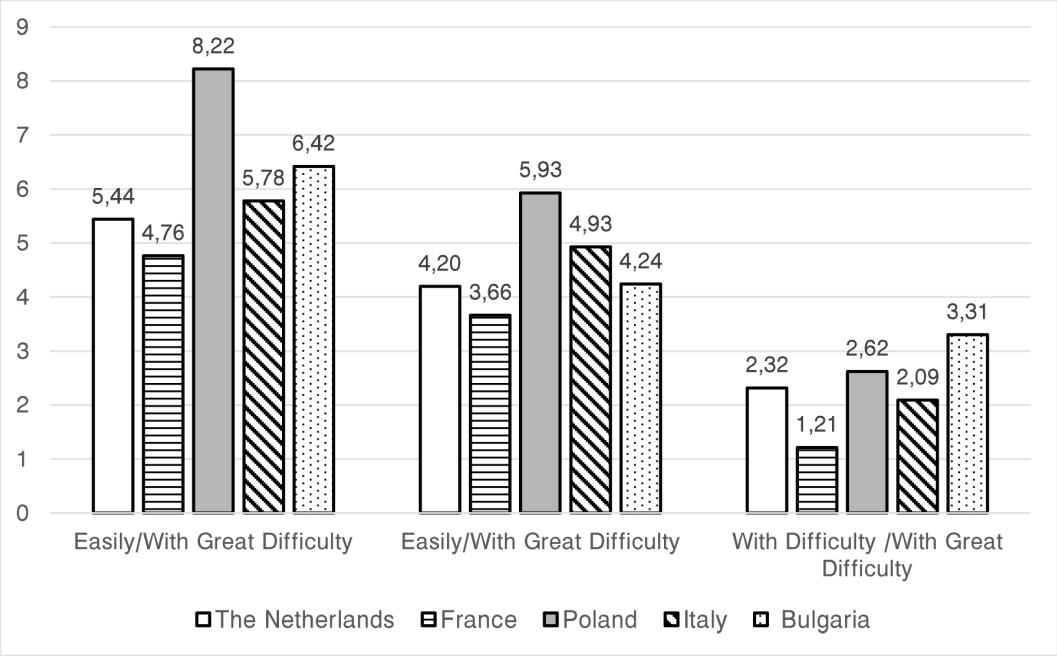
The comparison of QoL of the elderly people (aged 65+) in EU countries measured by CASP-12 on a country level showed that there are considerable differences between the countries. The highest scores are in the Northern countries (Denmark, Sweden) and countries from Western and Central Europe (the Netherlands, Germany, Luxemburg and Austria); the lowest scores are in Southern countries such as Italy, Greece and Bulgaria (Romania was not included in the study) and in Eastern countries (Lithuania and Latvia). This conclusion can be supported by the results of Motel-Klingebiel et al. (2009) based on Wave 1 SHARE data that levels of QoL depend not only on individual factors, but also on the welfare provision of the country in which the person lives. Similar conclusions were made by Conde-Sala et al. (2017) using Wave 5 SHARE data: "lower QoL observed for countries in our Eastern and Mediterranean clusters would reflect the fact that their social welfare regimes are more limited than those of countries in the Nordic and Continental clusters". The results of individual level analysis indicated that the household economic status self-assessed by the capacity to make ends meet affects positively the QoL of elderly people both for the total sample and on a country level; the impact is higher in the countries with relatively low CASP-12 scores. The positive effect of the material status on the QoL is in line with the results of Georgieva et al. (2021) who concluded that the income is the second most important variable for the prediction of QoL. It could be summarised that improving the economic status of households with elderly

**Table 3.** Linear models for CASP-12 and the factors economic status (SABES), socio-demographic variables and health variable – total and by selected country

| | All Countries | | | The Nederlands | | | France | | |
|---|---|---|---|---|---|---|---|---|---|
| | Model I | Model II | Model III | Model I | Model II | Model III | Model I | Model II | Model III |
| Adjusted $R^2$ | ***0.241*** | ***0.292*** | ***0.374*** | ***0.084*** | ***0.112*** | ***0.229*** | ***0.145*** | ***0.208*** | ***0.350*** |
| Intersept | 30.52** | 42.84** | 37.65** | 34.63** | 42.87** | 40.74** | 33.02** | 43.67** | 38.49** |
| Household is able to make ends meet | | | | | | | | | |
| Easily | 9.69** | 8.99** | 7.78** | 6.68** | 6.52** | 5.44** | 6.86** | 6.50** | 4.76** |
| Fairly easily | 7.14** | 6.70** | 6.03** | 5.08** | 4.94** | 4.20** | 4.68** | 4.72** | 3.66** |
| With difficulty | 3.59** | 3.29** | 3.05** | 2.67** | 2.66* | 2.32 | 1.19 | 1.31 | 1.21 |
| With great difficulty (base category) | X | X | X | X | X | X | X | X | X |
| Gender | | | | | | | | | |
| Male | - | 0.22** | 0.10 | - | 0.09 | 0.07 | - | 0.25 | 0.28 |
| Female (base category) | - | X | X | - | X | X | - | X | X |
| Family composition | | | | | | | | | |
| Living with spouse | - | 0.29** | 0.18* | - | .61 | .27 | - | 0.53 | 0.60 |
| Living without spouse (base category) | - | X | X | - | X | X | - | X | X |
| Education level | | | | | | | | | |
| Tertiary | - | 1.39** | 0.89** | - | 0.16 | -0.05 | - | 1.78** | 1.17** |
| Secondary | - | 0.92** | 0.82** | - | 0.45 | 0.38 | - | 0.48 | 0.07 |
| Primary or lower (base category) | | X | X | | X | X | | X | X |
| Age | - | -0.17** | -0.12** | - | -0.12** | -0.10** | - | -0.15** | -0.11** |
| Self-perceived health | | | | | | | | | |
| Excellent or very good | - | - | 4.94** | - | - | 4.59** | - | - | 6.10** |
| Good | - | - | 3.20** | - | - | 2.65** | - | - | 4.35** |
| Fair or poor (base category) | - | - | X | - | - | X | - | - | X |

| | Poland | | | Italy | | | Bulgaria | | |
|---|---|---|---|---|---|---|---|---|---|
| | Model I | Model II | Model III | Model I | Model II | Model III | Model I | Model II | Model III |
| Adjusted $R^2$ | ***0.215*** | ***0.274*** | ***0.347*** | ***0.143*** | ***0.217*** | ***0.266*** | ***0.174*** | ***0.252*** | ***0.355*** |
| Intersept | 30.26** | 42.40** | 37.56** | 30.23** | 44.80** | 40.07** | 28.59** | 38.71** | 35.523** |
| Household is able to make ends meet | | | | | | | | | |
| Easily | 10.54** | 9.75** | 8.22** | 6.75** | 6.34** | 5.78** | 8.67** | 7.87** | 6.42** |
| Fairly easily | 7.66** | 6.95** | 5.93** | 5.80** | 5.50** | 4.93** | 6.01** | 5.20** | 4.24** |
| With difficulty | 3.63** | 3.26** | 2.62** | 2.21** | 2.08** | 2.09** | 4.72** | 3.97** | 3.31** |
| With great difficulty (base category) | X | X | X | X | X | X | X | X | X |
| Gender | | | | | | | | | |
| Male | - | -0.55 | -0.50 | - | 1.21** | 1.00** | - | -0.35 | -0.64 |
| Female (base category) | - | X | X | - | X | X | - | X | X |
| Family composition | | | | | | | | | |
| Living with spouse | - | 0.82 | 0.97* | - | 0.96* | 0.88* | - | 1.69** | 1.54** |
| Living without spouse (base category) | - | X | X | - | X | X | - | X | X |
| Education level | | | | | | | | | |
| Tertiary | - | 1.06 | 0.61 | - | 0.37 | 0.12 | - | 1.97* | 1.25 |
| Secondary | - | 1.09* | 0.97* | - | 0.52 | 0.45 | - | 2.15** | 1.46* |
| Primary or lower (base category) | | X | X | | X | 0 | | X | X |
| Age | - | -0.17** | -0.12** | - | -0.21** | -0.16** | - | -0.15** | -0.13** |
| Self-perceived health | | | | | | | | | |
| Excellent or very good | - | - | 3.67** | - | - | 3.78** | - | - | 4.90** |
| Good | - | - | 3.80** | - | - | 2.65** | - | - | 4.15** |
| Fair or poor (base category) | - | - | X | - | - | X | - | - | X |

* p<0.10 ** p<0.05




**Source:** SHARE data, author's estimations,

**Figure 5.** Regression coefficients for the impact of "Household is able to make ends meet" on CASP-12 for respondents aged 65+

people through fair and sustainable pension incomes and appropriate social benefits would guarantee better quality of life for the older people.

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