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Health status of older people. Evidence from Europe

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Abstract

The objective of this article is to show the health status of the older population throughout European countries and indicate the data needs for a comprehensive comparative analysis of health status and its risk factors. The article briefly discusses definitions of health status in older age and presents adequate health status indicators. It discusses life expectancy, healthy life expectancy, disability adjusted life expectancy, the main causes of death as well as the prevalence of long-term illnesses, multimorbidity and functional health limitations across European countries, pointing out regional differences of the health status of older people. Next, several behavioural risks of poor health occurring in older age are shown: smoking, alcohol overuse and falls. The article concludes by demonstrating the need for more detailed, comparative and standardized data on the health status of older people across European countries, presenting sex and age-specific morbidity and health limitations as well as health risks.

Key words: **health status, older people, aging, chronic diseases, multimorbidity, long-standing illness, risk factors, functional limitations, quality of life**

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Introduction

The last few decades have brought serious age-related demographic changes associated with the longevity revolution. A large and rapid increase in life expectancy has been accompanied by a substitution of deaths caused by degenerative causes such as circulatory system diseases and cancers [1] for those previously caused by infectious and parasitic diseases. According to epidemiological transition theory, the process of modernization during the twentieth century improved the social, economic and health conditions via better sanitary conditions, improved medical technology and health education supporting a healthy life style, and in consequence reduced the risk of death from infectious diseases. The prevalence of degenerative diseases increases with age and, for this reason, redistribution of deaths from these causes characterises older age. Special attention has been paid to a fourth

stage of epidemiological transition (following the explanation given by Olshansky and Ault) [2] concentrated on the delay in degenerative diseases occurring in older age. Relatively rapid improvement in survival across the course of life and higher life expectancy are concentrated in the population at advanced ages [1].

Health status definition in older age is complex and characterised by various features of a biological nature related to physiological changes often coinciding with poor mental well-being, poor functioning and dependency, as well as features of a social character related to the erosion of social networks and changes in social participation [3]. The core elements of changes in health status are related to physiological changes and the high risk of the occurrence of often coinciding chronic conditions (which is referred to as multimorbidity), frailty, sarcopenia due to bone mass loss in the skeleton, a loss of muscle strength, the frequent occurrence of functional limitations and in many cases, resulting from chronic conditions, disability. The research on ageing and health status underlines, as Settersten and Angel [4] point out, that "the degree of variability among older people is not only great but is often greater than that existing in other age groups" and might be dependent not only on the current situation, but is a result of the cumulative advantages and disadvantages over the course of one's course.

The health status of older people depends on many factors like gender, socio-economic position and health-related quality of life [5]. Numerous theoretical concepts of healthy or successful ageing have been developed, stemming from the biomedical model of Rowe and Kahn who defined successful ageing in terms of longevity, mental and physical health and functioning, sometimes supported by social engagement [6, 7]. This concept of health in older age consisted of three main components: the low probability of disease and disease-related disability; a high cognitive and physical functional capacity; an active engagement with life [7]. Further studies have added dimensions of life that might be of importance for health status and a high quality of life in older age, including, alongside health, the prevalence of illnesses, functioning and cognitive capacities, psychological and social environment such as social resources (networking, support participation) [8, 9], psychological resources (self-efficacy, optimism, meaning of life, a sense of purpose) [8–10], activity [8, 11], etc. Typically multidimentional, these definitions have been difficult to act on, with no consensus on a common approach with respect to their content.

Given the complexity of approaches and changes in the biological capabilities and environment of older people, even the biomedical assessment of health status of older populations is based on a variety of measures, including, along with the typical mortality based indicators, indicators that take into account the coexistence of various chronic conditions, as well as the possible impact of these conditions and functioning on older people. The latter is especially important as studies have shown that comprehensive functional assessment is a better predictor of survival than the presence of specific diseases or even comorbidities [3].

This article presents the main features of health status in older age and the main health status indicators for the older population across European countries, as well as briefly discussing risk factors that might be of importance for ageing in good health and a high quality of life. Following the overview of the main features of health status in older age, the article discusses the limitations of the available comparative data and conclude with policy recommendations concerning the data needs. The health status of older Europeans is described using international datasets that provide standardised and comparative statistical information: Eurostat (including EU SILC), WHO Health of All Database, Eurobarometer data and some data from individual – thematic – research conducted across European countries.

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1. Measurement of the health status of older people – main indicators

Measures of health status are objective and subjective. The first are based on the three main epidemiological indicators: incidence, morbidity (prevalence) and mortality. The practical use of any of them depends on the nature of a disease and the availability of the data.

Mortality is the most often used indicator because diseases which end with death are more serious than others and because most of the deaths in developed countries are described in death certificates, coded and available in the statistical systems. For an acute disease the best measure to use is incidence, while morbidity would be difficult to assess and mortality is applicable only with diseases ending with death.

Morbidity data, quite desirable from the point of view of a health status snapshot and health planning, has limited availability in the statistical systems of Europe. While access to morbidity statistical information is limited, this data is very important to assess the existence of diseases with high prevalence which do not end in death, and are therefore absent in mortality records. For the latter, the data comes mostly from sample surveys, which feature limited participation of a randomly selected part of population and have lower credibility than data gathered from medical diagnoses.

While the definition of health status for older people has been evolving, including more dimensions, health measurement has also begun to cover such aspects and describe them from the prevalence point of view. Traditional mortality (and calculated from it, life expectancy – LE) is informed by aspects of the prevalence of chronic conditions, disability (Disability Adjusted Life Years – DALY) and finally, quality of life (i.e. Health Adjusted Life Expectancy – HALE), which adds subjective aspects of health.

Subjective health measurements include perceived health and quite a lot of indicators associated with the

concept of quality of life. Subjective indicators are used in terms of psychosocial and spiritual health, which is obviously the only way to gather the perspective of the examined person, but more and more often, they also replace objective health indicators (morbidity, etc.). Those last cases bring a social and cultural impact to the understanding of health, but also an uncertainty to the measurement and sometimes discord with data from objective sources. Examples of this could be data from surveys on chronic conditions versus hospital morbidity or the calculation of health adjusted life expectancy (HALE) where the self-assessment of a chronic condition, activity limitation and perceived health are included. The self-assessed measures of functional limitations, frailty and comorbidities are important for the quality of life and activity potential related to it, though being subjective survey measures, they might not always be comparable.

Changes in health indicator concepts clearly show that the purpose of public health and health care policies is not just extending life but extending healthy life expectancy and life with good quality (**Figure 1**).

2. Health status of older Europeans

Health status indicators of older persons are presented for all EU countries whenever data for these countries is available. At the same time differences between four groups of European countries: Northern, Western, Southern and Central/Eastern are shown following the concept of Raphael [12], underlining that different welfare regimes (liberal, conservative, socio-democratic) have varying public health policy measures that enable reaching health goals and have therefore observed variations in health outcomes.

2.1. Mortality (age standardized)

The mortality of older men and women strongly differs between countries. In 2013 male mortality over 65 from all causes was much higher in Central and Eastern European countries than in other countries. In men the highest mortality was observed in Latvia and Bulgaria (over 7,000/100,000) and in women, Bulgaria and Romania (over 4,700/100,000). The lowest mortality values were in men in Luxembourg, France and Spain (less than 3,900/100,000) and in women in France and Spain (less than 2,400/100,000) (**Figure 2**).

The main reason for deaths in the population 65+ were cardiovascular system diseases (CVD) and the differences between the regions in Europe for this indicator were similar to those described for the total mortality. Similarly, the highest CVD mortality rate was in Bulgaria and Romania (in men over 4,200/100,000; in women over 3,400/100,000) and the lowest in France and Spain (less than 1,100/100,000 and less than 800/100,000 accordingly) (**Figure 3**).

The second main reason for death, after cardiovascular diseases, was occurrence of malignant neoplasms. The cancer mortality gap between Central and the rest of Europe was lower than that observed for cardiovascular system diseases. However, it still existed. The highest values for men were in Latvia, Estonia and Croatia (over 1,700/100,000) and the lowest were in Sweden and Finland (1,100/100,000 and lower). However for women the highest cancer mortality was observed in Denmark, Hungary and Ireland (over 850/100,000) and the lowest in Spain, Portugal and Bulgaria (less than 570/100,000) (**Figure 4**).

Diseases of the respiratory system were the third most pronounced cause of death for the population over 65 (**Figure 5**). Indicators of mortality from respiratory system diseases in men were the highest in the United Kingdom (650/100,000) Portugal (640/100,000) and Ireland (630/100,000) and the lowest in Finland, Latvia, Austria and Bulgaria (less than 300/100,000). In women mortality from respiratory system diseases were lower by 20–80% compared to men, with a similar cross-country pattern (the highest indicator was in the UK, Ireland,

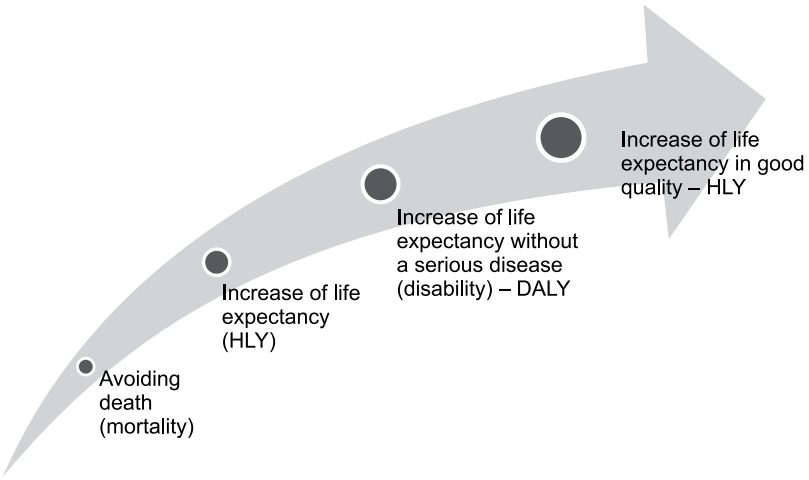

Figure 1. *The changing concepts of health indicators.*
Source: Own elaboration.

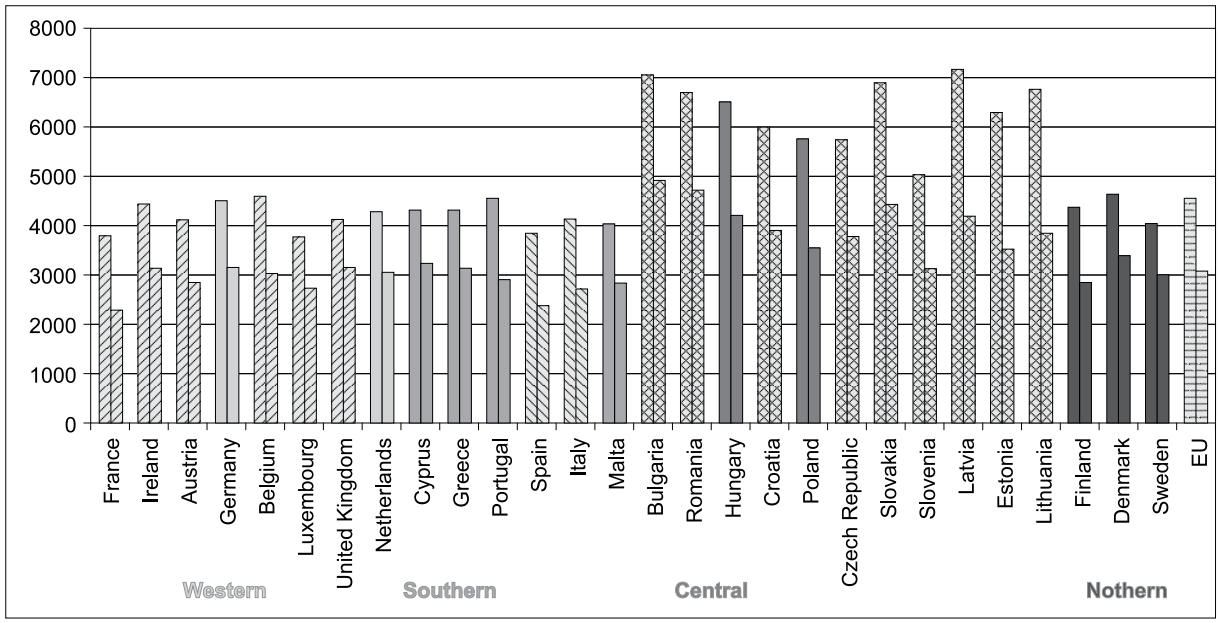

Figure 2. *Total mortality in EU countries at age 65+ in 2013 (first column – men, second column – women).*
Source: Own elaboration based on WHO Health for All database[1].

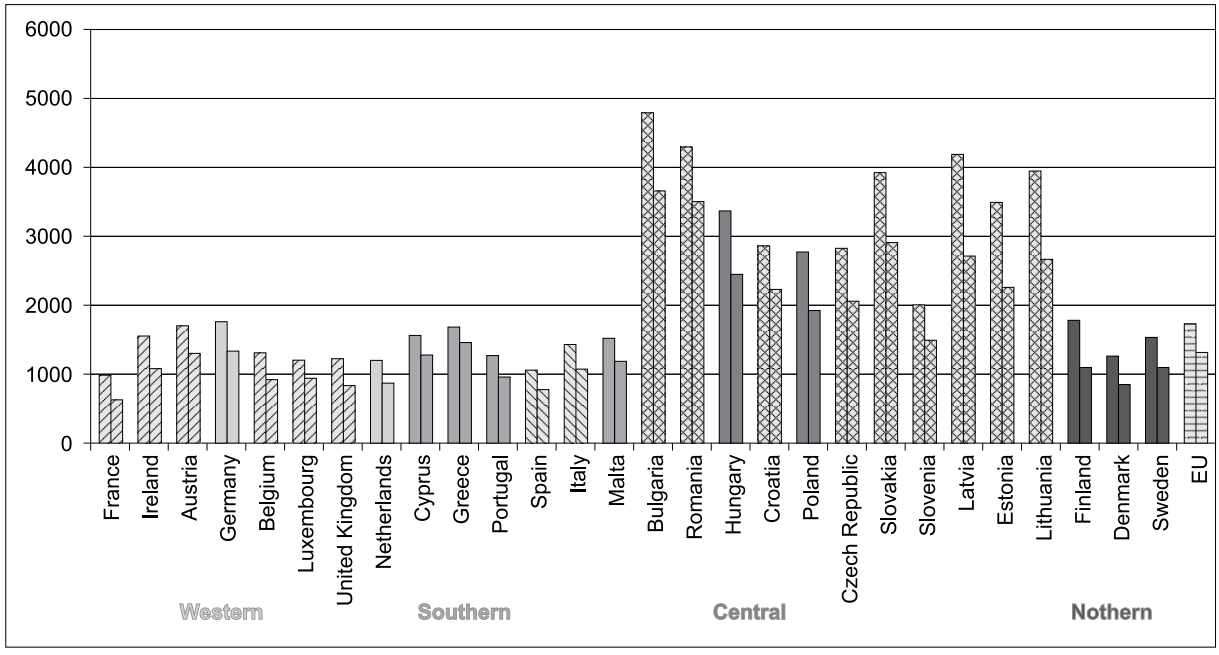

Figure 3. *CVD mortality in the EU countries at age 65+ in 2013 (first column – men, second column – women).*
Source: Own elaboration based on WHO Health for All database.

Denmark (more than 400/100,000) and the lowest in Latvia, Lithuania and Finland (less than 100/100,000) (Figure 5). This variation may suggest coding patterns rather than a health care system or disease prevalence explanation of the level of indicator.

2.2. Life expectancy

Life expectancy (LE) is the most widely used indicator of health, indicating the number of years that a new-born might live if mortality does not change during his/her life. Being a basic objective health status indicator, it allows for a comparison of annual changes of indication at the regional/country level as well as between countries or regions.

In 2013 the highest LE at birth in men in EU countries is observed in Italy, Spain and Sweden (79.4–79.5 years) and the lowest in Central and Eastern Europe, especially in the former Soviet Union (Lithuania and Latvia – 67–68.7 years). In women the LE is higher; the highest in Spain and France (84.9–85.3 years) and the lowest in

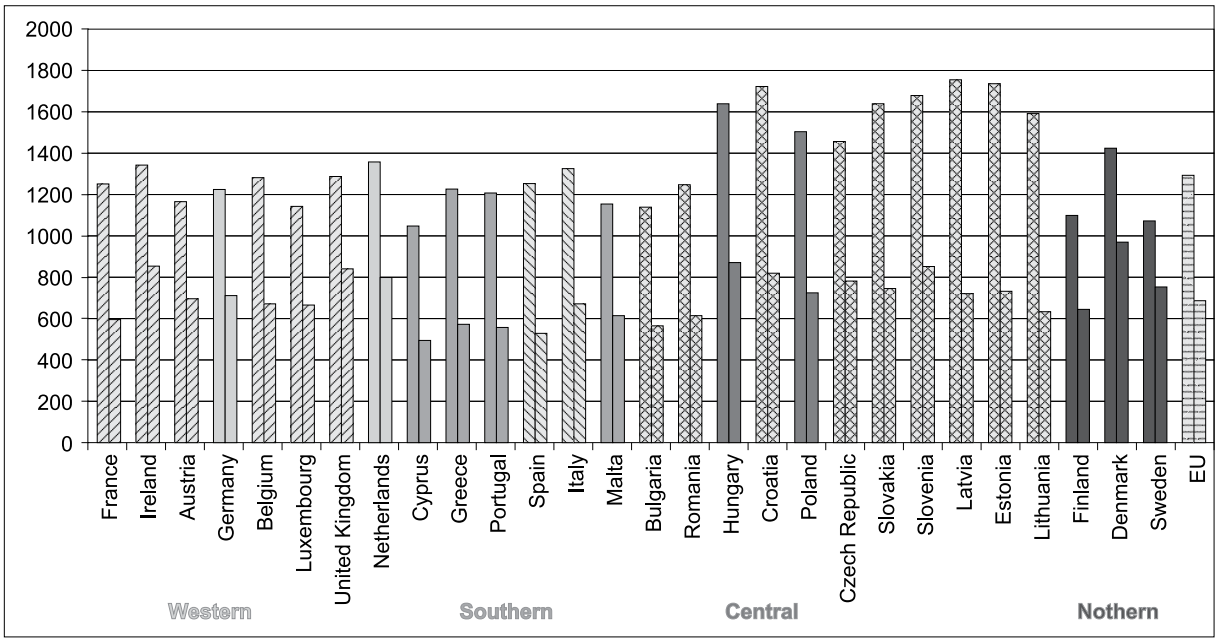

Figure 4. *Cancer mortality in the EU countries at age 65+ in 2013 (first column – men, second column – women).*
Source: Own elaboration based on WHO Health for All database.

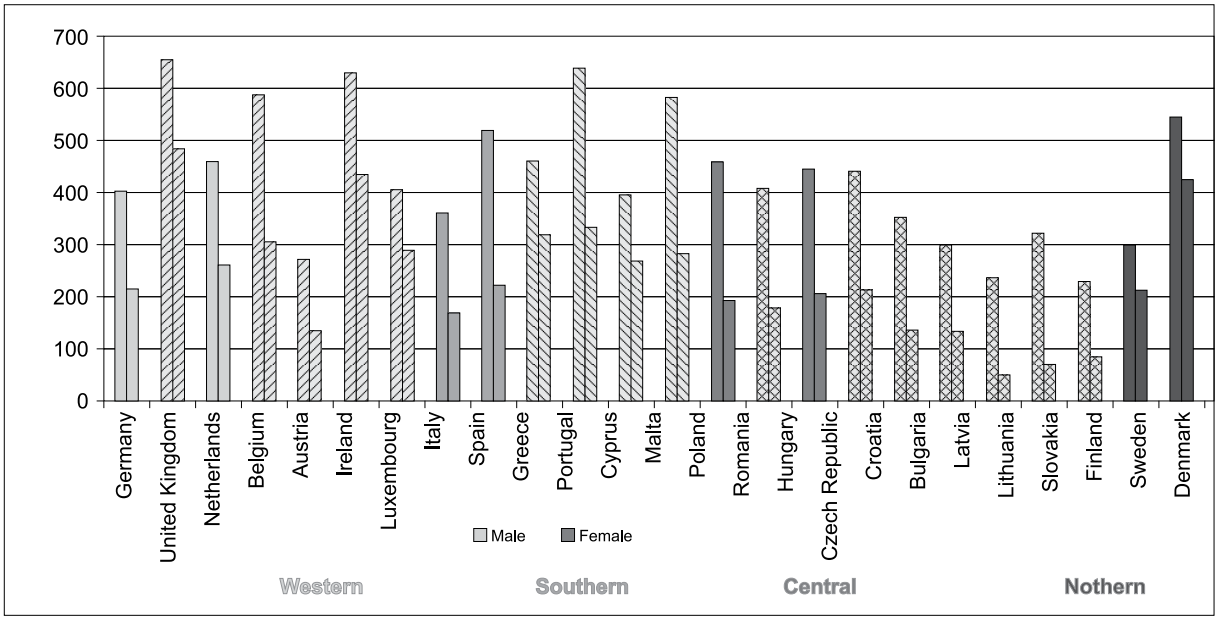

Figure 5. *Mortality from respiratory diseases in the EU countries at age 65+ in 2012/2013 (first column – men, second column – women).*
Source: Own elaboration based on WHO Health for All database.

Bulgaria and Latvia (78.1–78.3 years). LE is typically higher for women and in countries with low LE the gender gap is larger (in Lithuania 11 years, in Latvia 9.6) than in Western countries and the EU average of about 3.5 years (**Figure 6**).

Differences between Western and Eastern EU countries persist when looking at LE at 65 years of age (**Figure 7**). France, Spain, Luxemburg and Italy are the countries with the top LE for both men and women, with men at 65 years having an expected longevity of 19 years and women at the same age of 22 years. The smallest life expectancy is in Latvia, Lithuania and Bulgaria in men (14 years) and Bulgaria, Romania and Hungary in women (16.2–16.8 years). The differences between men and women ranges from 5.1 (Baltics) to less than 2.5 (Sweden and UK) (Figure 3). One can observe almost the same country ranking when looking at older people and calculating life expectancy for 84 years of age. It is over 8.0 years in women and only a lit-

tle lower in men (> 7.1; in this group Italy was replaced by Greece). The shortest LE at age of 84 is in Bulgaria, Croatia, Slovakia and Romania (men about 5.5 years, women 0.5–0.9 years longer). In total the differences between women and men are from 1.9 years (France) to 0.3 (Germany) in favour of women.

Generally, it is observed that life expectancy is higher in wealthier, more developed countries (Western, Northern and Southern Europe), while the post-communist countries of Central and Eastern Europe which have been undertaking political and economic system transition over the last few decades and are – relative to the

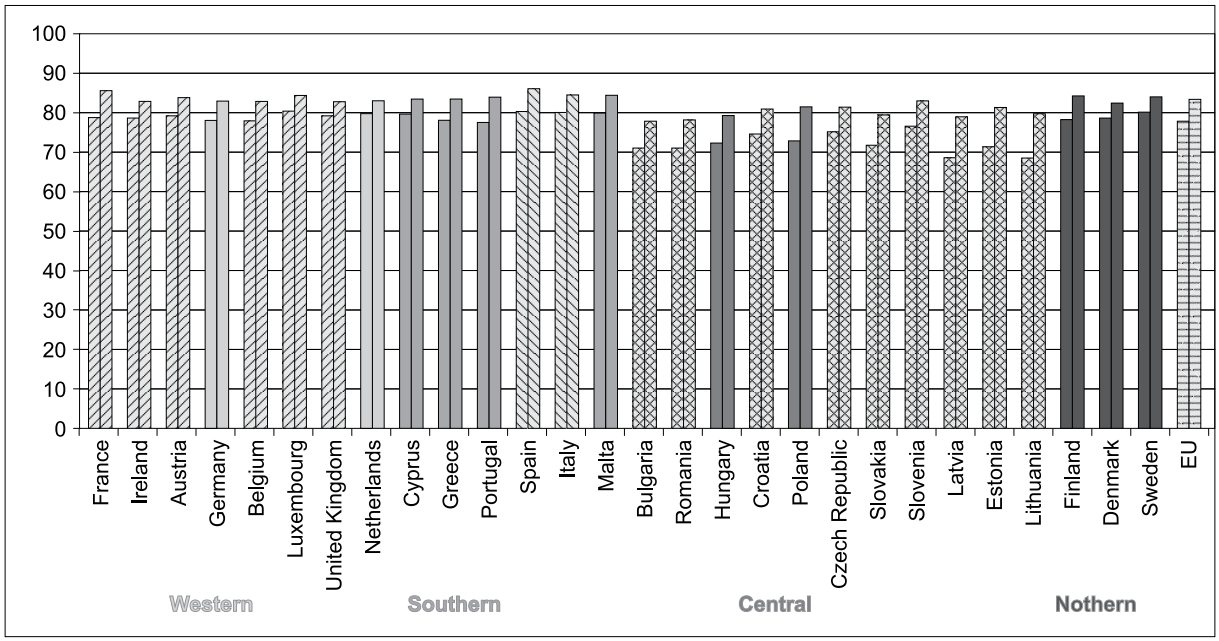

Figure 6. *Life expectancy in the EU countries in 2013 (first column – men, second column – women).*
Source: Own elaboration based on Eurostat database.

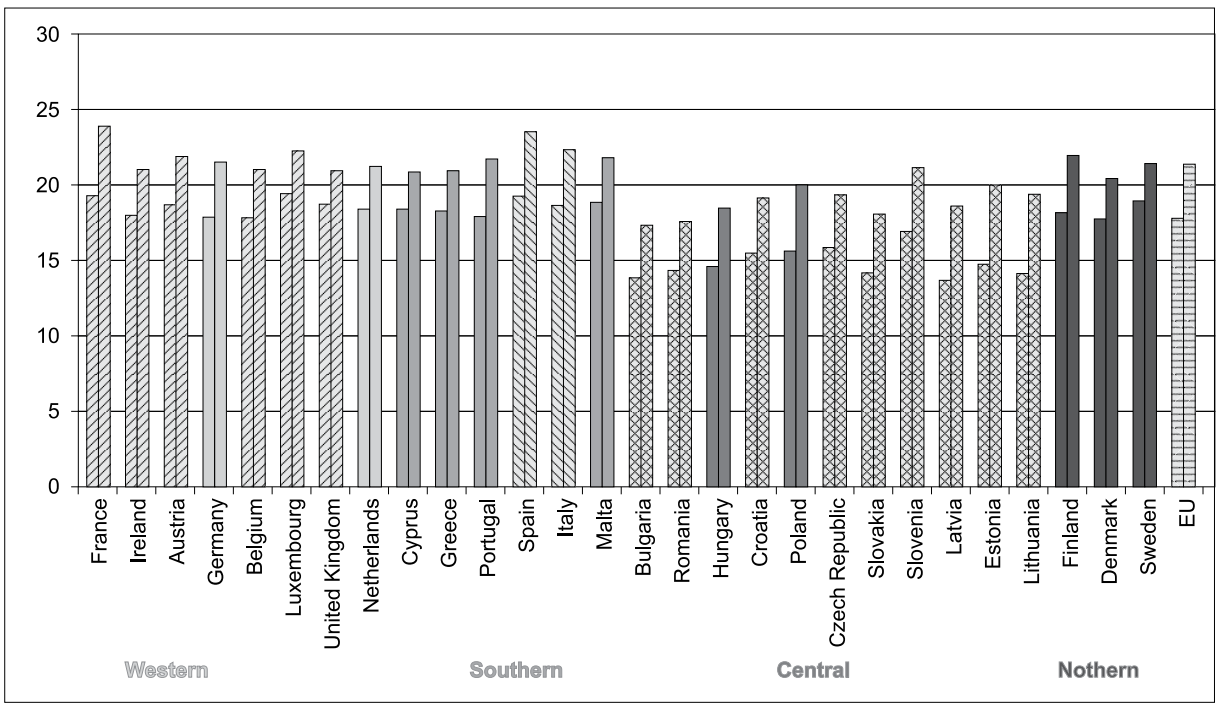

Figure 7. *Life expectancy in EU countries at age of 65 in 2013 (first column – men, second column – women).*
Source: Own elaboration based on Eurostat database.

average EU income – poorer, although enacting health improvements, are still lagging behind.

2.3. Healthy life years

The Healthy Life Years (HLY) indicator (also called disability-free life expectancy) measures the number of remaining years that a person of a certain age is still expected to live without disability, even if he/she is experiencing chronic conditions. It incorporates life expectancy and the prevalence of diseases (which might cause disability), as well as the quality of health care preventing the earlier onset of disability. The highest length of life free from disability is observed for men living in Malta and Sweden (71.6 and 66.9 years respectively) and women in Malta and Ireland (72.7 and 68.0 years respectively). The shortest HLY is observed in Latvia and Estonia in men (51.7 and 53.9 years) and Latvia, Slovakia and Germany in women (54.2; 54.3; 57.0). As the 3rd highest HLY for women is in Bulgaria (with almost the lowest life expectancy in EU) and the 3rd lowest is in Germany, followed by the Netherlands or Denmark one may have doubts about the precision of the methodology or the data. Most of the information of disabilities in HLY is based on questionnaire data, so cultural and awareness issues may influence the quality of the data (due to the subjective factor of the indicator) (**Figure 8**).

HLY for 65 years of age shows large differences between countries. It is estimated to last from only 4 years in Latvia and Slovakia to about 13 years in Sweden, Malta and Denmark (**Figure 9**).

2.4. Prevalence of chronic diseases and multimorbidity

The health of older people is characterised by suffering from diseases, many of which are chronic. These conditions often do not exist as a single health problem but rather co-exist and the occurrence of two, three or more chronic conditions simultaneously is referred to as multimorbidity [13]. In European countries it is assessed that the prevalence of multiple illnesses among older people exceeds 50%, 60% or even 80% depending on age [13, 14] and thus, multimorbidity becomes a typical situation in the older population rather than an exception [15], constituting a great burden on health care systems and a public health challenge. Multimorbidity and the occurrence of chronic conditions in older age are among conditions which constrain healthy, successful and active ageing. The most common chronic conditions are cardiovascular system diseases (hypertension and ischemic heart disease), pulmonary diseases, diabetes, osteoporosis and arthritis, vision and hearing impairments and cognitive disorders [16].

According to Onder et al. [17], 65% of the population 65+ suffers from chronic conditions and for the population 85+ this share rises to 85%. Eurostat data confirms that suffering from long-standing illnesses increases with age, accounting for the average preva-

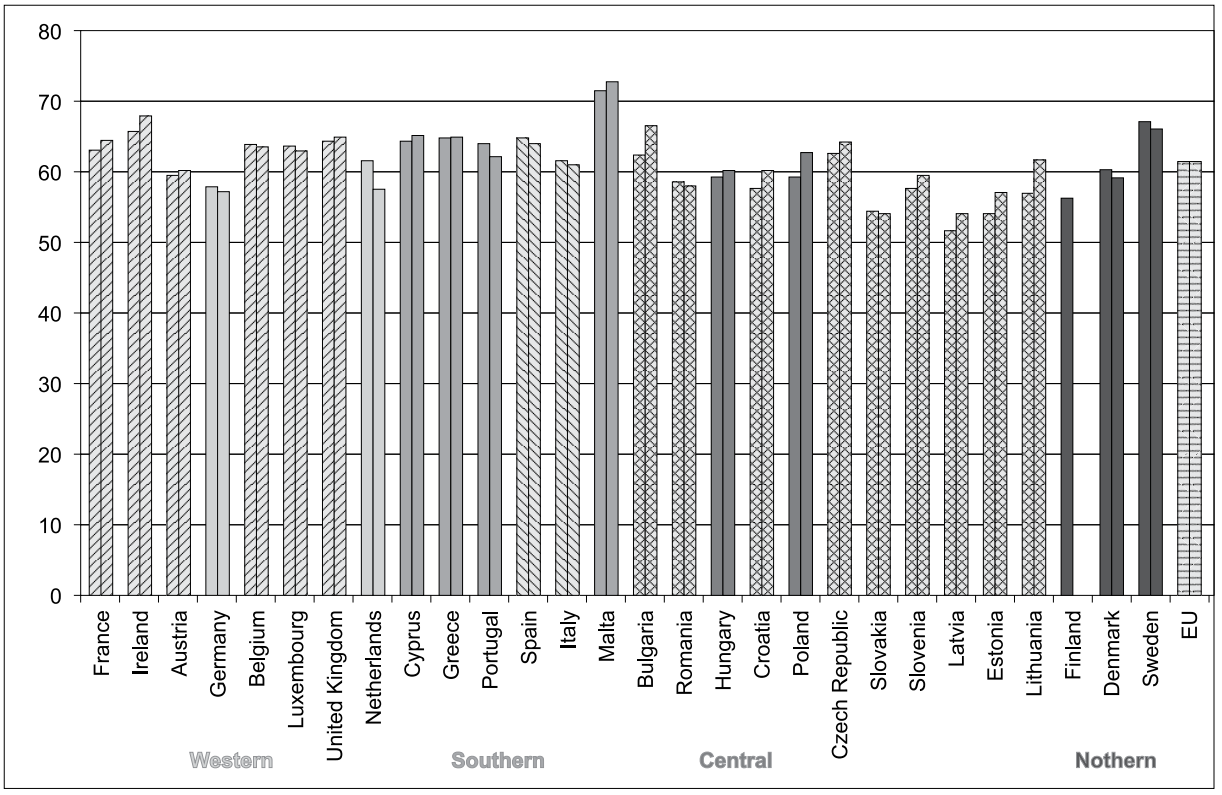

Figure 8. *Healthy life years in the EU countries in 2013 (first column – men, second column – women).*
Source: Own elaboration based on WHO Health for All database.

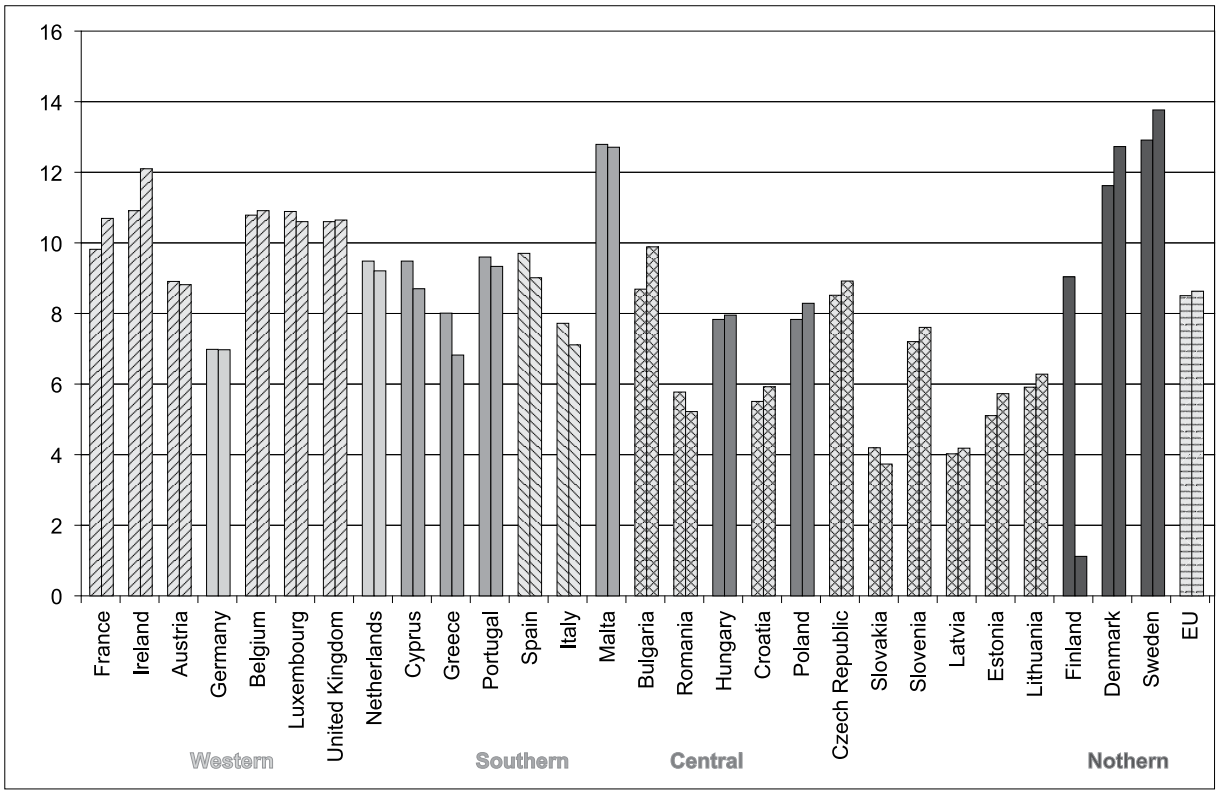

Figure 9. *Healthy life years in the EU countries at age of 65 in 2013 (first column – men, second column – women). Source: Own elaboration based on WHO database.*

lence of chronic conditions of about 54% for people in their 60s, increasing to 64% for men and 68% for women in their 70s and reaching 71% for men and 74% for women over 85 years of age (**Figures 10** and **11**). In some countries the prevalence of chronic illnesses exceeds 80% above the age of 85. The frequency of developing long-standing illness strongly varies between European countries. The occurrence of chronic conditions in older age is more frequent in Central and Eastern European countries (Estonia, Hungary, Latvia, Slovakia), followed by countries of Central and Western Europe (France, Germany, the United Kingdom). People living in Scandinavian countries (Denmark, Sweden) and some countries of Western Europe (Belgium, the Netherlands) declare long-standing illnesses least frequently, which could be related to various factors, including health care system performance and provision of care or technical aids, but it also might be related to the fact that individuals with a more severe health status are more frequently in full time care facilities and are not covered by survey research.

Similar country differences and age patterns of the increasing prevalence of long-standing illnesses are observed for men and women. However, in most of the countries women typically suffer from chronic conditions more frequently.

Poor health status and loss in capabilities in older age might be related to cognitive decline and dementia. Cognitive decline is first detectible in as early as the fifth decade of life. It is then observed to inevitably increase with age, though its prevalence depends on a combination of individual and social factors: from individual biological differences to education, learning, employment, income, wealth and social environment. Only a minority of older individuals develop dementia, which is a group of symptoms affecting memory, cognitive functions, social abilities and a lowered level of independently performed daily activities. The main type of dementia is Alzheimer's disease.

There is no routine data on dementia collected throughout Europe. Some of the data collected from country studies on diagnosed dementia (which includes only part of the real prevalence) are presented below (**Figure 12**) and show a lower prevalence in Central Europe than in the rest of Europe. However, the lowest percentages were in Ireland (1.08%) and Cyprus (1.07%). The highest prevalence was observed in Italy (2.09%) and in Germany (1.92%). Similar findings on the prevalence of dementia have been reported in the SHARE study results, showing that in Western European countries approximately 2% of people aged 65–70 and 25–30% of those aged 85+ develop dementia [18]. Dementia records however are difficult to compare and interpret as differences in health systems and practices in diagnosis of dementia as well as the average age of the countries' populations should be accounted for.

Another illness of a mental character related to the high prevalence of chronic illnesses and disability among

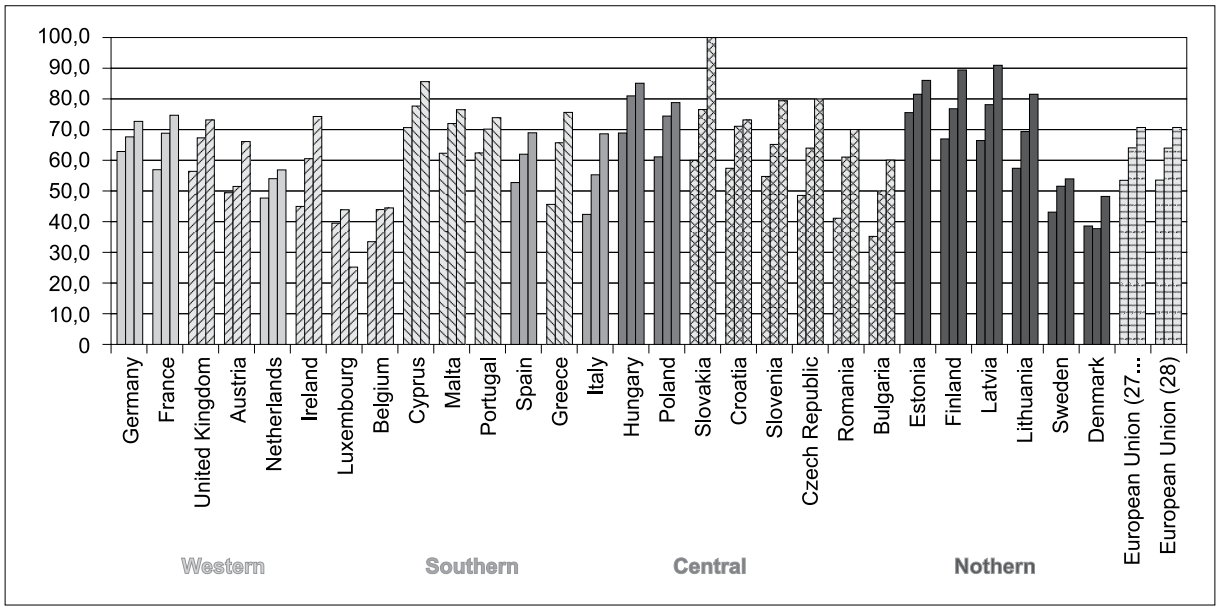

Figure 10. *Men with long-standing illness, EU countries 2013 (columns sorted by age group: first 65–74, second 75–84, third 85+). Source: Own elaboration based on Eurostat: EU-SILC data, hlth_silc_04.*

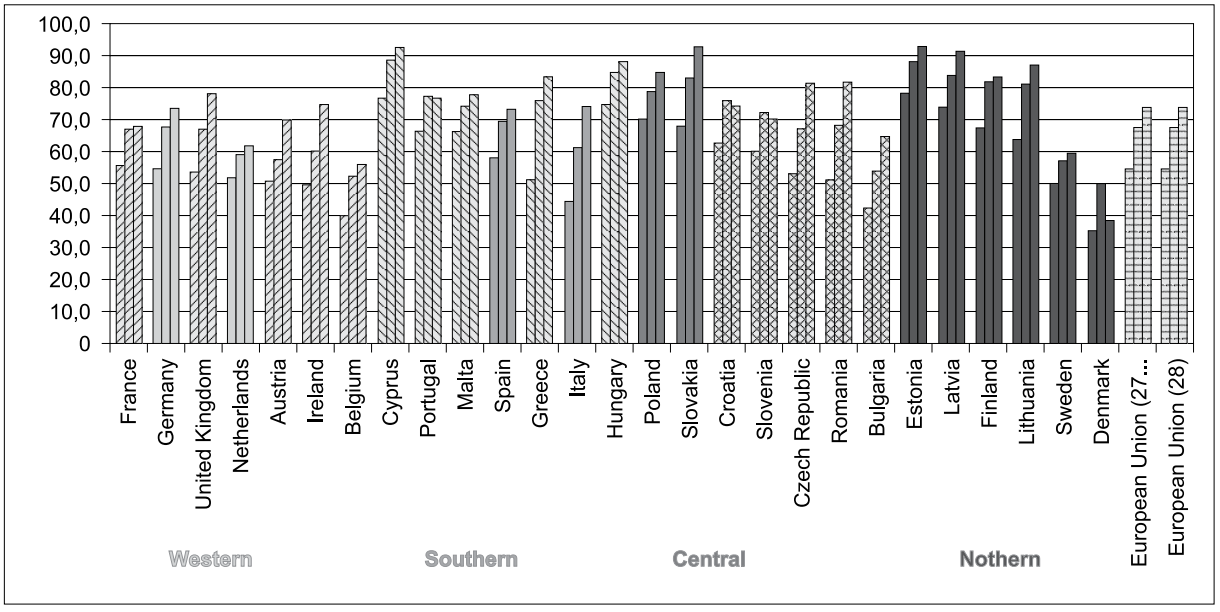

Figure 11. *Women with long-standing illness, EU countries 2013 (columns sorted by age group: first 65–74, second 75–84, third 85+). Source: Own elaboration based on Eurostat: EU-SILC data, hlth_silc_04.*

older Europeans is depression. It occurs particularly in women who more frequently suffer from disabilities and functional limitations in older age [19], which has an impact on individual well-being and the likelihood of poor mental health. In Western European countries depression is found to increase with age [20, 21], but the relationship is found to be driven by health status and functional capacities as well as social factors, including loneliness related to the loss of a partner [21].

2.5. Functional capacity

Long-standing illnesses and multimorbidity are perceived as the main contributors to an increased risk of death, developing functional limitations, disability and long-term dependency, though the their actual impact depends on the specific sequence of morbidities and their coexistence [15, 17]. Cognitive impairments (i.e. dementia), diabetes and Parkinson's disease are of special im-

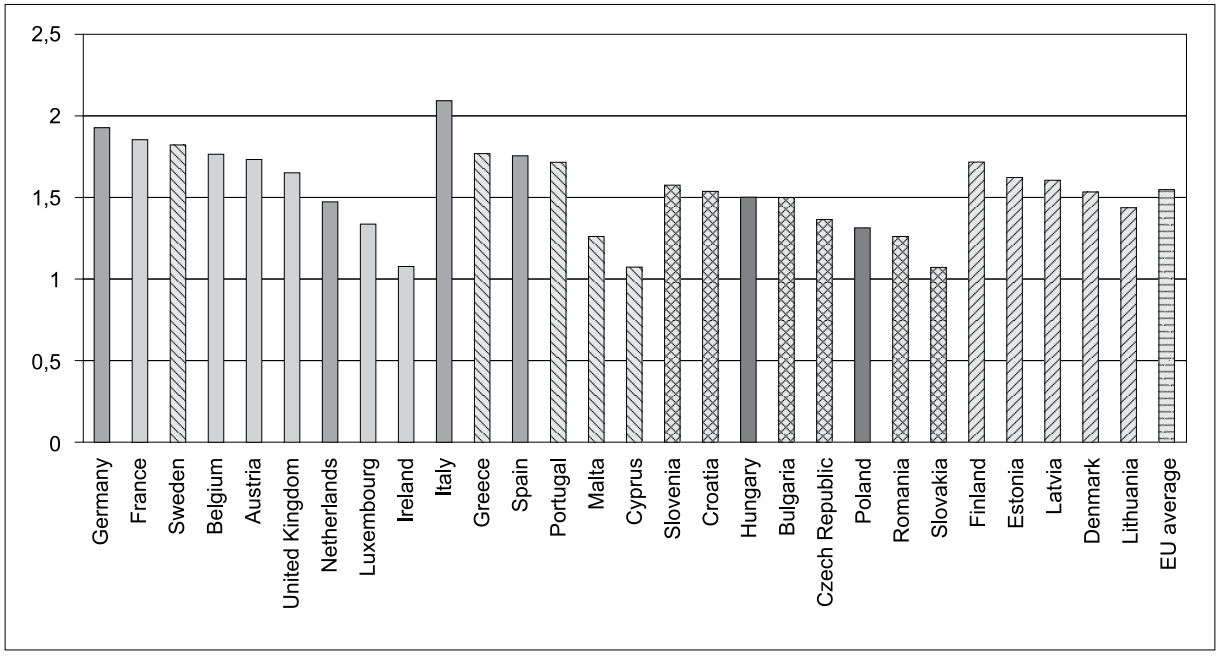

Figure 12. *The prevalence of dementia in the EU, 2013.*

Source: Own elaboration based on http://www.alzheimer-europe.org/Policy-in-Practice2/Country-comparisons/The-prevalence-of--dementia-in-Europe; accessed: 24.07.2015.

portance, increasing the risk of functional limitations [15, 17]. The gradual decrease in functional abilities is a result of illnesses, but also of frailty occurring in older age, the increased risk of falls and mortality [16].

Again, self-perceived functional limitations increase with age and differ between men and women with a higher level of limitations among women. About 42% of older men, aged 65–64, in EU countries suffer from some sort of limitations in usual activity due to health problems. For the male cohort 75–84 the prevalence of limitations increases to about 58% and for the oldest men (85+) it rises to 70% (**Figure 13**). There are great variations in the occurrence of functional limitations across European countries, similar to the pattern observed for long-standing illnesses with more frequent functional limitations in Eastern European Baltic countries (Latvia, Estonia) and Southern European countries (Croatia, Romania), followed by the countries of Central Europe (Germany, Poland, the Netherlands, Austria, France) and Northern European countries (Denmark, Sweden). There are some countries in which the prevalence of functional limitations very strongly increases with age: it is low-moderate for the population aged 65–74 and very high for the oldest. Among these countries are Belgium, Bulgaria, Malta, but also the Czech Republic, Austria and France.

The prevalence of functional limitations among women is higher and increases with age more steeply than for men, amounting to 47% for women aged 65–74, 65% for women aged 75–84 and 79% for women 85+ (**Figure 14**).

2.6. Burden of disease

Combining both life lost due to earlier mortality (YLL, years life lost) and years of life with disability (YLD) results in DALY (disability adjusted life years), as developed by Murray and Lopez from 1996 [22] and called burden of disease. The last data come from 2012 and are presented by age standardised DALY per 100,000 [18]. This indicator allows for comparison of countries by health, diminishing however the role of different age structures. In the EU the highest age standardized DALY per 100,000 inhabitants was in Lithuania, Latvia and Bulgaria (28.77–30.22) followed by other Eastern and Central European countries. The lowest burden of disease was observed in Southern European countries (Cyprus, Italy and Spain) 15.79–16.98 DALY/100,000. Most of the burden comes from non-communicable diseases (78–85% of DALY). However, in some EU countries loss from injuries accounts for 13–14% of total DALY (Finland, Slovenia, Poland, Lithuania) (**Figure 15**).

2.7. Quality of life and well-being

There are a number of objective and subjective methods to evaluate the health status of older Europeans, whilst assessment of the complex phenomenon of the quality of life in older age and healthy/successful ageing or well-being is a difficult task. There is no common operationalisation of healthy/successful ageing, though the discussion on how to measure it has been launched. Additionally, in a lot of research well-being, quality of life and happiness are used synonymously [23]. Various tools have been used

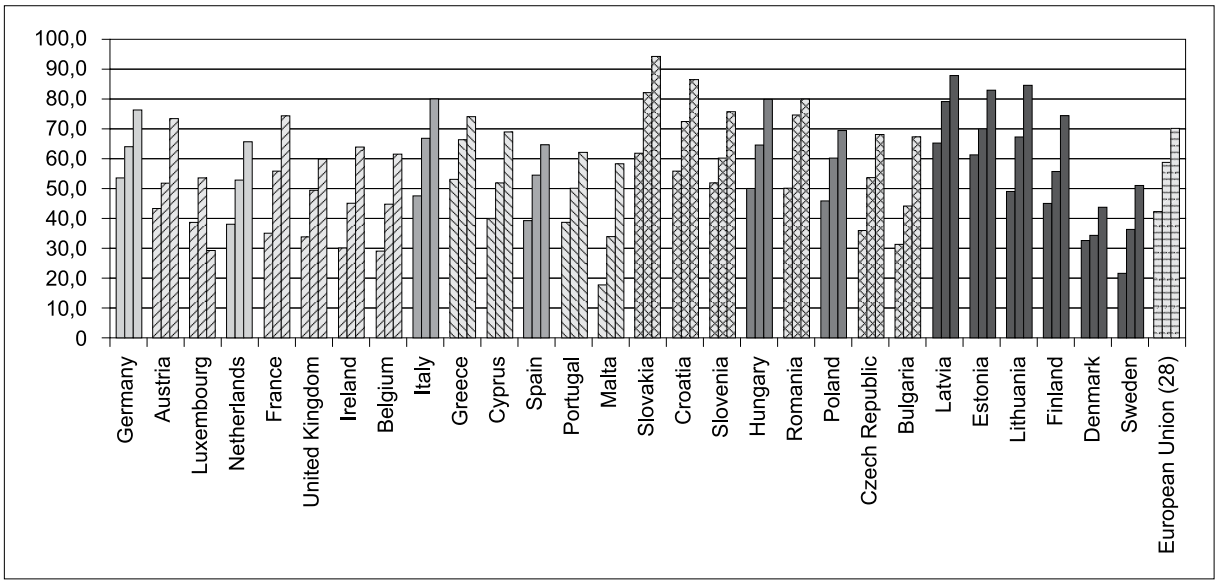

Figure 13. *Self-perceived (some and severe) long-standing limitations in usual activities due to health problems, EU countries, men, first column: 65–74, second column: 75–84 and third column 85+).*

Source: Own elaboration based on Eurostat: EU-SILC data, hlth_silc_06.

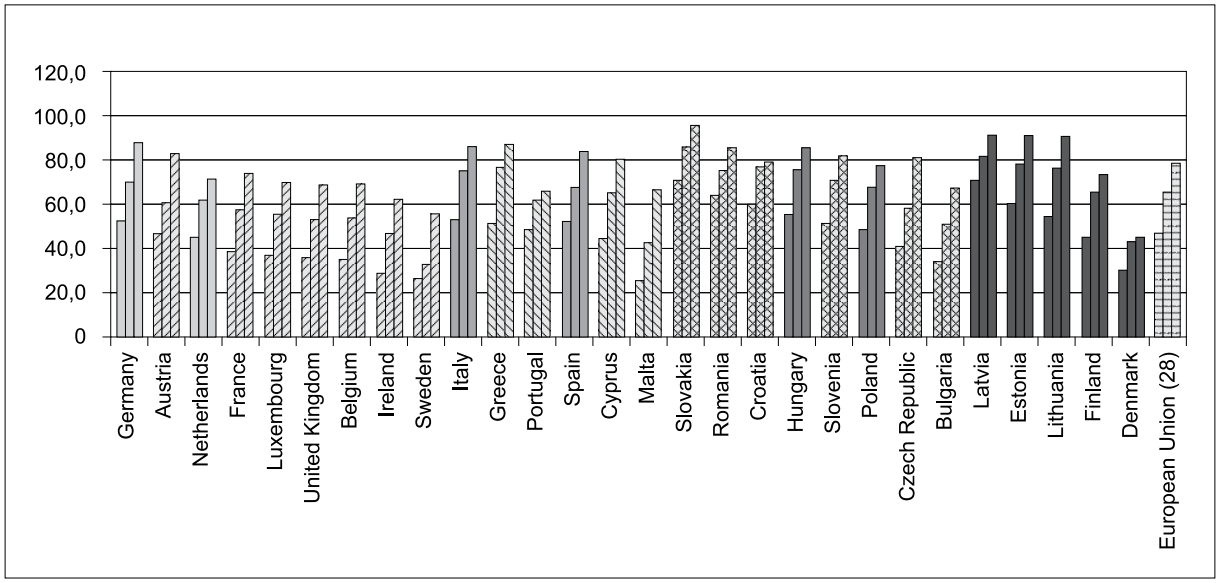

Figure 14. *Self-perceived (some and severe) long-standing limitations in usual activities due to health problems, EU countries, women, first column: 65–74, second column: 75–84 and third column 85+.*

Source: Own elaboration based on Eurostat: EU-SILC data, hlth_silc_06.

to measure quality of life and well-being, but most of them share similar domains: health status, education, economics, society/community and environment. They refer to objective and subjective indicators as well as including indicators at the individual and society levels.

The conceptual framework proposed by the World Health Organization differentiates between health, quality of life and well-being, acknowledging that these concepts are interrelated and that health is a strong determinant of the latter two [24]. For the purpose of measuring the quality of life and well-being WHO have developed a theoretical framework in which individual health status and its behavioural determinants, socio-economic factors and environment, including health care coverage and utilisation are assessed. Well-being is evaluated based on individual self-assessment and reported emotions everyday life. In Europe research utilising the WHO methodology has been conducted in Finland, Poland and Spain and results indicated better well-being in Finland than in other two countries [24] and in every country health status was

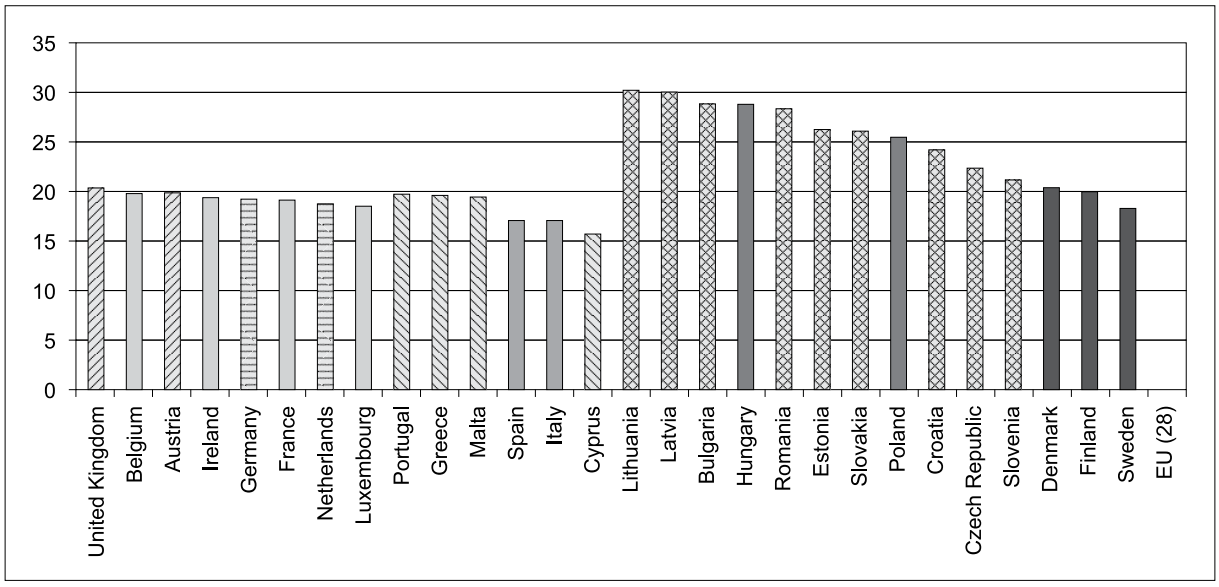

Figure 15. *Disability adjusted life years in the EU countries in 2012.*
Source: Own elaboration based on WHO database.

found to be the main component of well-being. Another study based on the WHO methodology for assessing quality of life was conducted in Poland in the Polsenior project. Results show that almost 60% of older people (55+) evaluates their quality of life as good, with slightly higher frequency for men than women and in urban rather than in rural areas [25], while the share of older people satisfied with their health status is lower, amounting to 45%. Satisfaction with physical capabilities is strongly related to the functional abilities of older people. Satisfaction from the psychological domain is related to satisfaction with life, the frequency of good emotions, the feeling of meaning in life and is found to be higher for older men than women and in urban rather than in rural areas. Another important domain of the quality of life is that of social relations which refer to the quality of interpersonal contacts, intimate life and social support. Contrary to previous domains, older women tend to be more satisfied with this domain than men which might reflect their stronger social networks. Finally, environment is assessed as a quality of life element with men being more satisfied than women. In its most recent work [3] WHO has proposed an indicator of healthy ageing as a process that enables the well-being of older people. The indicator of ageing in good health and well-being is comprised of the assessment of functional abilities, intrinsic capacity (individual physical and mental capacities), impact of environment, happiness and fulfilment.

Another approach to measure quality of life and well-being has been proposed by the OECD in the Better Life Index methodology. This takes into account quality of life (including health status, but also including work-life balance, education, social connections, civic engagement and governance, environmental quality, personal security and subjective well-being), material living conditions (income and wealth, jobs, earnings and housing) and economy (GDP). Results indicate that the quality of life and well-being are found to be the highest in Nordic countries (Denmark, Norway, Sweden, but also the Netherlands), good in Western European countries (Germany, Belgium, Finland, Austria, the United Kingdom) and poorer in Southern and Central European countries (Spain, Italy, Poland) [23].

Noteworthy efforts in the promotion of policies oriented towards healthy and fulfilling old age, with goals well beyond health status itself, but oriented towards the independent living of older people, have been undertaken in the Active Ageing Index project supported by the European Commission and the United Nations Economic Commission for Europe [26]. One of its most important elements is the capacity for active ageing which includes health and social measures, such as remaining life expectancy at the age of 55, the share of healthy life expectancy at the age of 55, mental well-being, use of ICT, social connectedness and educational attainment. When EU countries are ranked according to performance in this domain, Scandinavian countries (Sweden, Denmark, the Netherlands) are again the best performers, followed by the countries of Western Europe (the United Kingdom, Belgium, France, Austria), Southern European countries (Italy, Portugal) and then Central and Eastern European countries (Latvia, Poland, Estonia, Slovakia, Hungary).

3. Behavioural health risks

Among the main behavioural risks of poor health in adults and the older population in developed societies are smoking, obesity and a lack of physical activity. The

data on these risk factors are collected on the basis of the European Health Interview Survey (EHIS), routinely performed roughly every 5 years. The latest EHIS survey was done in 2014, but the data have not been presented yet. The previous EHIS study only included 17 countries, mainly from Central and Southern Europe, Germany, Austria and Belgium. This is why the country comparison cannot be comprehensive. There are, however, other sources of information on behavioural risks in the Eurobarometer survey or the WHO statistics. However, the information provided covers the total population and little is known about the health behaviours of older people.

3.1. Smoking

Smoking prevalence was assessed in the Attitudes Of Europeans Towards Tobacco And Electronic Cigarettes Eurobarometer Study in 2014. For all ages the highest prevalence was in Greece (38%) and Bulgaria (35%), while the lowest is in Sweden (11%). Smoking is higher in men than in women (31% versus 22%) On average, smoking is the most common in age 25–39 (33%) and 40–54 (34%) and drop to 17% for individuals 55+. Among the youngest adults (15–24) smoking prevalence amounts to 25% (**Figure 16**).

3.2. Obesity

According to the WHO HFA data, the prevalence of obesity[2] in the EU in 2014 amounts to 22.9% in men and 23.11% in women, and strongly varied across European regions (**Figure 17**). The lowest share of adult men with obesity is in Portugal, Italy, Austria and Romania (19.8–20.5%), and the highest in the United Kingdom and Luxemburg (26.6–26.9%). In women the highest share is also observed in the UK (29.2), but a similarly high proportion of obese adult women is reported in Malta and Lithuania (28.3–28.5%).

3.3. Alcohol overuse

Alcohol consumption is culturally dependent with different traditions regarding the frequency, type and amount of consumed alcohol present across countries and regions. The highest per capita consumption of alcohol is observed in Lithuania (14.3 litres per capita for the age 15+) and the Czech Republic (12.47). Poland (10.67) and Hungary (11.21) are around the EU average (9.87), while the data for Italy, Greece, and Sweden showed consumption of less than 7.l litres per capita annually (**Figure 18**).

The highest risk of a negative health impact from alcohol consumption is related to binge drinking. Binge drinking across age groups and European countries was analysed in the EHIS 2008 study, and was found to be very high in men aged 65–74 in Estonia, Greece and Hungary (45.3–52% reported binge drinking), by half that in Slovakia and Romania (18.2–19.5%) and very low in Latvia (9.2%). At the age of 75–84 Latvia still had the lowest prevalence of binge drinking (6.8%) while in Belgium, Slovenia, Estonia the percentage still amounted to over 45%. At age 65–74, between 8% (in Slovakia) to 27.9% (in the Czech Republic) and 37.3% (in Belgium) of women reported binge drinking. In the older age group (74–84) the shares of individuals drinking excessively were, on average, much smaller amounting to 4.3% in Slovakia, 13.1% in the Czech Republic and still high in Belgium (36.8%). It should be noted however that only the data for certain European countries have been reported.

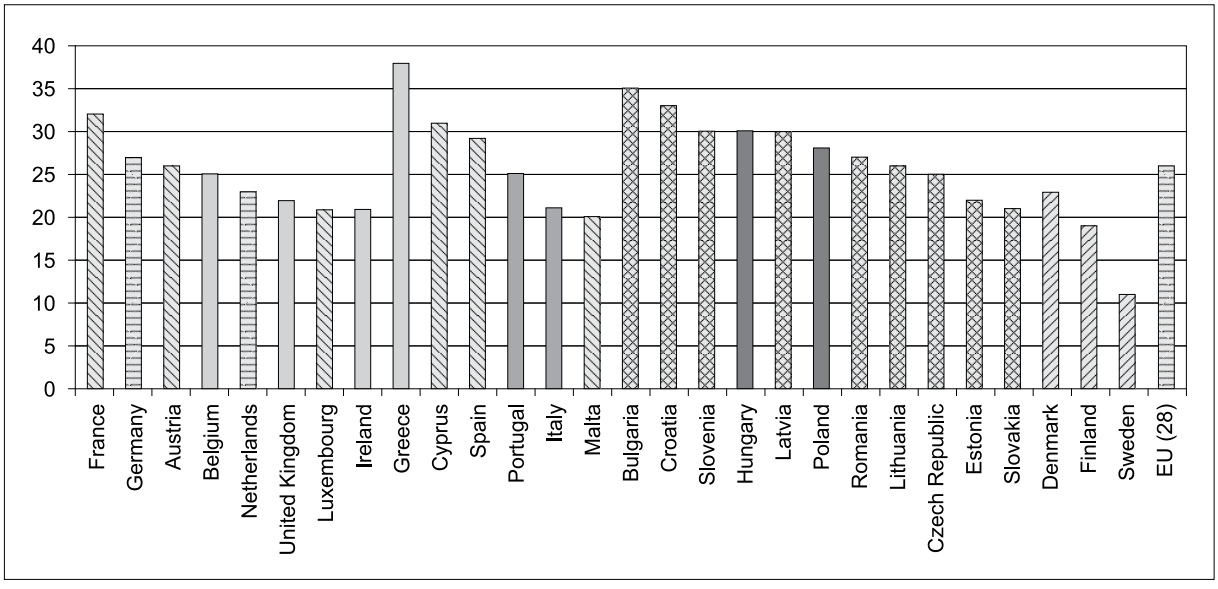

Figure 16. *Smoking prevalence in the EU (all ages).*
Source: Own elaboration based on Eurobarometer 2014.

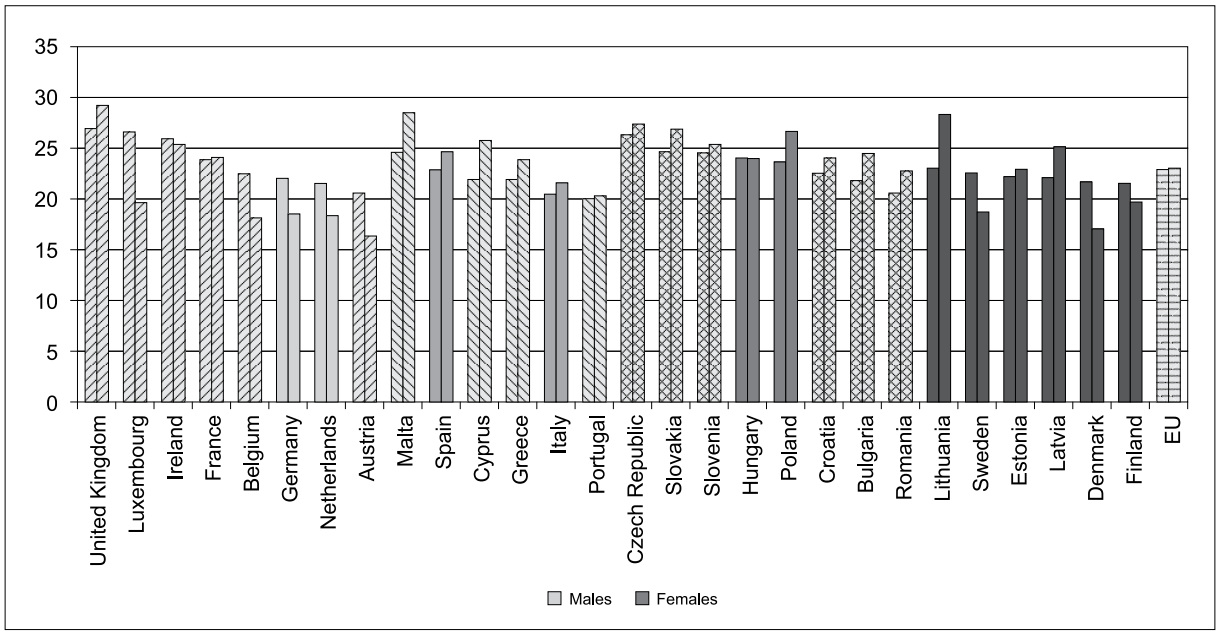

Figure 17. *The prevalence of obesity in the EU.*
Source: Own elaboration based on WHO Health for All Database, 2015.

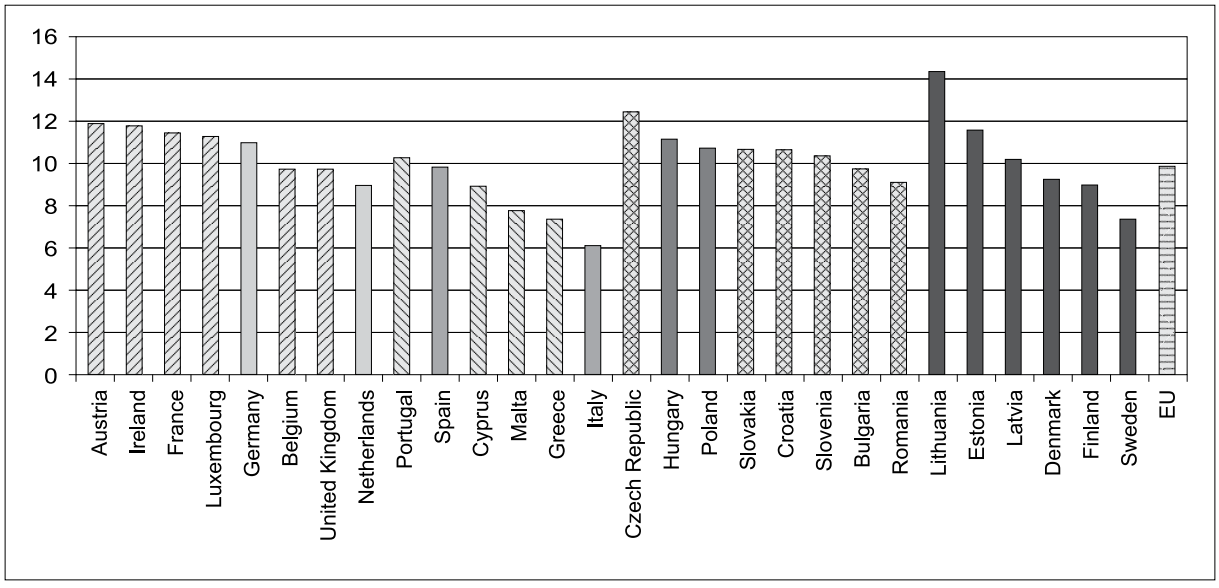

Figure 18. *The consumption of alcohol (litres per capita) in the EU.*
Source: Own elaboration based on WHO Health for All Database, 2015.

3.4. Falls

An important risk factor occurring in older age and related to chronic diseases, functional decline and impaired mobility is that of falls. The risk of fall-related injuries increases with age and is the highest in older people. Falls are reported to be the predominant cause (58%) of injury related emergency department attendances for older people within the EU. The incidence rate of falls is very different across Europe which might be related to characteristics of medical departments' registry certificates and their completeness (**Figure 19**). Almost half of all falls result in fracture, 25% in bruises, 10% in open wounds and 5% in fall-related concussion/brain injury [27].

Conclusions

Traditionally, health status is described by various demographic and epidemiologic indicators related to mortality, life expectancy and morbidity. Responding

to the phenomenon of increasing longevity, the definition of health status has evolved over the past few years and health now means not only living longer, but living longer in better health or without limitations, which is especially important for the older population. The epidemiologic transition observed in developed countries is characterised by a change from the dominance of infectious diseases to the dominance of civilization diseases as the main death risk factors, leading to an increase in the average life expectancy, but also to a higher prevalence of diseases typical for older age that are frequently long-standing and might lead to functional limitations. The longevity of Europeans has been increasing in recent years, but high variations between European countries are still observed: from the highest longevity in Southern Europe (Italy, Spain) and some Northern European countries (Sweden) to the lowest longevity in Central and Eastern Europe (Latvia, Lithuania, Bulgaria). High longevity is not always accompanied however by good health as older age is characterised by numerous and often age-specific conditions which are often chronic and coexist with one another. Chronic conditions, including mental health problems, multimorbidity and functional decline are perceived as typical features of older age. There are high variations in the prevalence of chronic conditions and functional limitations, occurrences of which strongly increase for the oldest population (80+, 85+), between European countries with the highest prevalence in Eastern European (Estonia, Latvia, Slovakia), but also Southern European (Italy, Greece) countries and the lowest in Nordic countries (Denmark, Sweden).

Given the multidimentionality of health status in older age, the definitions of health status are evolving towards healthy, active and successful ageing, addressing not only biomedical features of health status, but risk factors important for healthy living and successful ageing: behavioural, psychological, social and economic. The crucial behavioural factors are related to nutrition (the risk of either under-nutrition or obesity), smoking, alcohol overuse and poor physical activity. Psychosocial factors are related to self-perception, but so are family and social networks and social support, which prevents loneliness. The new definitions of healthy, successful, active ageing and well-being in older age incorporate these dimensions.

Policy recommendation

An evidence based public health policy requires adequate statistical data of the highest quality on the health status of the population. On an international level, it is important that the data are comparable and standardised. Despite improvements in the provision and availability of statistical information on health status in general, data allowing for assessment of the health status of older people as well as the behavioural, social and physical aspects of older people's lives remains poor with little room for international comparisons and analysis. There is little cross-country information on the morbidity of older people, except selected studies which in most cases are country based and difficult for comparisons due to differences in data collection and – in the case of multimorbidity assessment – the definition of co-morbidity or multimorbidity applied. It is important to collect information regarding morbidity specifically for the "younger" and "oldest" age groups to assess the occurrence of age-specific health problems. An important source of information on morbidity, functional limitations and risk factors is survey data. These surveys however, are performed only every couple of years (2008, 2014). It would be desirable to collect and publish the data more regularly,

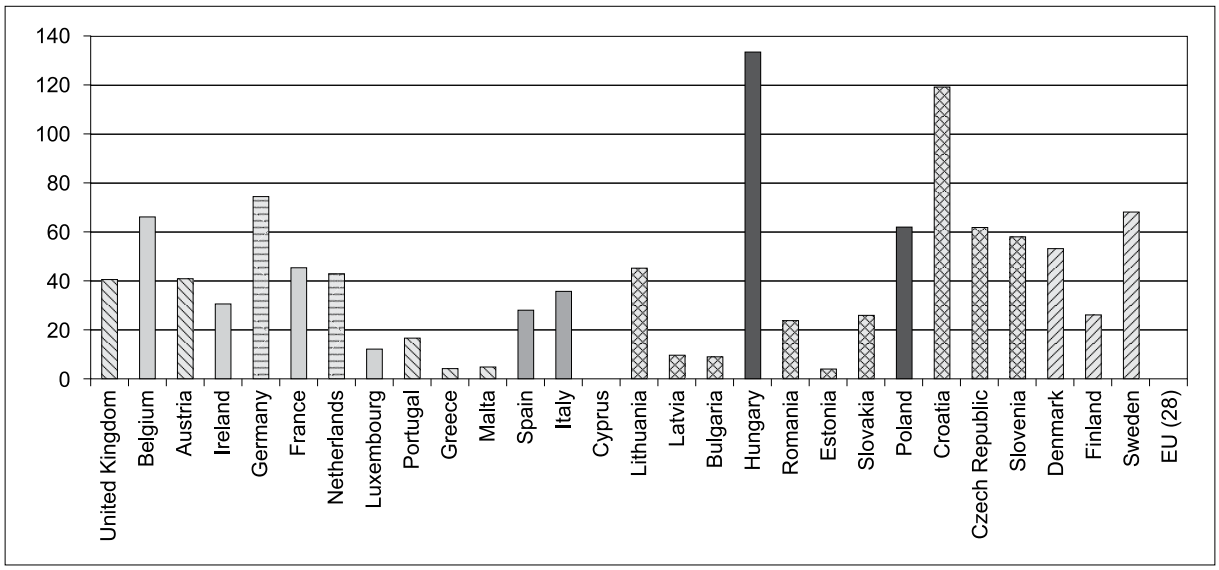

Figure 19. *Incidence rate of falls per 100,000 for age 65+ (age standardised) 2010–2012.*

Source: EuroSafe, Profound, Factsheet Falls in older adults in EU, 2010–2012, https://eupha.org/repository/sections/ipsp/Factsheet_falls_in_older_adults_in_EU.pdf; accessed: 24.07.2015.

with information on the prevalence of illnesses, limitations and behaviour risk factors of poor health provided by country, sex, and age group of older people. This type of data is especially important for designing well targeted public health actions for older cohorts.

Notes

[1] WHO Database, http://apps.who.int/gho/data/node.main.DALYCTRY?lang=en; ac

[2] Obesity if defined as BMI over 30 kg/m^2.

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