Associations between Heart Attack, Stroke and Arthritis and Disability Levels among European Older Populations

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Abstract

This paper explores the associations between heart attack, stroke, arthritis and disability in different European welfare states among the 50+ population. 16 European countries are included, based on SHARE fourth wave data. Disability is measured by using both ADL and IADL instruments combined into three scales (basic, medium, complex) in order to reflect different levels of disability and to assess the needs of all population groups comprehensively. Women's risk of complex disability is high in four East European countries in the case of heart attack, the risk increases also in Southern Europe in the case of stroke and arthritis. Men's risk of complex disability is highest in Estonia in the case of all chronic diseases. Men from Southern Europe and Czech Republic fare best in terms of all disability risks in case of most of the chronic diseases. For heart attack and stroke, also Francophone men show small disability risks.

Introduction

Most developed countries are experiencing population ageing with the share of older people in societies being on the rise. The main reasons behind this trend include increasing longevity, decreasing mortality and fertility, changes in individual behaviour as well as improvements in medical care. As people live longer and age, it is natural that their bodies and minds deteriorate and various health malfunction conditions and chronic diseases develop more frequently (Christensen et al. 2009). These conditions can – but do not have to – be linked with disability when they cross a certain clinical threshold (Nagi 1976, Verbrugge & Mette 1994). Despite the increasing evidence of reduction in disabilities, there is an assumption that disabilities might be increasing among younger old people and baby boomers in some countries (Christensen et al. 2009).

The main purpose of this paper is to analyze the prevalences of some of the most disabling chronic diseases and the associations between these and old age (50+) disability levels in different European welfare state regimes. Identifying and explaining risks of disability can help to contribute to preventive activities for older individuals' health condition and quality of life. Secondly, we aim to understand how country-specific health and social care systems are associated with the risk of being disabled. In this cross-sectional analysis, we include 16 European countries that participated in the fourth wave of the Survey of Health, Ageing and Retirement of Europe (SHARE), and group them into main welfare regimes. As several East European countries were newcomers to this survey wave, our deeper focus is on five East European countries, which have adopted elements from different care regimes (Schneider 2009, Fuchs & Offe 2008). It is of interest to understand which regime is the closest to each of these five countries and whether they can be classified into one certain category.

Old age disability in this paper is defined in terms of activities of daily life (ADL) and instrumental activities of daily life (IADL). The two scales, the first referring to basic self-care functional activities (ADL) and the latter relating to cognitive-related activities (Katz et al. 1963, Lawton & Brody 1969) will be combined in this analysis. This combination allows the assessment of disability levels among the different older population age groups in a better way since not all age groups report similar disability levels (Christensen et al. 2009, Thomas et al. 1998). In combining the two scales, we follow the examples of Thomas et al. (1998) and Wolinsky & Johnson (1991) who constructed a three-dimensional structure of ADL/IADL items for the purpose of testing the hierarchy of these items in interaction with the social environment.

Background

Literature on the links between chronic diseases and disabilities has shown that the reduction of most diseases' prevalences might have contributed to reductions in disabilities and functional limitations (Christensen et al. 2009, Puts et al. 2008). We look at stroke, heart attack and arthritis, because these have generally been found to be the most disabling chronic diseases. Earlier, stroke and heart attack have often shown fatal outcomes, but the development of care strategies recently has had a significant impact on reducing the fatality of these diseases. Thus, they contribute to an increase in the disablement of a population (Kunst et al. 2011, Crimmins et al. 2010, Kelly-Hayes et al. 2003). The impact of stroke on disability can be the severest compared to other conditions, because it can impair any location in the body due to the damage done in the brain (Pschyrembel 2010). It also has a significant impact on the disease burden of a population as a whole, but it has been found to be more burdening for countries with lower income (Kim & Johnston 2011). On the other hand, for the near future, it has been projected for some of the West European countries that „stroke may lose much of its effects on life expectancy but remain a frequent cause of death among elderly populations‟ (Kunst et al. 2011), thus indicating that the future burden of stroke will shift more towards burden of morbidity. Therefore, the need for more targeted preventive measures towards people at older ages emerges.

Heart attack, although a disease with frequent fatal outcomes, recently displays increasing recovery rates in populations and thus is expected to contribute more to disablement (Kunst et al. 2011, Kelly-Hayes et al. 2003). In several case studies, heart attack has been found to be significantly associated with ADLs and IADLs (Fuchs et al. 1998, Spiers et al. 2005). In some analyses, based on earlier waves of SHARE data, it has been found that the association of heart attack with ADL shows lower levels of disablement than in the case of stroke (Klein 2012).

Hypertension, high blood cholesterol and diabetes can have lower associations with disability than the previously mentioned diseases, however, these conditions are confounding risk factors for heart attack and stroke (Puts et al. 2008, Kelly-Hayes et al. 2003). The combination of these three risk factors causes the metabolic syndrome, which in turn leads to cardiovascular diseases (Winter et al. 2012). Previous literature has established associations between hypertension and functional disability (Elias et al. 2010) as well as this factor being a major risk factor for stroke (Winter et al. 2012). Risky health behaviour is often behind the development of these diseases (smoking, physical inactivity, nutrition habits, often leading to obesity), determining the extent of disease-related disabilities in older ages.

Arthritis, depending on the severity level, has been known for its high impact on disability and has not shown a reduction in its disabling effect over the years (Puts et al. 2008). Its prevalence is high in all developed countries and affects older people most often, being the main contributor to disability among these groups (Dunlop et al. 2003, Hughes & Dunlop 1995, Reginster 2002). In the US, arthritis has been found to substantially elevate the risk of developing ADL disability among elderly, regardless of ethnicity or sex (Song et al. 2006) as well as to be one of the best predictors of the development of functional limitations after controlling for other effects (Boult et al. 1994). Also, most rheumatic disorders are more prevalent among women than men (Pschyrembel 2010, Whitson et al. 2010). With the ageing of the baby boomers, the prevalence of arthritis and related disabilities is expected to quickly escalate (Dunlop et al. 2003, Hughes & Dunlop 1995, Reginster 2002). Studies have shown (Wright et al. 2011) that fracture rates tend to be highest among those with rheumatoid arthritis and lowest in the groups without that chronic health problem, therefore fracture is considered as a confounding factor of arthritis.

Different regions and countries can reveal some variety in the prevalences as well as associations between chronic conditions and disability levels. On the one hand, this can be explained by environmental characteristics such as care, diagnosis and treatment mechanisms – these welfare regimes are described in the following section. On the other hand, a more long-term development influences the current welfare and health situation – such a historical and general framework is provided by the health transition, and more specifically the cardiovascular revolution (Vallin & Meslé 2005, Caselli 1995). The decrease in cardiovascular mortality started a new divergence in life expectancy development in the mid-1960s, known as the cardiovascular revolution. Western Europe re-established the rapid growth in life expectancy after a decade of slow-down while life expectancy in Eastern Europe stagnated or even deteriorated for decades during this transition. Since the early 1970s, the survival trends in East and West became particularly different (Caselli 1995). An increase in mortality of man-made diseases has been characteristic for the Eastern part of Europe causing a distinct deviation from the trends in the West. The stagnation in life expectancy lasted until the end of the 1980s and the beginning of the 1990s for most of the East European regions and even longer for the Baltic countries. However, the end of the period of social transition has brought along the reduction of mortality, including a drop in the number of deaths due to cardiovascular conditions, and growth in life expectancy in the above-mentioned region (Sakkeus & Karelson 2012).

Regional differences in the health status of populations have not disappeared in Europe. Further increases in life expectancy are mainly due to the mortality decline in older ages, especially among elderly men. New mortality models have emerged first in Northern and Central Europe, then spreading further to Southern Europe. These developments have clearly been related to the formulation of a new health culture both from the individual and societal side. The European population is still exposed to a higher risk of mortality compared to their European counterparts (Caselli, 1995). In addition to the welfare regimes' categories, the grouping of countries also characterizes the timing and space of the cardiovascular revolution in Europe. The forerunners of the revolution were countries from the Northern part of Europe followed by the Francophone countries, the German-speaking countries and Southern Europe. Evidence of decreasing cardiovascular mortality is most recent for East European countries. Our hypothesis is that in those countries, which have entered the phase of the cardiovascular revolution more recently, the levels of population disability related to cardiovascular diseases are higher. We assume that Scandinavian countries, which were the pioneers in terms of cardiovascular revolution, have the lowest risk of disability due to cardiovascular conditions.

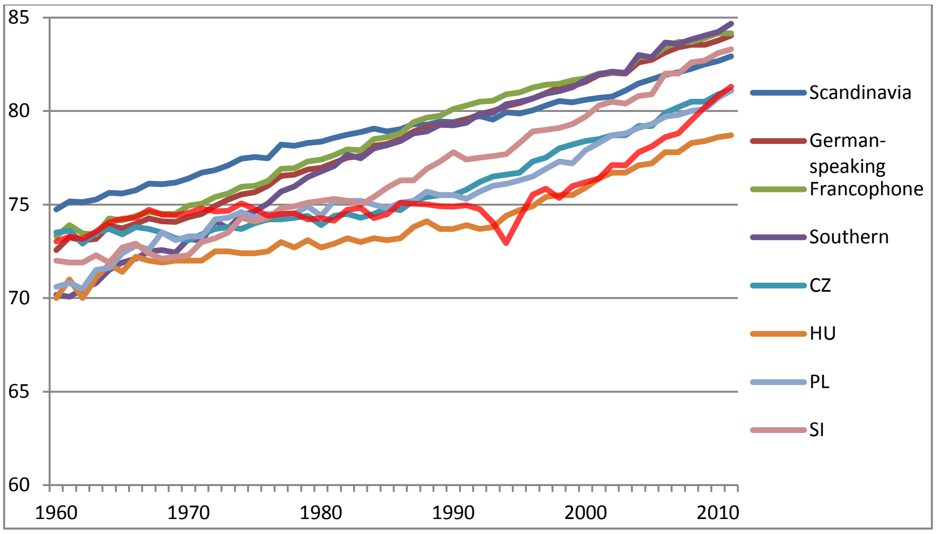

Figure 1. Average life expectancy (e_0) among women
Source: Eurostat (2013), Council of Europe (2006)

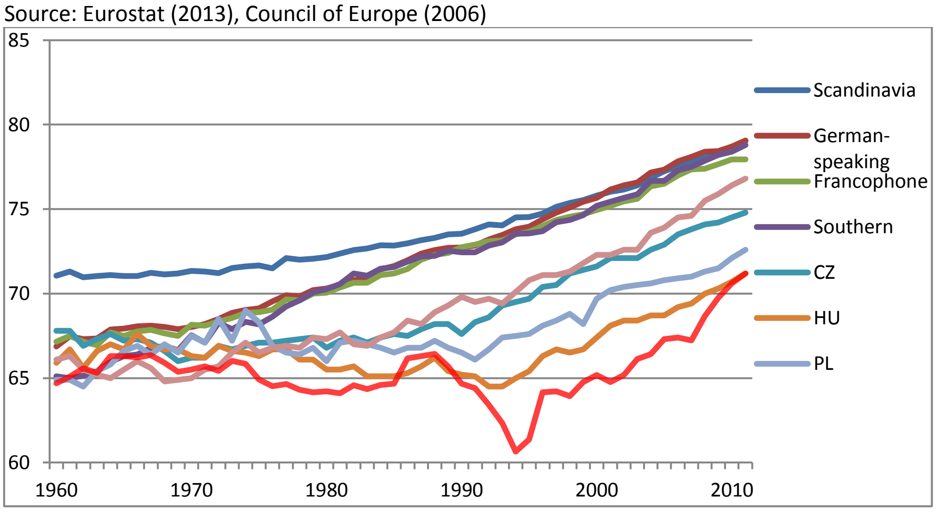

Figure 2. Average life expectancy (e_0) among men
Source: Eurostat (2013), Council of Europe (2006)

Average life expectancy at birth (e_0) has been added for the observed countries from 1960 to 2011 in figures 1 and 2. They give an overall estimation of the life and health quality and are an indicator of the health transition. There are larger country differentials among men than among women, but it shows a clear advantage of Scandinavians of both sexes, however, the German-speaking[1], Francophone and Southern countries caught up with the trend since about the second half of 1970s. Women in the latter regions showed faster increases than men. From about the second half of the 1980s, German-speaking, Francophone and South European women have a higher life expectancy than that of the Scandinavians. For slightly over a decade now, Southern Europe leads the trend - which is a rapid development given they had one of the lowest life expectancy together with Hungary in 1960. Surprisingly, also Slovenian women have surpassed Scandinavian women since 2006-2007. Among men, only the German-speaking have a higher life expectancy than Scandinavians starting from 2001. For the Eastern Europe countries a clear stagnation can be seen in the 1960s-1970s, especially among men. Slovenia has been the fastest to catch up with the more developed European countries. Among men, the Czech Republic follows the course of Slovenia more closely than other Eastern Europe countries, but they also already had a rather high life expectancy in 1960. Estonian women were advanced in the beginning of the 1960s in terms of life expectancy, but that stagnated. In 1993-1994 the situation was especially bad in Estonia for both women and men with all causes of death cumulating in a one-year period, and thus bringing Estonia down to one of the lowest life expectancies in Europe. From the end of the 1960s to the beginning of the 1990s, and again from the beginning of 2000s, Hungarian women show the lowest life expectancy.

Welfare regions

Grouping countries by welfare regimes enables the capturing of differences in health, social care policies and services. This is useful since the postponement of disabilities is strongly related to the health care and social policy schemes available in a particular country. The Western European countries form care clusters comparable to the known welfare regions of Esping-Andersen (1990). According to him, welfare states can be distinguished by the level of de-commodification. In this paper, we distinguish welfare regime groups by the concept of familialism, which provides quite a similar categorization to the original model (Anttonen & Sipilä 1996:88f). Based on these groups, we

[1] Life expectancy data starting from 1960 was available only for West-Germany, therefore German-speaking countries here only include Austria, Switzerland and West-Germany.

distinguish a Scandinavian region, German-speaking countries, Francophone countries, and Southern Europe as four different categories of elderly care (welfare) regimes. In addition, five East European countries will be included in the analysis as separate countries in order to explore which care or welfare regime group each of them resembles as there is evidence of significant variations between these countries (Bobak et al. 2007, Redon et al. 2011, Kim & Johnston 2011). Also, due to major societal transformations in some of these countries, the regimes could not be regarded as complete and final mechanisms only until recently. Therefore including them as one single group (e.g. Eastern Europe) can be questionable.

The Scandinavian region is characterized by the most generous individual entitlements (universalism) to services with well-organized formal care strategies, funded by the general taxation and the least use of informal care (Esping-Andersen 1990, Anttonen & Sipilä 1996, Bettio & Plantega 2004, Simonazzi 2009, Kraus et al. 2010). In this paper we include Sweden, Denmark and the Netherlands into this region. The first two countries are the most de-commodifying welfare states and share the Beveridge-system with the liberal welfare state in the English speaking countries – only based on the principle of universalism rather than residuality: the state offers abundant services for all of its society members in need, all services are comparably high funded from the general taxation and coordinated by public administrative entities. This can be characterized as de-familialization via public services. Although care within the family is supported by means like direct payments to the family, at least moderate services for all kinds of formal care are easily accessible (Leitner 2003). Out of all Scandinavian countries, Denmark and Sweden show this model in the purest way. In the Netherlands, the universalist pattern is not as clear. The care services are funded by compulsory insurance against high expenditures in the case of an accident or the need of long-term care, therefore moving more towards the continental European schemes. However, previous research has shown that, even after different clustering procedures, including the Netherlands to the Scandinavian group appears to be robust (Kraus et al. 2010).

The more conservative, continental European region is distinguished by explicit familialism with the nuclear family being in charge of providing care and the state just filling in if the family's capacity is exhausted (subsidiarity). Thus informal care is more widespread and formal services are less abundant and funded by universal insurance schemes. In the German-speaking countries, the family is supposed to take care and the element of subsidiarity is more stressed than in the Francophone countries. They rely more on low paid, non-family minders (Esping-Andersen 1990, Anttonen & Sipilä 1996, Leitner 2003, Simonazzi 2009, Kraus et al. 2010). The German-speaking countries comprise of Austria, Germany and Switzerland. Germany can be characterized by increasingly under-qualified formal care staff, combined with female (partly illegal) migrants providing the care service. Though

Switzerland shows more elements of liberal policy than the other two countries, it is also stronger tied to the subsidiarity principle with strongly means-tested benefits. The francophone region consists of two SHARE participating countries in this study: France and Belgium. In France a universal allowance for frail elderly is paid and is often spent on a non-family carer. However, the mechanism works more like a job-creating scheme, but without illegal migrants. Belgium shows similarities to both the German and French systems. However, due to divergent developments between the Flemish- and French-speaking parts, either region moves closer to the German or French models repectively (Theobald & Kern 2011, Simonazzi 2009, Oesch 2008, Beland & Lecours 2005).

South European countries form their own cluster of implicit familialism with the extended family being legally in charge of providing care. Formal care strategies are, in a manner of speaking, absent, rather there are allowances paid to frail elderly. The level of spending towards the elderly in terms of pension and social transfers is low. The only exception is Italy which ranges at the upper end within the European Union close to the German speaking countries. Despite the generally low labour market participation of women (except for Portugal), the actual provision of care is widely undertaken by female (often illegal) migrants. The care model can best be described as “migrant in family model” and is present in all Mediterranean countries (Anttonen & Sipilä 1996, Leitner 2003, Bettio & Plantega 2004, Bettio et al. 2006, Simonazzi 2009, Kraus et al. 2010). Aside from Italy, Spain and Portugal, also Greece is part of this region. But as it did not participate in this wave of SHARE, this cluster only consists of the first three countries.

All of the East European countries in the SHARE study are alike in their scarcity of formal care options and thus resemble the southern region in showing implicit familialism (Kore 2005, Reimat 2009, Simonazzi 2009, Kraus et al. 2010, Saraceno & Keck 2010). Albeit showing much lower levels in welfare spending, all of the countries are strongly committed to conservative corporate ideas of welfare. But still, they do not form a homogenous group as each country is influenced by other policies to a quite different extent (Eichorst & Hemerijck 2008, Fuchs & Offe 2008). The only country aiming towards an increasingly universalistic direction is the Czech Republic. Together with Slovenia, their funding of welfare towards the older population is most generous in Eastern Europe. Slovenia can best be described as “purely” committed to conservatism (Fuchs & Offe 2008, Hengstenberg 2009, Żukowski 2009, Potůček et al. 2009, Schneider 2009, Saraceno & Keck 2010, Holmerová et al. 2011). Hungary, Poland and Estonia on the other hand show elements of liberal policy to different extent, i.e. non-mandatory private contribution welfare schemes and means-tested benefits. Estonia can be considered to be the country with the strongest liberal incentives and the lowest general welfare spending. That leaves Poland and Hungary in a medium position in terms of spending and liberal incentives. Poland is known for the importance of informal care due to lack of formal long-term care and traditions of family support in the society (Fuchs & Offe 2008, Aidukate 2009, Filinson et al. 2010, Golinowska 2010, Schneider 2009, Saraceno & Keck 2010, Széman 2011, Habicht 2012, Esping-Andersen 1990). In addition, it should be pointed out that among the SHARE participating countries, only Estonia was part of the Soviet Union. The other East European countries of SHARE were part of the Warsaw pact, and thus did not obey directly to the Soviet management of health care (although they were strongly affiliated by similar principles). The Soviet health care system neglected individual responsibility and preventive measures to fight diseases, meaning that healthy lifestyles were not promoted nor were problems diagnosed early enough, resulting in a clear mortality stagnation (Sakkeus & Karelson 2012). The economic situation of individuals played an important role in the general well-being of several post-communist bloc countries. Estonian older workers' worsening living situation during the transformation period has been explained by liberal welfare policies (Täht & Saar 2006). The older workers in the Czech Republic and Hungary, on the contrary, have been more financially protected (Blossfeld et al. 2006).

Data and Methods

The data source used for this analysis is the longitudinal panel survey SHARE, or Survey of Health, Ageing and Retirement in Europe. It maps different aspects, characteristics and paths of life for people who are aged 50 and above (Börsch-Supan et al. 2009), thus also covering the pre-retirement period. Data from the SHARE fourth wave release 1 (field work carried out in 2010-2011) are used, since they include several East European countries as newcomers to the survey. The 16 European countries included in the fourth wave are: Austria, Belgium, the Czech Republic, Denmark, Estonia, France, Germany, Hungary, Italy, the Netherlands, Poland, Portugal, Slovenia, Spain, Sweden and Switzerland. SHARE provides an opportunity to analyze the older population (aged 50+) in different countries based on a survey that has been conducted with a similar methodology and questionnaire in each country. That thus enables international comparisons that have been rare on this topic.

The disability scales under study are based on ADL and IADL categorizations. The first refers to basic self-care functional activities such as dressing, eating, bathing etc. (Katz et al. 1963). The IADL scale was developed to complement the Katz scale with more cognitive-related activities such as housework, meal preparation, handling money, phone use etc. (Thomas et al. 1998). It has been argued that ADLs only capture disability at the extreme end of the scale and are thus unable to discriminate above very low levels of disability in community populations where the prevalence of ADL disability tends to be low (Spector et al. 1987, Kovar & Lawton 1994). Therefore, we use a combination of ADL and IADL scales into one scale, which follows the example of Thomas et al.

(1998) and Wolinsky & Johnson (1991). These authors identified and used a three-dimensional structure of ADL/IADL, suggesting in their analysis that there might be different levels of functioning within which some items are more or less substitutable with each other. In our paper, the basic self-care scale includes four ADL items: toileting, dressing, eating and transferring (grooming was not included in the survey). The second scale – intermediate self-care – includes bathing, walking, housework, meal preparation, shopping and walking outside. The third scale – complex self-management – includes handling money, phone use and self-medicating, which all indicate more cognitive impairment. We proceed from the notion that functional status reflects a much wider context involving access to health care, stigmatization, discrimination and social exclusion**.** Thus, we envisage that the three different levels of disability are in close interaction with the social environment that can be captured by welfare regime variables.

Age and gender are included in the analysis as main demographic control variables, as, due to differential survival from chronic diseases, disabling conditions become more prevalent for the female population (who live longer than men) and at older ages (Crimmins et al. 2010). Chronic diseases become more disabling with age, with the relationship having a non-linear shape. The variable of age squared is included as one of the covariates in order to disentangle the effect of getting frailer in older ages from the impact of investigated chronic diseases (Kulminski et al. 2006, Kelly-Hayes et al. 2003, Kunst et al. 2011). Prevalence of disability differs by sex – arthritis, heart failure as well as stroke have been found to be contributors to higher prevalence of disability among women (Whitson et al. 2010, Crimmins et al. 2010).

The highest level of attained education[2] and having a partner (or not) control for socio-demographic conditions in this analysis. The first variable should take care of the main occupational effects during the lifetime as well as the prediction for cognitive functioning. The latter has been found to have an effect for late recognition of heart attack and thus reduced prevalence of it (Winter et al. 2012, Cutler & Lleras-Muney 2010). Partnership status controls for the immediate social network presence at the household level.

Alcohol use and smoking are included since these tend to be main risk factors for stroke and heart disease, besides very high blood pressure and diabetes (Yusuf et al. 2001a, Yusuf et al. 2001b, Wolf et al. 1991, Reddy 2004). The smoking status as well as drinking problems will be categorized in

[2] In our analysis, education is classified according to ISCED97 standard with levels 4-6 grouped as high, 3 as intermediate, and 1-2 grouped as low education level and those without any information about the educational level will be treated as a separate group

terms of life-time occurrence. Missing information about drinking problems is included as a separate variable category.

Co-morbidities have been found to have a more disabling effect, in particular for women with stroke (Kelly-Hayes et al. 2003, Puts et al. 2008). The effect of co-morbidities will be controlled with a variable indicating the number of health conditions someone has (0/1/2+ further conditions mentioned). Whether a person is eating properly[3] and the frequency of physical activity[4] will be controlled as risk factors for the metabolic syndrome, heart attack and stroke.
Initially, being in a nursing home was to be controlled for in order to distinguish those with different care opportunities as well as for participation in previous waves. Since the number of cases left for the regression analysis decreased to one case when including other control variables, the nursing home control was removed from the analysis.

The analysis will be carried out in the following way: firstly, the prevalences of heart attack, stroke and arthritis as well as different levels of disabilities among regions are examined. Next, the main analytical tool used is a logistic regression with the state of disability (being disabled – yes or no – in terms of a basic, intermediate or complex disability level) being the dependent variable. The results are shown as odds ratios and the threshold of the significance is an error probability of five percent. All computations are carried out separately for both sexes and controlled for age squared and the regions as described previously. For each dependent variable, the model is run three times containing different condition covariates each time: heart attack, stroke and arthritis. Each of these main conditions is controlled for the presence of possibly confounding conditions - heart attack and stroke for hypertension (includes high blood pressure), diabetes (includes also high blood sugar), high blood cholesterol and arthritis for fracture.

Six regression models were run for each dependent variable, i.e. level of disability. The first model only includes the chronic disease and the respective confounding factors. For heart attack and stroke, the confounding factors are hypertension, cholesterol and diabetes. For arthritis the confounding factor is fracture. The second model includes education levels and the third model includes the partner variable (whether one has a partner living in the same household or not, including cohabiting partners). The fourth model introduces the number of other co-morbidities (0/1/2+). For each condition this variable differs as the main condition and its confounders are not

[3] Eating properly will be constructed as following: eating all of the following items at least twice per week: milk products, legumes or eggs, meat/fish/chicken, vegetables or fruits
[4] At least once moderate physical activity per week/ less than once per week/ information not available (99)

counted in the respective co-morbidity variable. The fifth model includes the behavioural factors smoking and if one ever had a drinking problem, and the final model includes dietary habits (eating well in terms of the number of meals per week one has with milk, eggs, meat and fruit) as well as whether or not the respondent is physically active on a moderate level at least once per week. In this set of analysis, interaction terms between the main condition variable (heart attack, stroke or arthritis) and welfare region variable are included.

As households inhabited by more than one age-eligible person (i.e. aged 50+) have a higher probability of becoming part of the study, the data are biased in favour of those living with a partner. Furthermore, the data are biased by the non-response of targeted respondents which does not occur at random. In order to correct for the unequal chances of being included in the study and the over- or underrepresentation, we chose to weigh our data. We used the calibrated cross-sectional individual weights of Wave 4 which are equal to the inverse of the probability of being included in the study. Each respondent receives a weight according to his/her household design weight, a set of other calibration variables and the proportion of the respective age group in the national population. The weights were calculated separately for each country as the sampling frame and thus the inclusion probabilities vary considerably among the participating countries. The weights adjust the sample as a cross-sectional analysis. It needs to be kept in mind that using such weights ignores the fact that some countries have a panel and one or more refresher samples with a certain panel mortality in their national samples while others participate for the first time and are not yet selected in that respect (Lynn et al. 2013, Schulz & Doblhammer 2011). The unweighted sample included 30923 women and 24626 men, who were at least 50 years old at the time of the interview (2010-2011).

Results

The descriptive results of the main control variables are brought out in tables 1 and 2 in the appendix, and will not be discussed here in detail. Also, figures 3 and 4 in the appendix visualize the proportions of the different disability levels by age and gender in different European regions. Figure 5 illustrates the distributions of other co-morbidities (besides the conditions included in the analysis from model 1) across regions. Next, we describe the prevalence of different chronic diseases that are studied in this paper, followed by results from the regression analyses of the interaction effect.

The prevalences of different chronic diseases and health conditions, that we study in this paper, are illustrated in figures 6-7. Heart attack was most prevalent in Hungary and Estonia, for both men and women (ranging between 21,6% and 23,4%, for others the prevalence remained below 20%). This finding is related to a higher incidence of cardiovascular deaths in these countries. For other countries, the gender differentials were much higher, usually in favour of women. The prevalence of stroke was smaller in all regions and both sexes, remaining below 10%. Here, too, Hungarian and Estonian men and women led the way (6 to7%) and the other countries' prevalences remained between 2,8% and 3,8% for both men and women. Among men, Slovenia and the Francophone region showed the lowest stroke prevalence. Arthritis, the least disabling of the three chronic diseases, was noticeably more prevalent among women with the lowest prevalence among Slovenians (13,2%) and highest among Hungarians (45,9%). Women from Southern Europe showed the second highest arthritis prevalence (41,8%). This was a somewhat surprising finding, because previous research does not usually confirm such high prevalence for this region. Also, Southern European and Francophone women had arthritis as the most prevalent condition compared to the other conditions. Among men, again Slovenia showed the lowest share of people with arthritis (5,9%) together with Scandinavia (7,8%), while the largest shares could be found in Hungary (31,8%), Poland (24,6%) and the Francophone region (22,2%).

Hypertension was the most prevalent condition in almost all regions and for both sexes, except for women from Southern Europe and Francophone countries. In Hungary, 60% of women reported having hypertension, while 50% of Estonian women reported the same. It was least found among Scandinavian and Francophone women (32,7% and 32,3%, respectively). More women than men tended to have hypertension. Among men, Hungary (49,4%), the Czech Republic (44,4%) and the German-speaking countries (43,1%) had the largest shares of hypertension. Again, Scandinavian and Francophone men showed the smallest shares of men with hypertension (slightly below 30%). The Francophone and Southern European older population showed higher prevalences of high blood cholesterol among both sexes.

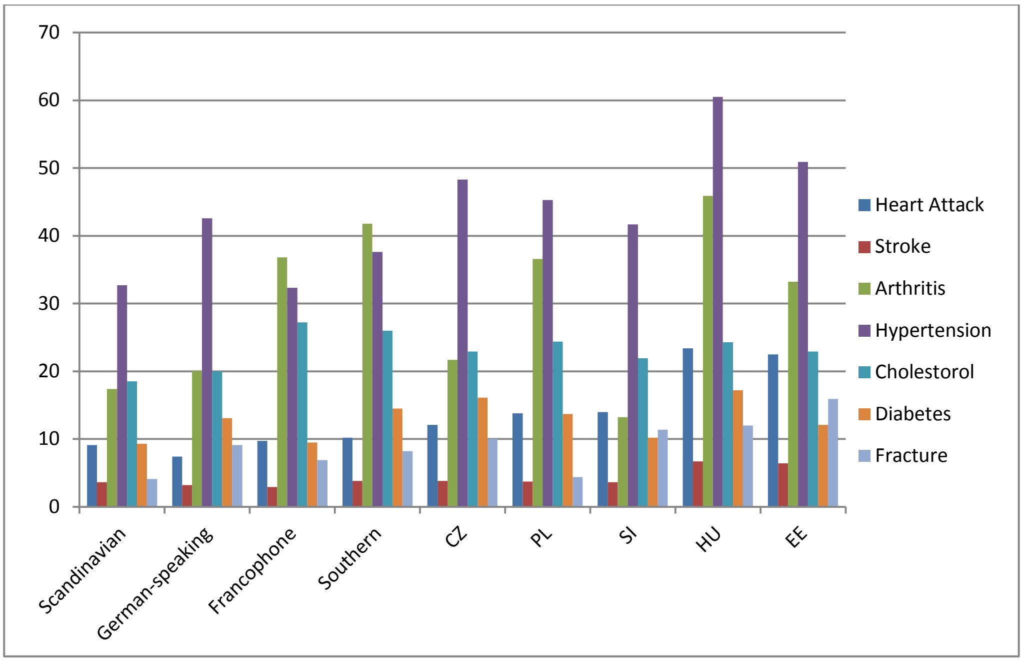

Figure 6. Prevalences of chronic diseases and health conditions among women, weighted data

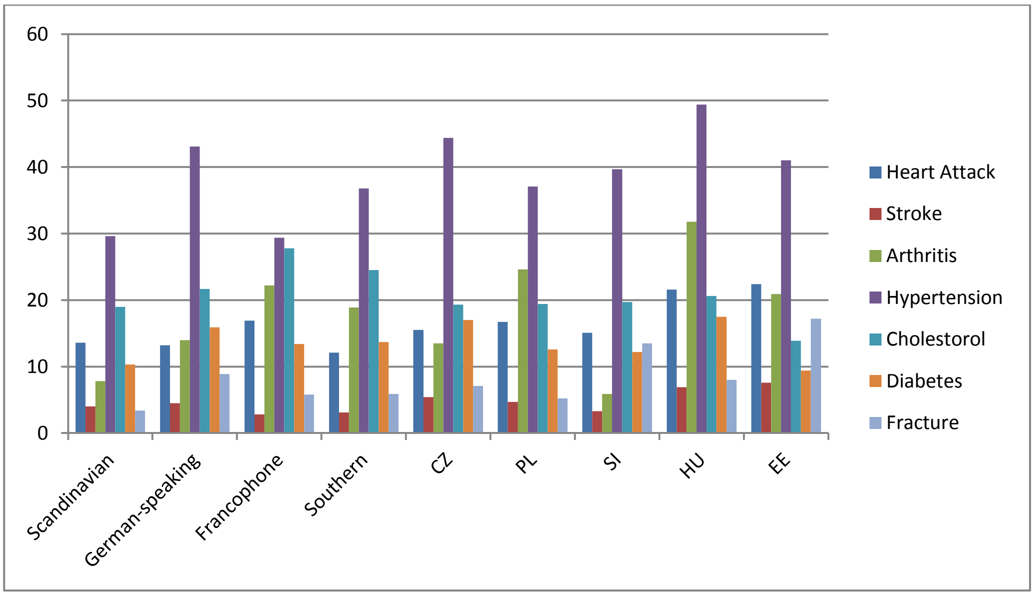

Figure 7. Prevalences of chronic diseases and health conditions among men, weighted data

Scandinavian women and Estonian men showed the smallest prevalence for cholesterol. For Estonia, the diagnosis of cholesterol had been a recent phenomenon, especially among men who are more reluctant in visiting doctors. Therefore it is likely that an important share of men with high levels of blood cholesterol were not diagnosed. Diabetes was more prevalent in Hungary and the Czech Republic. Women from Southern Europe as well as German-speaking men also reported relatively high levels of diabetes. The prevalence of fracture was highest among Estonian men and women. In addition, among women it was also high in Hungary and Slovenia, whereas among men it was next highest in Slovenia and the German-speaking countries. Polish and Scandinavian women had the lowest fracture prevalence, among men it was lowest among Scandinavia, Poland as well as Southern Europe and the Francophone countries.

In order to assess the differential risk of being disabled on a basic, intermediate and complex level, we analyzed the level of disability in comparison to Scandinavia with interaction effects from the logistic regression models. That means we did not only examine the disability risk in the different regions - assuming that the risk for both, those with and without the condition, differed from Scandinavia by the value indicated, but also it is much more likely that the different policies and levels of spending influence the groups with and without conditions differently. That means, we examined the risk of being disabled in a certain region in comparison to Scandinavia: in a given region there are people who have a condition and underlie a certain risk of being disabled. This risk might – or might not – be different from the risk of Scandinavians who have the condition. But for people living in the same region and not having a condition, the risk of being disabled must not necessarily differ by the same extent from Scandinavians who do not have the condition. Although it would be possible, we chose to not include any information on the differential risk of being disabled *within* regions, because it would go beyond the magnitude of this article. That is to say all statements are in relation to Scandinavians having or not having (as indicated) the condition. All disability risks are brought out in tables 3-14 in the appendix.

Disability risks from heart attack

Becoming disabled on a basic level (having difficulties with dressing, eating, toileting and transferring) from heart attack was found to be most likely among Polish and Estonian women – both groups had a disability risk about 2,5 times higher than Scandinavian women who had a heart attack, after controlling for all variables. The disability risk among those who have not had a heart attack remained significantly higher (1,6 times) only among Polish women compared to Scandinavian women who have not had a heart attack, meaning that Poles have a higher disability risk than Scandinavians for both healthy and unhealthy people. South European women had a 2,3 times higher disability risk from a heart attack. Czech and Slovenian females remain similar to Scandinavians throughout all the models. Among men, the differentials in basic disability risks varied to a lesser extent between countries with none of them having a significantly higher disability risk than Scandinavians with a heart attack. But German-speaking men who have not had a heart attack, showed a 1,76 times significantly higher disability risk compared to Scandinavian men with no heart attack. That points out that there were bigger differentials for those who had a heart attack between these two regions rather than among the healthy. Eating well and moderate physical activity decreased the disability risk levels significantly among Hungarian women, as well as Czech and

Estonian men. Co-morbidities explained much of the risk differentials among Francophone women as well as German-speaking, Polish and Slovenian men. Smoking and drinking behaviour explained much of the risk among German-speaking women.
Diabetes remained a significant confounding factor for basic disability risk from heart attack among women (1,40 times higher risk than for women without diabetes) after controlling for all variables, while diabetes' effect disappeared among men with the addition of other comorbidities. Also cholesterol was a significant confounding factor for women who had a heart attack – until the addition of other comorbidities.

The intermediate disability level refers to problems with bathing, walking, doing housework, meal preparation, shopping and walking outside. For those who have not had a heart attack, intermediate disability risk was significantly higher for Hungarian women (1,52 times) and men (1,84) compared to Scandinavians who have not had a heart attack, meaning that Hungarians are more likely to be disabled even when healthy in comparison to Scandinavians. The intermediate disability risk from a heart attack was highest among women in Hungary (3,18 times), Estonia (2,32), Slovenia (1,98) and the Czech Republic (1,88) compared to Scandinavian women with a heart attack after controlling for all variables. Only German-speaking women remained similar to Scandinavians throughout all models, so they perform similarly to Scandinavia in terms of disablement, both when having as well as not having a heart attack.
The disability risk from heart attack was the same for men all over Europe as none of the regions differ from Scandinavian men with heart attack after controlling for all variables. Eating well and moderate physical activity explained much of the risk differentials among Francophone and South European women as well as Slovenian men. Other co-morbidities diminished the disability risk among Hungarian and Estonian men (who have one of the highest co-morbidities' prevalence within heart attack). Having a partner was important in reducing the disability risk among Polish women who had a heart attack.
Diabetes remained a significant confounding factor for both men (1,44) and women (2,07) after controlling for all variables in the association of intermediate disability and heart attack. Hypertension was significant for men only in the first model, but education reduced much of the risk among men while adding other co-morbidities reduced the risk for hypertension among women.

Complex disability includes difficulties with handling money, phone use and self-medicating. After controlling for all variables for those who have not had a heart attack, complex disability risk remained significantly higher among Estonian men and women (1,60 resp. 2,88 times) as well as among Slovenian (2,35) and Polish (1,74) women compared to Scandinavians who have not had a

heart attack. The complex disability risk from heart attack was highest among women who have had a heart attack in Estonia (3,82 times of Scandinavians with heart attack), Hungary (3,24), Southern Europe (3,04) and Slovenia (2,64). German-speaking and Czech women remain similar to Scandinavians through all interaction models with the reference of Scandinavians having had a heart attack. In that respect, men again did not show any significant variation from Scandinavian men. Not even Estonians differ, although they showed significant differences when not having the condition, meaning that only healthy men in Estonia differ from healthy men in Scandinavia. Controlling for other co-morbidities contributed most in explaining the differences between Estonia and Scandinavia and reflected the high prevalence of other co-morbidities with two or more conditions among Estonians with heart attack. Including the smoking and drinking habits decreased the complex disability risk when having had a heart attack among French speaking women, eating well and moderate physical activity explained much of the risk differences for Polish women (who have one of the lowest prevalence of eating well).
Diabetes remains an important confounding factor in all models among women (1,55) while none of the factors are important for men in any model. This reflects men's lower chances of reaching complex disability levels.

<u>Disability risks from stroke</u>

For those who have not had stroke, the risk of basic disability in comparison to Scandiavia remained highest for Polish (1,71 times) and Estonian (1,42) women, while men from all regions had the same risk as Scandinavian men. Basic disability risk among women who have had a stroke was highest among South European (3,67 times the risk of Scandinavian women) and Polish (2,87) women after controlling for all variables. Therefore Polish women are more likely to be disabled even when healthy in comparison to Scandinavians, or alternatively, there were unobserved factors influencing the possibility of disability. For those who had a stroke, eating well and moderate physical activity reduced the disability risk most, especially among Estonian women as well as German-speaking and Estonian men. Other co-morbidities also reduced the risk considerably among Estonian women as well as South European men. Smoking and drinking habits increased the disability risk in most of the regions, but especially among South European and Estonian men. Francophone, German-speaking, Czech and Slovenian women's risks remained similar to that of Scandinavians' throughout all models. For basic disability risk from stroke among women, diabetes was a significant confounding factor (with 1,41 times higher disability risk compared to women without diabetes) and it remained so throughout all models. Cholesterol's significance disappeared after controlling for other co-morbidities. Among men, only diabetes was an important factor, but its significance disappeared after controlling for education.

Intermediate disability risks from stroke among both men and women were similar to Scandinavians in all regions after controlling for all variables. Smoking and drinking habits increased the disability risk to a significant level among South European women, whereas controlling for it decreased the risk among Estonian men. However, education, eating well and moderate physical activity decreased the disability risk among South European women probably indicating again to the positive effect of the Mediterranean diet (as physical activity prevalences were one of the lowest among South Europeans). Co-morbidities were important in explaining much of the risk differentials among Hungarian men.
Compared to Scandinavians who did not have a stroke, intermediate disability risks remain significantly higher for Hungarian women (1,76 times), Hungarian men (1,6) and Slovenian men (1,39). Again, the healthy differed in disability risks more than those who had a stroke.
Diabetes remained a significant confounding factor for stroke in this disability level among both men (1,42) and women (2,05) and also among those who have not had a stroke. Hypertension was important only for women until co-morbidities were controlled for.

In all regions, the complex disability risks from stroke as compared to Scandinavians were very high among women, e.g. being 8,4 times higher for Polish women than Scandinavians (risks from different models are illustrated in figure 8). In several regions, the disability risks even increased when controlling for different variables. In the case of German-speaking, Slovenian and Estonian women, the disability risks were higher in the final model than before controlling for all the variables, meaning that the included variables increased the disability risk. In the Slovenian and Estonian case a very small number of women with stroke were recorded, indicating that this group is, in general, a very small and selective one, thus conclusions about complex disability risk for these two countries will be avoided here. In the German-speaking countries the number of observations was higher. A possible explanation for the found phenomenon might be that the population was selected in a way that women with mental health problems (or having difficulties with cognitive skills) have remained at home to be cared for by other family members while those with physical impairments live in institutions. Similarly, for other countries there must be some unobserved characteristics at play with this population group, as controlled variables did not explain the differences for them as well.
Among men, again the differentials did not vary much with only Hungarians showing a significantly lower (2,94 times) disability risk than that of Scandinavian men with stroke. Smoking and drinking problem variables diminished the disability risk among Polish men, and co-morbidities did the same for Estonian men. Taking into account that Poles had one of the highest smoking prevalences and

Estonians had one of the highest co-morbidities' prevalences within stroke, these explain much of the disability risk in the two countries.

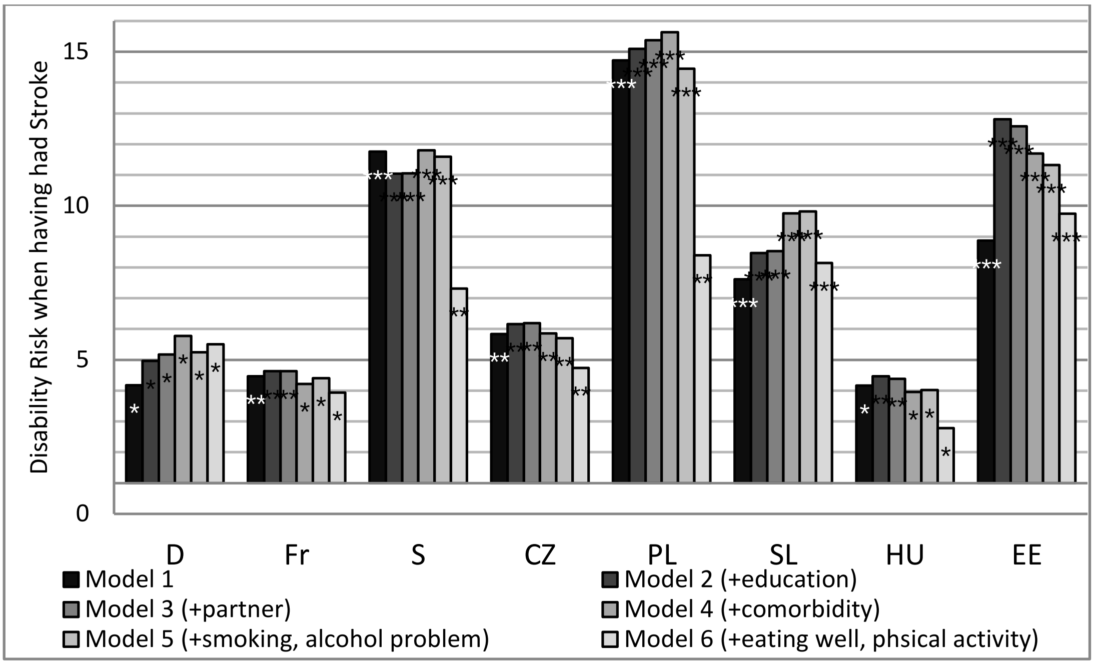

Figure 8. Complex disability risks from stroke for women, weighted data

Women in Estonia, Hungary, Slovenia, Poland and Southern Europe as well as men in Estonia remained with significantly higher complex disability risks among those without stroke compared to Scandinavians without the condition. Introducing co-morbidities reduced the complex disability risk for those not having had a stroke significantly for Francophone women and Hungarian men while controlling for smoking and drinking problems reduced the risk for Polish men.

Diabetes is a significant confounding factor only among women (1,52 times higher risk). No confounding factors for complex disability risk were significant among men, but this perhaps reflects the small chances of men reaching complex disability levels compared to women.

Disability risks from arthritis

Comparison of risks of being disabled in basic activities when having arthritis in relation to Scandinavians showed that the risk was highest among women in Poland (2,02 times) and Estonia (1,5). Among those not having arthritis, Estonian women remained with a significantly higher basic disability risk (1.39 times). Smoking and drinking habits explained much of the risk differences for Hungarian women and German-speaking men in that respect. Women in all other regions remained similar to Scandinavians. Men from Southern Europe, the Czech Republic and Hungary had statistically significant lower disability risks (2,1- 2,7 times) than Scandinavians with this condition. Also, among those who do not have arthritis, Southern European and Czech men remained with significantly lower disability risks than Scandinavians. This finding confirms some of the previous results that arthritis is more common in Nordic countries and that it is also more disabling there. Eating well and physical activity variables reduced the risk significantly for South European men, adding once again to the evidence of the positive dietary effects in the region. Fracture was an important confounding factor for both men (2,46) and women (1,61), and it remained significant throughout all models - also among those who have not had the condition.

Among those who do not have arthritis, all regions and both sexes were similar in their intermediate disability risk. Among those having arthritis, the risk was highest among women from Hungary (2,01 times higher than the risk of Scandinavian women). Smoking and drinking problems explained much of the initially higher disability risks for Estonian women and Polish men, eating well and moderate physical activity reduced the disability risk among Francophone women and German-speaking men, while education explained much of the differences for Polish and Slovenian women. Co-morbidities were important in explaining the risk differences for Slovenian men.
Fracture remained again a significant confounding factor for both men (2,35) and women (2,19) in all models, also for those who have not had arthritis.

Complex disability risk from arthritis was most pronounced among the women from Estonia (4,03 times higher risk of Scandinavian women with the condition), Hungary (3,21), Slovenia (2,35), Poland (2,09) and South Europe (1,91). All these countries had a higher prevalence of co-morbidities with one and more conditions within arthritis. All other regions performed similar to Scandinavia. Among men, only Estonians had a significantly higher (1,98 times) complex disability risk from arthritis than Scandinavian men. Education explained much of the risk differentials for Polish men, confirming education as an important factor for explaining the disability risk differentials in Poland for all three chronic conditions. Also among those who have not had arthritis, only Estonians of both sexes remained with a significantly higher complex disability risk compared to Scandinavians, meaning that the disability risks were high in Estonia for those with and without this condition. This finding implies structural problems for this country, e.g. in the care system, and the controlled variables were not able to explain the complex disability risk to a complete extent.
In the case of complex disability, fracture was an important confounding factor only for men (1,61) while it did not matter for women throughout all models. Therefore fracture is an important confounding factor in basic and intermediate disability among women, while for men it is more important in complex disability.

Discussion

In this paper, three types of disabilities and their association with heart attack, stroke and arthritis were explored and how they affect people in different welfare state regimes. We found larger regional disability risk differentials among women than men for all three chronic diseases, but especially for heart attack and stroke. This finding suggests that disablement in old age concerns firstly women: They underly a higher disability risk especially at the complex or cognitive level – while women survive, men do not live long enough to develop a complex disability because mental skills tend to deteriorate among the age group 80+. Alternatively, women could have a higher chance of staying at home rather than in a care institution when their mental capabilities decrease which would make them more likely to appear in our sample. The fact that men in all regions performed similarly to Scandinavians in case of heart attack as well as stroke suggests that cardiovascular reasons are behind these differentials. Also, for men's disability risks the welfare system does not make a difference – they do evenly good or bad with or without having the condition in almost all cases.

The disabling impact of stroke was most pronounced at the complex disability level among women and most regions showed the biggest deviations from the Scandinavian level of disability in this case. However, the included variables did not reduce the complex disability risk from stroke among women, suggesting that there are unobserved characteristics that influence this kind of disability even more. Estonia and Slovenia indicated a very small number of cases in this group, meaning that older people with complex disability from stroke might be in general a very small and selective group. Due to having to remove the nursing home variable, it is possible that people disabled on a complex level from stroke live in nursing homes (at least in countries where such services are more available), which excluded them from our sample.

Eating and moderate physical activities were the main factors reducing the disability risk from heart attack, stroke and arthritis for basic levels among women in the Southern Europe, Poland, Slovenia and Estonia and intermediate levels in Southern Europe. Education reduced the disability risks additionally for women in Poland (basic level) and Southern Europe (intermediate level). Men's reduced disability risks from stroke (at any level) could be explained to a large extent by smoking and drinking habits as well as other co-morbidities, besides eating well and being engaged in moderate physical activity.

The association of complex and intermediate disability with heart attack was very likely to be higher than in Scandinavia among elder European women than among men. For women, smoking and drinking habits also played an important risk-reducing role in the German-speaking, the Francophone countries and Poland. In all of the regions, co-morbidities, eating well and engagement in moderate physical activity were the main explaining variables for country differentials. For men, these factors were the only risk reducing factors in the case of all three disability levels.

Arthritis is a different type of disability, and despite having high prevalences in some regions, this disability is not as fatal as heart attack and stroke can be. Even so, suffering from arthritis can influence one's quality of life to an important extent. In most regions, eating well and moderate physical activities, co-morbidities as well as controlling for smoking and drinking habits reduced the disablement risk from arthritis significantly among men and women. Except for Estonian men who remained with a significantly higher complex disablement risk. For arthritis, Scandinavia was not the best reference group as it did not perform as well as for heart attack and stroke: other regions among both the disability risk with and without arthritis displayed considerably lower risks, even when controlling for all covariates.

Diabetes was the main confounding factor for women with basic, intermediate and complex disability as well as for men with intermediate disability from heart attack. It was also the most significant confounding factor for women with basic and intermediate disability from stroke as well as for men with intermediate level of stroke. Fracture remained the most important confounding factor for women with basic and medium disability as well as men with any disability level from arthritis.

In correspondence to the development of health transition and the cardiovascular revolution in Europe, most of the East European countries were more likely to develop disabilities from heart attack, stroke and arthritis than Scandinavians, German-speaking and Francophone populations. South European women showed higher chances of having a complex disability associated with heart attack, a basic disability risk associated with stroke and complex disability associated with arthritis. These findings reflect that Southern Europe is going through the cardiovascular revolution later than Northern- and Western Europe, but earlier than most of the East European countries. Also, there were large differences in the disability prevalences between different age groups in this region. This suggests that these conditions have not been diagnosed or treated so well among the older South Europeans. It also indicates that these groups have not moved to nursing homes which makes them more likely to be present in our sample. Education was an important factor in reducing several disability risks in Southern Europe. This fact refers to big societal, possibly even occupational differences in disability risks in Southern Europe compared to other regions. Besides this region, German-speaking men, who did not have a heart attack, indicated a higher basic disability risk than Scandinavian men without stroke.

East European men showed the least prevalences for each disability level and all three conditions. However, this refers mostly to fewer men being alive in these regions at older ages and therefore not developing complex disability levels. The Czech Republic showed the smallest disability risks among the East European countries, while Estonia and Hungary showed the highest disabling risks for different conditions compared to Scandinavians. Men from the Czech Republic were subject to a significantly lower basic disability risk from heart attack as well as arthritis than Scandinavian men with the corresponding diseases. The Czech's better advancement is probably related to several factors – on one hand, the health transition began more recently than in Scandinavia, and thus the region advances at a faster pace and with a stronger intensity than Scandinavia did during its transition. On the other hand, the Czech Republic is more universalistic and its generous welfare funding might have influenced the disability outcomes in a positive way. Surprisingly, despite the Slovenian's higher life expectancy (as compared to the Czechs) as well as its comparably generous welfare regime, the disability outcomes were not so favourable for Slovenian women. They showed significantly higher complex disability risks from heart attack as well as arthritis. Even among those without the conditions, Slovenian women still indicated a significantly higher complex disability risk from stroke compared to Scandinavians.

Poland follows next in terms of disability outcomes in Eastern Europe: women underly a higher basic disability risk from heart attack, stroke and arthritis as well as a higher complex disability risk from arthritis. Similarly to Southern Europe, education reduced several disability risks for the Polish, meaning there might be societal inequalities influencing the access to care by different population groups. Like in other Eastern European countries, smoking is strongly influencing the Polish population's disability risks. This is related to a high proportion of smokers in this country. As the Polish care system focuses primarily on informal care due to a relative lack of formal care or not being affordable, but also due to preferring family support to institutions, it is likely that our sample is biased towards more disabled Polish women being at home, and thus available for interviews. Our findings support the strong filial commitment common in the Polish society, and to a lesser extent also in Southern Europe and Estonia.

Hungary, despite its relatively good economic development over the last 20 years, still, together with Estonia, fares worst in terms of disability outcomes from chronic diseases. Hungarian and Estonian women and men tended to be disabled most likely at any level and from all conditions. Even after country differentials disappear among men in most cases, Hungarian and Estonian men still remained with significantly higher complex disability risks from stroke as well as arthritis. Men from these two regions showed higher prevalences of hypertension and fracture, which are important confounding factors for stroke and arthritis, but the health and care situation in these countries is worst according to our findings. The relatively bad health situation in Hungary and Estonia is reflected in their lower life expectancy, but has probably also been influenced by more liberal care regimes during the societal transitions, with small institutional support, but also lack of filial care.

We can confirm Scandinavia's best disability outcomes for those with and without a heart attack and stroke, but Scandinavia's disability outcomes are not so advanced in the case of arthritis. Among the already known regions, the conservative cluster, consisting of the German-speaking and Francophone region, fare worse than the social-democratic Scandinavians and the East European region. The East European countries' performance correlates highly with the legacy from the Soviet or communist era combined with the more recent societal transitions. The Czech Republic shows the most preferable outcomes – in some cases it even surpasses Scandinavia – having the direction of development headed towards the social-democratic system. Slovenia and Poland can be found in a medium position and are close to conservative ideas – albeit Poland faring worse. That might be the effect of Poland's liberal incentives. The strongest liberal incentives as well as influence from the past, though, can be found in Hungary and especially Estonia – which fare worst in terms of health as well as care situation.

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Appendix 1. Tables and figures

Table 1. Prevalences by main control variables and regions, women, weighted data

	Scandinavian	German-speaking	Francophone	Southern	CZ	PL	SI	HU	EE
Age in 5yr groups									
50-54	13,6	11,7	18,9	17,4	19,4	12,2	18,5	15,8	19,8
55-59	19,3	19,9	15,3	13,2	15,9	21,8	16,6	18,9	13,8
60-64	19,3	15,7	16,4	15,8	17,3	20,1	15,3	16,5	14,6
65-69	14,4	12,7	11,7	13,1	16,5	12,0	11,8	15,1	13,2
70-74	11,3	15,3	11,3	12,6	9,6	12,8	12,4	11,9	14,0
75+	22,1	24,6	26,4	28,0	21,3	21,2	25,4	21,9	24,6
Partner in Household									
no	38,5	39,3	38,1	39,2	42,0	42,2	49,2	53,5	56,3
yes	61,5	60,7	61,9	60,8	58,0	57,8	50,8	46,5	43,7
Educational Status									
low	42,6	22,2	48,1	76,4	43,6	42,9	44,2	44,0	6,1
medium	26,8	52,9	28,3	12,7	46,1	41,6	40,4	43,8	71,1
high	26,8	22,4	20,5	9,5	8,8	5,2	15,4	12,2	22,7
99	3,8	2,5	3,2	1,4	1,5	10,3	0,0	0,0	0,0
Smoking Status									
never	44,3	61,6	66,6	74,0	62,9	51,6	74,3	65,0	71,6
yes	19,4	17,2	13,2	12,2	20,3	21,5	12,4	18,1	13,5
quit	33,9	19,7	18,1	13,2	15,9	19,1	13,3	17,0	14,9
99	2,4	1,5	2,0	0,6	0,8	7,8	0,0	0,0	0,0
Ever had drinking problem?									
no	83,1	77,0	79,7	80,1	76,0	49,2	88,1	67,7	70,8
yes	1,4	1,7	1,6	0,2	0,7	0,6	0,4	0,2	1,2
99	15,5	21,3	18,6	19,7	23,3	50,2	11,5	32,1	28,0
Moderate physical activity at least once a week									
no	14,1	15,1	20,7	35,0	18,9	34,6	20,7	29,1	20,3
yes	85,9	84,9	79,3	65,0	81,1	65,4	79,3	70,9	79,7
# of Servings Milk+Egg+Meat+Fruit per week									
4x	75,7	72,0	59,3	59,9	30,4	48,6	56,5	56,2	54,0
3x	21,5	22,9	36,8	30,9	57,2	35,3	33,8	29,5	35,5
0-2	2,8	5,1	3,9	9,2	12,5	16,2	9,7	14,2	10,5

Table 2. Prevalences by main control variables and regions, men, weighted data

	Scandinavian	German speaking	Francophone	Southern	CZ	PL	SI	HU	EE
Age in 5yr groups									
50-54	9,5	14,2	19,5	21,6	22,2	9,4	25,7	19,3	25,8
55-59	26,4	21,6	18,9	14,8	19,0	29,4	18,3	21,8	17,7
60-64	20,2	16,8	18,4	16,9	18,7	22,5	16,7	18,4	16,7
65-69	17,1	15,0	13,1	14,3	17,5	13,4	13,4	16,1	13,1
70-74	10,8	14,8	10,3	12,7	9,1	9,8	10,7	8,9	11,5
75+	15,9	17,6	19,8	19,6	13,5	15,5	15,2	15,5	15,2
Partner in Household									
no	23,4	20,3	20,0	19,3	17,0	21,3	25,9	21,5	25,1
yes	76,6	79,7	80,0	80,7	83,0	78,7	74,1	78,5	74,9
Educational Status									
low	33,4	6,8	36,3	64,2	39,7	27,0	22,8	18,5	4,8
medium	33,3	57,7	36,6	23,8	42,5	52,3	58,1	65,8	73,5
high	29,3	32,3	24,8	10,6	15,7	10,1	19,0	15,7	21,8
99	4,0	3,2	2,2	1,5	2,1	10,7	0,1	0,0	0,0
Smoking Status									
never	32,5	37,2	34,4	39,6	45,4	20,3	47,6	35,4	27,9
yes	21,4	23,3	19,9	23,3	25,0	36,3	19,6	29,3	34,1
quit	43,9	37,4	44,6	36,5	28,3	36,2	32,8	35,3	38,0
99	2,2	2,1	1,1	0,6	1,3	7,3	0,0	0,0	0,0
Ever had drinking problem?									
no	84,9	78,1	84,1	82,1	79,5	63,9	84,9	74,1	66,2
yes	5,0	7,5	5,9	1,6	4,1	6,6	2,6	5,5	12,3
99	10,1	14,4	9,9	16,3	16,4	29,5	12,4	20,4	21,4
Moderate physical activity at least once a week									
no	10,0	14,8	14,5	23,0	17,4	27,9	19,2	25,3	16,1
yes	90,0	85,2	85,5	77,0	82,6	72,1	80,8	74,7	83,9
# of Servings Milk+Egg+Meat+Fruit per week									
4x	75,4	73,9	65,0	62,9	32,6	46,7	54,1	56,1	57,6
3x	21,5	20,5	30,7	28,2	50,8	35,5	34,7	29,8	32,0
0-2	3,1	5,5	4,2	8,9	16,6	17,9	11,2	14,0	10,4

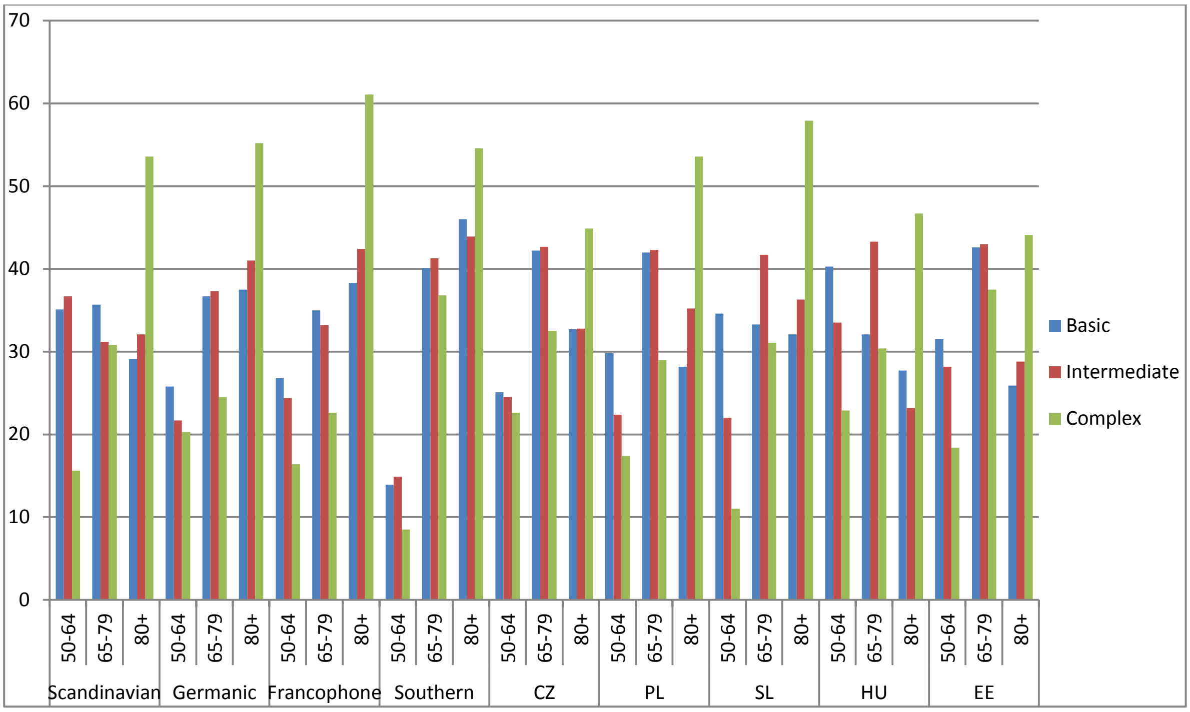

Figure 3. Prevalences of three disability levels by age group among women, weighted data

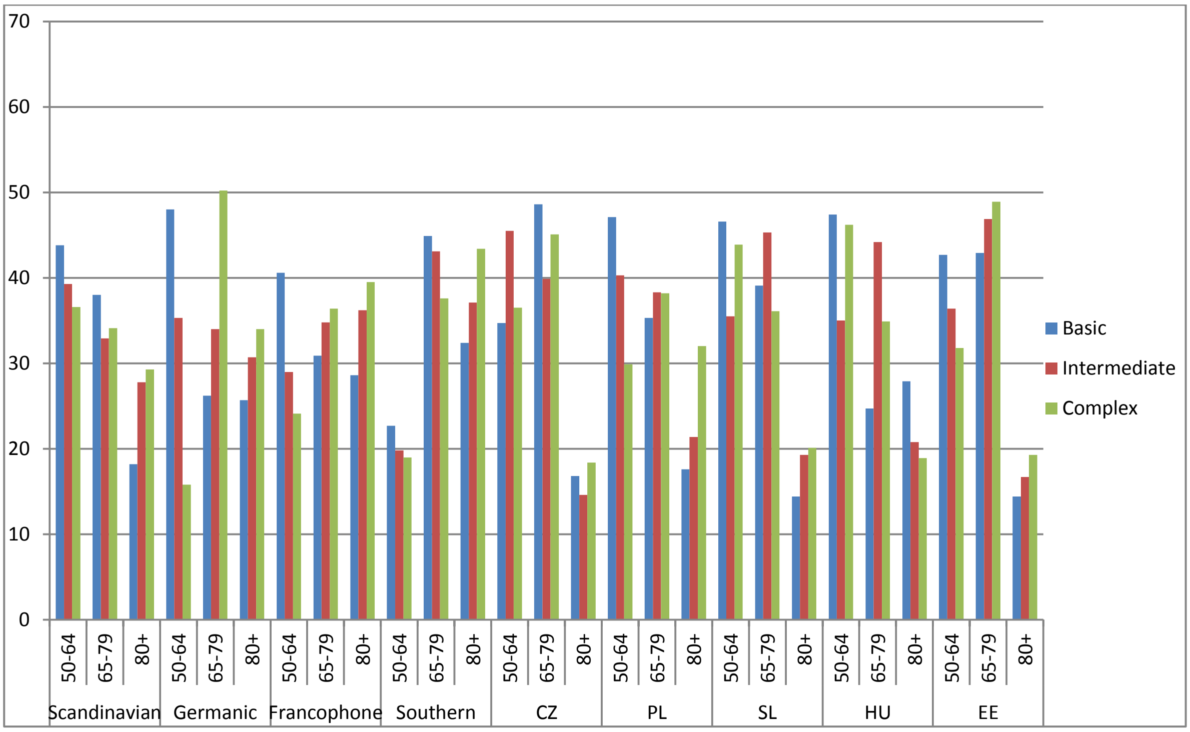

Figure 4. Prevalences of three disability levels by age group among men, weighted data

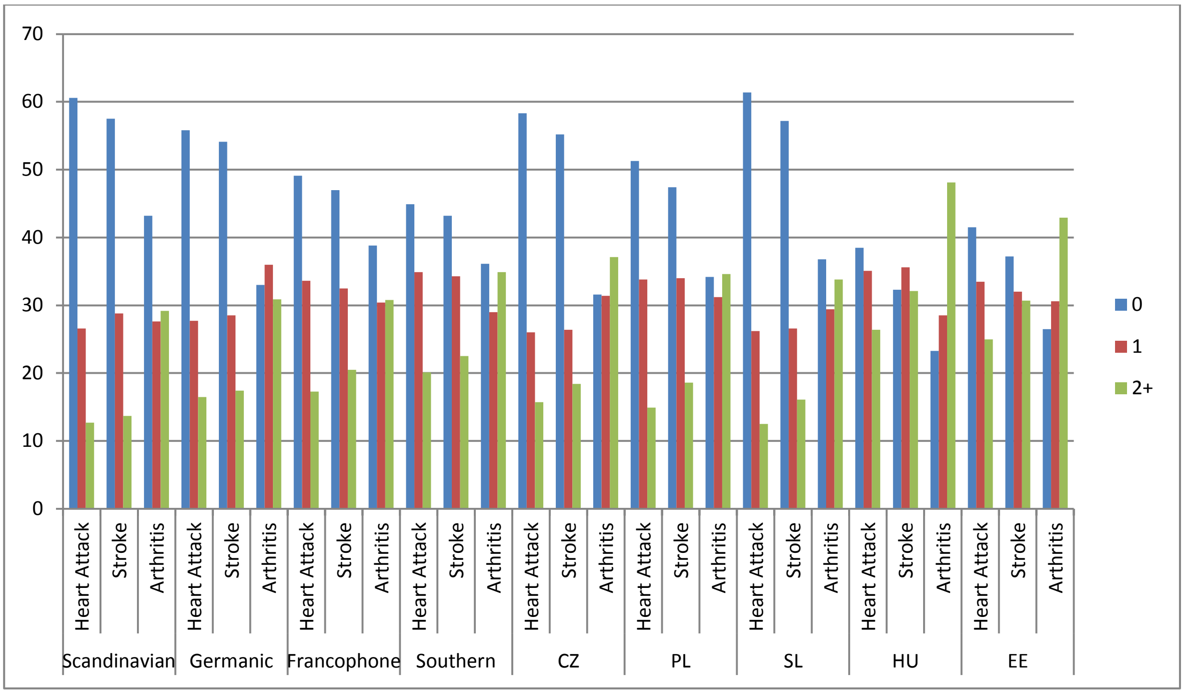

Figure 5. Prevalence of co-morbidities by chronic conditions, weighted data

Table 3. Disability risks for three levels from heart attack for women, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**						**Complex**					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	2,24*	2,26*	2,26*	1,98*	1,84	1,84	1,29	1,44	1,46	1,31	1,23	1,23	0,78	0,82	0,82	0,63	0,54	0,45
Fr	2,02*	2,02*	2,02*	1,75	1,77	1,53	1,86**	1,77**	1,79**	1,62*	1,65*	1,44	2,62*	2,52*	2,55*	2,13*	2,13	1,74
S	3,48***	3,43***	3,45***	3,01***	3,11***	2,34**	2,77***	2,44***	2,49***	2,24***	2,34***	1,64	5,93***	5,25***	5,32***	4,46***	4,46***	3,04**
CZ	1,67	1,65	1,64	1,41	1,36	1,29	2,44***	2,34***	2,33***	2,12**	2,09**	1,88*	1,66	1,66	1,65	1,42	1,34	1,05
PL	4,00***	3,85***	3,85***	3,73***	3,27***	2,55**	1,70*	1,67*	1,66	1,59	1,41	0,92	4,55***	4,19***	4,17***	3,76***	3,24**	2,00
SI	1,64	1,64	1,62	1,57	1,67	1,49	2,29***	2,29***	2,23***	2,26**	2,46***	1,98*	3,17**	3,33**	3,29**	3,19**	3,29**	2,64*
HU	2,46**	2,43*	2,39*	2,05*	2,03*	1,39	6,08***	5,70***	5,49***	4,79***	4,94***	3,18***	6,49***	6,36***	6,18***	5,47***	5,26***	3,24**
EE	3,70***	3,79***	3,75***	2,82***	2,64***	2,49***	2,99***	3,59***	3,49***	2,72***	2,63***	2,32***	4,77***	6,41***	6,32***	4,82***	4,45***	3,82***

Table 4. Disability risks risks for three levels from stroke for women, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**					**Complex**						
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	0,74	0,74	0,75	0,84	0,72	0,71	0,77	0,89	0,93	1,00	0,88	0,88	4,18*	4,96*	5,17*	5,78*	5,25*	5,51*
Fr	0,82	0,83	0,83	0,68	0,76	0,65	0,78	0,76	0,78	0,62	0,69	0,61	4,47**	4,63**	4,63**	4,22*	4,40*	3,94*
S	4,19**	4,14**	4,16**	4,91**	5,34**	3,67*	2,94*	2,66	2,72	3,13	3,38*	2,19	11,76***	11,04***	11,05***	11,80***	11,59***	7,31**
CZ	0,77	0,77	0,77	0,67	0,69	0,66	0,84	0,81	0,84	0,76	0,78	0,64	5,84**	6,16***	6,19***	5,86**	5,70**	4,74**
PL	4,30**	4,18**	4,23**	4,26**	4,16**	2,87*	3,18	3,45	3,64	3,23	3,11	1,97	14,72***	15,09***	15,37***	15,64***	14,45***	8,39**
SI	1,73	1,75	1,76	2,04	2,24	1,90	1,06	1,08	1,10	1,24	1,35	1,01	7,61***	8,47***	8,53***	9,75***	9,82***	8,14***
HU	1,68	1,68	1,67	1,37	1,49	1,13	2,35	2,20	2,14	1,66	1,73	1,20	4,16*	4,47**	4,38**	3,96*	4,02*	2,78*
EE	2,15*	2,25*	2,24*	1,96	2,02*	1,77	1,55	1,89	1,85	1,61	1,68	1,37	8,87***	12,81***	12,58***	11,70***	11,32***	9,74***

Table 5. Disability risks for three levels from arthritis for women, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**						**Complex**					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	1,35	1,32	1,32	1,25	1,18	1,22	1.01	1.03	1.04	0.96	0.93	0.94	1,54	1,59	1,59	1,49	1,32	1,17
Fr	1,06	1,04	1,04	1,03	1,01	0,92	0.85	0.76	0.77	0.76	0.76	0.66*	1,79	1,62	1,62	1,60	1,53	1,24
S	1,36	1,31	1,32	1,25	1,27	1,05	1.19	0.95	0.95	0.90	0.92	0.72	3,66***	2,97***	2,98***	2,80***	2,67***	1,91*
CZ	1,00	0,98	0,97	0,90	0,88	0,85	1.27	1.14	1.12	1.02	1.02	0.87	1,87	1,81	1,79	1,64	1,55	1,19
PL	3,25***	3,06***	3,06***	2,90***	2,57***	2,02**	1.52*	1.36	1.34	1.25	1.12	0.76	5,16***	4,38***	4,33***	4,03***	3,50***	2,09*
SI	1,27	1,25	1,24	1,18	1,27	1,07	1.59*	1.45	1.42	1.31	1.42	1.15	3,45***	3,28**	3,25**	3,11**	3,15**	2,35*
HU	1,97**	1,92**	1,91**	1,66*	1,58	1,32	3.51***	3.20***	3.04***	2.57***	2.48***	2.01*	6,06***	5,70***	5,53***	4,85***	4,39***	3,21**
EE	1,89***	1,88***	1,87***	1,68**	1,57*	1,50*	1.51*	1.67**	1.61**	1.42*	1.37	1.23	4,58***	5,90***	5,78***	5,20***	4,67***	4,03***

Table 6. Disability risks for three levels from heart attack for men, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						Medium						Complex					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	1,78	2,16*	2,19*	1,72	1,70	1,38	1.29	1.61	1.72	1.32	1.29	1.02	0.91	1.12	1.12	0.82	0.82	0.61
Fr	1,57	1,59	1,61	1,30	1,32	1,25	0.92	0.92	0.97	0.76	0.81	0.73	0.70	0.70	0.70	0.54	0.55	0.49
S	1,51	1,30	1,31	1,14	1,10	0,80	1.27	1.07	1.11	0.97	0.93	0.66	1.46	1.25	1.25	1.10	1.01	0.74
CZ	0,94	0,95	0,97	0,80	0,76	0,52*	1.13	1.15	1.23	1.04	0.98	0.71	0.83	0.85	0.86	0.73	0.65	0.43
PL	2,10*	2,17*	2,20*	1,72	1,40	0,86	1.51	1.56	1.68	1.29	1.05	0.66	1.92	1.87	1.87	1.53	1.11	0.63
SI	1,99*	2,07*	2,08*	1,66	1,72	1,19	2.27**	2.42**	2.46***	2.03*	2.17*	1.45	1.53	1.63	1.63	1.34	1.36	0.89
HU	1,55	1,74	1,75	0,99	0,94	0,55	2.34**	2.71**	2.81***	1.64	1.54	0.86	1.81	2.10	2.10	1.24	1.12	0.69
EE	2,95***	3,36***	3,38***	2,10***	1,77*	1,47	2.04***	2.39***	2.50***	1.52	1.25	1.04	2.59*	3.02**	3.03**	1.89	1.50	1.28

Table 7. Disability risks for three levels from stroke for men, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						Medium						Complex					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	3.11*	3.96*	4.00**	3.95*	3.41*	3.19	1.82	2.34	2.42	2.35	1.95	1.84	0.57	0.75	0.76	0.65	0.54	0.38
Fr	1.87	1.81	1.84	1.47	1.40	1.26	0.81	0.76	0.81	0.60	0.62	0.51	0.73	0.69	0.70	0.53	0.51	0.42
S	3.28**	2.77*	2.80*	2.43	2.38	1.69	2.15	1.77	1.82	1.53	1.59	1.08	2.06	1.65	1.66	1.35	1.23	0.82
CZ	1.36	1.38	1.40	1.09	1.01	0.76	1.00	1.00	1.05	0.78	0.78	0.58	1.05	1.08	1.10	0.85	0.76	0.57
PL	2.26	2.27	2.32	2.15	1.58	1.01	2.22	2.19	2.34	2.22	1.50	0.95	4.00*	3.94*	3.99*	3.67*	2.34	1.49
SI	1.85	1.90	1.90	1.88	1.93	1.78	1.03	1.06	1.07	1.04	1.16	1.07	0.85	0.86	0.87	0.83	0.81	0.69
HU	1.16	1.17	1.18	0.83	0.72	0.52	2.34	2.38	2.51*	1.81	1.60	1.18	0.84	0.84	0.84	0.58	0.46	0.34*
EE	4.03***	4.36***	4.40***	3.12**	2.48*	2.06	3.30***	3.61***	3.74***	2.57*	2.07	1.76	2.91**	3.14**	3.16**	2.22	1.63	1.32

Table 8. Disability risk for three levels from arthritis for men, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						Medium						Complex					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	2.33*	2.49*	2.49*	2.31*	2.13	1.99	2.19*	2.40**	2.44**	2.28*	2.15*	1.98	1.22	1.38	1.38	1.29	1.22	0.99
Fr	1.00	0.90	0.90	0.89	0.94	0.89	1.25	1.10	1.13	1.14	1.26	1.21	1.30	1.12	1.12	1.10	1.21	1.10
S	0.75	0.59*	0.60*	0.58*	0.60	0.46**	1.55	1.18	1.24	1.21	1.28	1.02	1.65	1.24	1.24	1.19	1.27	0.98
CZ	0.67	0.60	0.60	0.56*	0.53*	0.40**	1.81*	1.60	1.64	1.54	1.52	1.33	1.02	0.91	0.91	0.84	0.79	0.57
PL	1.39	1.27	1.28	1.27	1.02	0.69	2.39**	2.16**	2.27**	2.30**	1.78	1.24	2.42*	2.05	2.05	2.01	1.46	0.89
SI	1.21	1.18	1.18	1.04	1.02	0.88	1.90*	1.85	1.92*	1.72	1.73	1.55	1.63	1.58	1.58	1.45	1.39	1.13
HU	0.74	0.69	0.69	0.62	0.57*	0.36***	4.20***	3.96***	4.04***	3.74***	3.54***	2.65***	2.30	2.13	2.13	1.95	1.72	1.12
EE	1.34	1.35	1.35	1.32	1.11	0.92	2.55***	2.64***	2.67***	2.66***	2.20***	2.01**	2.84**	2.92**	2.92**	2.84**	2.33*	1.98*

Table 9. Disability risk for three levels without having heart attack for women, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**						**Complex**					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	1,22	1,23	1,23	1,16	1,11	1,13	1,03	1,13	1,14	1,08	1,06	1,04	1,37	1,60	1,62	1,53	1,46	1,41
Fr	1,13	1,12	1,12	0,97	0,95	0,89	1,04	1,01	1,01	0,87	0,87	0,79*	1,35	1,30	1,31	1,14	1,12	0,97
S	1,59**	1,55**	1,55**	1,29	1,31	1,05	1,33**	1,15	1,16	0,95	0,97	0,73**	2,85***	2,52***	2,53***	2,09***	2,06***	1,48
CZ	0,77	0,75	0,75	0,73*	0,73*	0,7*	1,18	1,15	1,14	1,13	1,12	1,00	1,51	1,55*	1,55*	1,51	1,46	1,20
PL	2,56***	2,43***	2,42***	2,32***	2,11***	1,64**	1,41**	1,36*	1,33*	1,26	1,15	0,80	3,46***	3,17***	3,14***	2,94***	2,7***	1,74*
SI	1,09	1,08	1,07	1,18	1,22	1,12	0,98	0,94	0,92	1,01	1,05	0,94	2,43***	2,44***	2,4***	2,65***	2,68***	2,35***
HU	1,51	1,50	1,48	1,21	1,16	1,05	2,29***	2,29***	2,21***	1,79**	1,73**	1,52*	2,33**	2,44**	2,4**	2,14**	1,99*	1,59
EE	1,65***	1,68***	1,66***	1,31*	1,23	1,19	1,33**	1,56***	1,49***	1,19	1,16	1,05	3,17***	4,2***	4,1***	3,4***	3,18***	2,88***

Table 10. Disability risk for three levels without having stroke for women, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**						**Complex**					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	1,39*	1,41*	1,41*	1,34	1,29	1,30	1,08	1,19	1,20	1,15	1,14	1,11	1,12	1,30	1,31	1,24	1,17	1,09
Fr	1,32*	1,3*	1,31*	1,13	1,11	1,02	1,18	1,14	1,15	0,99	0,99	0,89	1,45*	1,38*	1,39*	1,24	1,21	1,04
S	1,7***	1,64***	1,65***	1,39*	1,42*	1,13	1,44***	1,24*	1,25*	1,05	1,08	0,81	2,87***	2,52***	2,53***	2,19***	2,17***	1,55*
CZ	0,94	0,92	0,92	0,85	0,84	0,81	1,37**	1,34**	1,32**	1,28*	1,27*	1,13	1,29	1,32	1,31	1,23	1,18	0,96
PL	2,78***	2,65***	2,64***	2,44***	2,18***	1,71***	1,42**	1,37**	1,34*	1,21	1,11	0,77	3,26***	2,99***	2,95***	2,72***	2,44***	1,58*
SI	1,17	1,16	1,15	1,15	1,20	1,10	1,18	1,14	1,11	1,13	1,19	1,04	2,37***	2,38***	2,34***	2,38***	2,43***	2,06***
HU	1,7**	1,68*	1,66*	1,31	1,26	1,05	2,92***	2,88***	2,77***	2,18***	2,14***	1,76***	3,33***	3,39***	3,31***	2,92***	2,74***	2,02**
EE	2,09***	2,15***	2,12***	1,56***	1,46**	1,42*	1,63***	1,93***	1,85***	1,39**	1,35**	1,23	3,13***	4,15***	4,05***	3,31***	3,08***	2,71***

Table 11. Disability risk for three levels without having arthritis for women, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**						**Complex**					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	1,26	1,26	1,26	1,24	1,19	1,15	1,07	1,19	1,19	1,16	1,13	1,09	1,22	1,46	1,47	1,45	1,41	1,30
Fr	0,94	0,94	0,94	0,94	0,93	0,89	0,92	0,91	0,92	0,93	0,93	0,87	1,40	1,39	1,41	1,43	1,41	1,30
S	1,59*	1,58*	1,58*	1,61*	1,67*	1,22	1,16	1,04	1,04	1,07	1,11	0,75*	3,2***	2,95***	2,97***	3,03***	3,04***	2,04**
CZ	0,82	0,81	0,80	0,75	0,73	0,70	1,39**	1,37**	1,36**	1,25	1,23	1,10	1,52	1,56*	1,55*	1,45	1,38	1,14
PL	1,74**	1,66*	1,66*	1,66*	1,46	1,10	1,14	1,11	1,10	1,09	0,96	0,65*	2,96***	2,75***	2,72***	2,81***	2,5***	1,62
SI	1,16	1,16	1,15	1,15	1,20	1,12	1,07	1,05	1,02	1,01	1,07	0,95	2,34***	2,39***	2,35***	2,41***	2,46***	2,18***
HU	0,65	0,65	0,65	0,63	0,62*	0,51**	1,62*	1,63*	1,59*	1,51*	1,49	1,18	1,68	1,76	1,74	1,75	1,70	1,22
EE	1,69***	1,7***	1,69***	1,55***	1,46*	1,39*	1,29**	1,53***	1,47***	1,33*	1,29*	1,14	2,98***	4***	3,91***	3,63***	3,4***	2,94***

Table 12. Disability risk for three levels without having heart attack for men, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**						**Complex**					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	2,03***	2,32***	2,33***	1,95**	1,8*	1,76*	1,18	1,39	1,40	1,15	1,04	1,00	1,05	1,25	1,25	1,03	0,92	0,90
Fr	1,5**	1,44*	1,45*	1,22	1,24	1,13	1,08	1,03	1,05	0,87	0,91	0,79	1,30	1,23	1,23	1,05	1,07	0,92
S	1,10	0,91	0,91	0,77	0,78	0,62**	1,05	0,85	0,88	0,73*	0,72*	0,57***	1,29	1,04	1,04	0,87	0,85	0,67
CZ	0,83	0,77	0,78	0,67*	0,65*	0,52***	1,42*	1,34	1,39*	1,24	1,18	1,03	1,19	1,14	1,14	1,01	0,93	0,73
PL	2,46***	2,29***	2,29***	1,99***	1,63*	1,16	2,17***	2,02***	2,04***	1,8**	1,36	0,96	2,4***	2,12**	2,12**	1,93**	1,39	0,88
SI	1,27	1,26	1,26	1,09	1,08	0,95	1,55**	1,58**	1,59**	1,39	1,39	1,26	1,56	1,59	1,59	1,38	1,32	1,16
HU	1,77*	1,73*	1,73*	1,28	1,17	0,91	3,11***	3,13***	3,17***	2,46***	2,15***	1,84**	2,59	2,55	2,55	1,92	1,63	1,24
EE	2,03***	2,19***	2,18***	1,37	1,16	1,05	1,95***	2,18***	2,17***	1,37*	1,10	1,04	2,99***	3,3***	3,3***	2,13***	1,76**	1,6*

Table 13. Disability risk for three levels without having stroke for men, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**						**Complex**					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	1,89***	2,19***	2,2***	1,95**	1,83**	1,7*	1,12	1,34	1,37	1,17	1,09	1,00	1,12	1,35	1,36	1,20	1,11	1,03
Fr	1,56***	1,51**	1,52**	1,31*	1,32*	1,21	1,13	1,09	1,11	0,93	0,96	0,85	1,28	1,23	1,23	1,07	1,09	0,95
S	1,08	0,89	0,90	0,81	0,82	0,65**	1,05	0,85	0,88	0,78	0,76	0,6***	1,32	1,07	1,07	0,99	0,96	0,76
CZ	0,76	0,71*	0,72*	0,65**	0,63**	0,5***	1,38*	1,32	1,38*	1,25	1,19	1,01	1,01	0,97	0,98	0,91	0,84	0,65
PL	2,41***	2,26***	2,27***	2,01***	1,68**	1,18	2,01***	1,88***	1,92***	1,7**	1,33	0,92	2,08**	1,84*	1,85*	1,69*	1,25	0,78
SI	1,42*	1,43*	1,43*	1,24	1,25	1,00	1,88***	1,93***	1,94***	1,68***	1,69***	1,39*	1,84*	1,9**	1,9**	1,69*	1,64*	1,30
HU	1,79*	1,81*	1,81*	1,36	1,26	0,89	3,02***	3,16***	3,21***	2,4***	2,14***	1,6*	2,84*	2,91*	2,93*	2,34	2,05	1,43
EE	1,98***	2,17***	2,17***	1,5**	1,28	1,13	1,82***	2,06***	2,08***	1,38*	1,12	1,03	2,62***	2,95***	2,96***	2,16***	1,78**	1,63*

Table 14. Disability risk for three levels without having arthritis for men, weighted data (*** p<0,001, ** p<0,01, * p<0,05)

	Basic						**Medium**						**Complex**					
	M1	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**	**M1**	**M2**	**M3**	**M4**	**M5**	**M6**
D	1,57*	1,78*	1,79*	1,68*	1,54	1,43	0,97	1,14	1,16	1,08	0,97	0,88	0,89	1,07	1,07	1,02	0,90	0,83
Fr	1,33	1,31	1,31	1,25	1,26	1,12	0,89	0,88	0,90	0,85	0,86	0,73*	1,02	1,00	1,00	0,96	0,96	0,81
S	1,07	0,91	0,92	0,88	0,87	0,69*	0,86	0,72*	0,74*	0,7*	0,67**	0,53***	1,14	0,95	0,95	0,92	0,87	0,69
CZ	0,82	0,78	0,78	0,72	0,69*	0,52***	1,30	1,26	1,31	1,19	1,12	0,92	1,08	1,06	1,06	0,97	0,89	0,65
PL	2,24***	2,11***	2,12***	2,21***	1,8**	1,20	1,77**	1,67**	1,68**	1,79**	1,36	0,90	2,18**	1,98**	1,98**	2,09**	1,51	0,90
SI	1,35	1,36	1,36	1,28	1,28	1,00	1,57**	1,62**	1,62**	1,53**	1,54**	1,23	1,44	1,49	1,49	1,42	1,39	1,06
HU	1,85	1,89*	1,89*	1,74	1,51	1,11	2,25***	2,37***	2,41***	2,24***	1,86**	1,44	2,29	2,42	2,42	2,27	1,86	1,31
EE	1,81***	1,95***	1,95***	1,78***	1,46*	1,27	1,55***	1,75***	1,75***	1,58**	1,23	1,10	2,63***	2,99***	2,99***	2,74***	2,16***	1,89**