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Huijts T, Stornes P, Eikemo TA, Bambra C, The HiNews Consortium.  
[Prevalence of physical and mental non-communicable diseases in Europe: Findings from the European social survey \(2014\) special module on the social determinants of health.](#)  
*European Journal of Public Health* 2017, 27(Suppl. 1), 8-13.

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<https://doi.org/10.1093/eurpub/ckw232>

**Date deposited:**

27/02/2017

**Embargo release date:**

23 August 2017



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**Prevalence of physical and mental non-communicable diseases in Europe: results from the European Social Survey (2014) special rotating module on the social determinants of health**

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## **Abstract**

### ***Background***

Previous studies examining physical and mental non-communicable diseases (NCDs) in Europe have so far largely either focused on limited numbers of countries or on fairly limited ranges of NCDs, with mental health in particular often being ignored. This paper has three aims: (1) To provide a recent, comprehensive overview of a broad range of NCDs across a range of countries in all European regions; (2) To give an overview of measures of physical and mental health in the new special rotating module in the European Social Survey; and (3) To offer the first comprehensive comparison of estimates on physical and mental NCDs across European countries in this new promising data source.

### ***Methods***

We use data from the 7<sup>th</sup> wave of the European Social Survey. Results are presented separately for men and women. All results were age-standardised by weighting up or down the unstandardized (crude) prevalence rates for five year age groups in each country to a common standard. We present pooled estimates for the combined cross-national sample as well as country-specific results.

### ***Results***

Overall, 74.1 percent of men and 79.7 percent of women reported at least one physical NCD. Across the 21 countries observed these percentages varied between 45.2 percent (for men in Hungary) and 91.6 percent (women in Finland). Serious depressive symptoms were reported by 10.2 percent of men and 18.8 percent of women, with percentages ranging between 6.2 percent (men in Ireland) and 30.9 percent (women in Portugal).

### *Conclusions*

A substantial share of Europeans experience the burden of NCDs, and the extent to which people report these conditions varies across countries. However, all physical and mental NCDs in this rotating module are reported by considerable percentages in each of the 21 country samples, which emphasizes that these conditions are not marginal phenomena but public health concerns.

Key words: NCDs; mental health; social determinants of health; Europe

## **Introduction**

The burden of non-communicable diseases (NCDs) is currently the main cause of death in Europe, and this applies across socioeconomic groups, genders and age groups.<sup>1-4</sup> Within high-income countries, poor as well as young and middle-aged people are affected by chronic conditions related to non-communicable diseases.<sup>2</sup> NCDs such as cancer and cardiovascular disease now account for over 50% of deaths globally and around 75% in Europe. NCDs are characterised by slow development, long morbidity period and multiple causes. Communicable diseases now account for less than 3% of all deaths in high income countries, whilst in contrast, cancers account for 25% and cardiovascular disease accounts for 38%.<sup>1</sup> Likewise, the significant contemporary causes of ill health and disease (or morbidity) are largely chronic in nature such as diabetes, obesity, mental health or musculoskeletal problems. Additionally, NCDs depress earnings, wages, workforce participation and labour productivity, and increase job turnover, early retirement, and disability.

Like physical NCDs, mental health problems are also increasingly recognized as a major public health issue.<sup>1</sup> Worldwide, depression has gained increasing salience as a leading illness and plays a substantial part in poor general well-being and lower quality of life. Additionally, psychological discomfort is not only a cause of personal suffering, but also leaves a substantial impact on the immediate environment (e.g. family relationships) and on societies more generally. For example, mental health problems also have a considerable economic cost. Mental health issues contribute significantly to absenteeism and reduced productivity at work.<sup>5,6</sup> Moreover, the total expenditure for mental healthcare has increased in most industrialized countries.<sup>7</sup>

Because NCDs are the leading cause of mortality in the region it is evident that the research interest and policy impact of analyses of NCDs is very high in Europe. However,

research at the individual level examining a variety of physical and mental NCDs in Europe is scarce. This is largely due to the lack of cross-nationally comparable data on a wide range of physical and mental conditions. Previous studies examining physical and mental NCDs in Europe have so far largely either focused on limited numbers of countries or on fairly limited ranges of NCDs, with mental health in particular often being ignored. Additionally, although physical and mental NCDs are prevalent across all social strata, the literature on the social determinants of health has emphasized that they occur more in some groups than in others and are strongly influenced by people's social background and living conditions.<sup>8,9</sup> One core example can be found in the role of gender: most physical NCDs are more common among women than among men, and women generally have a greater risk of mental illness than men.<sup>10</sup>

The new special rotating module on the social determinants of health in the 7th wave of European Social Survey (ESS; 2014)<sup>11</sup> provides the opportunity to obtain a more comprehensive overview of the prevalence of physical and mental NCDs in countries across all regions in Europe, and to establish to what extent there are gender differences in these conditions in each of these countries. Although earlier waves of the ESS already included some questions on mental health and general physical health, the new rotating module is unique because it also contains a range of self-reported specific physical conditions and measures of height and weight. All in all, this paper therefore has three aims: (1) To provide a recent, comprehensive overview of a broad range of physical and mental NCDs across a range of countries in all European regions; (2) As such, this paper also aims to give an overview of measures of physical and mental health in the new special rotating module in the ESS; and (3) The paper offers the first comprehensive comparison of estimates on physical and mental NCDs across European countries in this new promising data source. We analyse

men and women separately to do justice to the gender differences in physical and mental NCDs that we are expecting to find in these new data based on previous research.

## **Methods**

### *Data*

We focus on the 7<sup>th</sup> wave of the European Social Survey.<sup>11</sup> This particular wave contains a special rotating module on social inequalities in health and their determinants, and includes information on individuals on 20 European countries and Israel: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Hungary, Ireland, Israel, Lithuania, Netherlands, Norway, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland and UK. Data was designed to be representative for the full non-institutionalised population aged 15 and over living in each country (including both citizens and non-citizens). Information was gathered by conducting face to face interviews in people's homes. The full questionnaire that was used and more information on the data collection can be found on the ESS website: <http://www.europeansocialsurvey.org/>. Below we describe the measurements used to obtain estimates of health outcomes and their social determinants in this paper, and the process of recoding the original items to derive comparable summary estimates. For further explanation of the process and rationale behind the special rotating module on the social determinants of health and the design of the questionnaire and measurements included in this rotating module we refer to Eikemo and colleagues.<sup>12</sup>

### *Measurements*

All waves of the ESS have included two health outcomes: self-rated health and limiting longstanding illness. Although these measures are not part of the rotating module on the social determinants of health in the 7th wave, we present prevalence estimates for these outcomes as well in this paper. This allows us to assess whether general patterns of cross-national variation in health in the 7th wave of the ESS are comparable to those observed in earlier waves of the ESS.<sup>13-15</sup> Self-rated health was measured by asking respondents ‘How is your health in general?’. There are five answering categories: ‘Very good’, ‘Good’, ‘Fair’, ‘Bad’ and ‘Very bad’. We created a dichotomous variable to represent poor self-rated health, contrasting respondents with fair, good or very good health with people with poor or very poor health. To measure limiting longstanding illness, respondents were asked whether they are hampered in their daily activities in any way by any longstanding illness, or disability, infirmity or mental health problem. Answering categories are ‘No’, ‘Yes, to some extent’ and ‘Yes, a lot’. Again we created a dichotomous variable, now contrasting respondents with no limiting longstanding illness with respondents who are hampered by longstanding illness (either to some extent or a lot). These operationalisations are in line with earlier work on social inequalities in health using previous waves of the ESS.<sup>13-16</sup>

The rotating module also included a measure of mental health that was already included in the 3<sup>rd</sup> and 6<sup>th</sup> waves of the ESS. A depression scale was created by using the CES-D 8 (Centre for Epidemiologic Studies-Depression 8), containing 8 questions asking how often respondents have felt like this in the past week (i.e., felt depressed; felt everything was an effort; sleep was restless; was happy; felt lonely; enjoyed life; felt sad; and could not get going).<sup>17-19</sup> The items were scored on a 4 point Likert scale, ranging from “None of the time”, “Some of the time”, “Most of the time” to “All of the time”. The items were recoded with a range of 0 through 3, and respondents with inconsistent answering patterns (e.g., similar scores on positively and negatively phrased items) were removed from the sample.



The values on happiness and enjoying life were reversed to reflect higher values indicating higher degrees of depressive feelings. The result was a 24 point depression scale, named *depression\_scale*. There were only 1.5% missing values in the sample. Mean imputation was applied if respondents reported valid answers on at least 5 out of 8 items. The scale had a Chronbach's alpha of 0.81 for the sample. For this paper, we used a dichotomized measure capturing serious depressive symptoms following earlier studies, where values 0 through 9 were coded as below the depression cutoff point, and values 10-24 above.

In addition to these outcome measures, the rotating module in the 7<sup>th</sup> wave of the ESS also contains a number of health outcomes that were not included in any of the earlier ESS waves. Most importantly, respondents were asked to tick on a showcard whether they experienced one or more of the following eleven different health conditions in the last 12 months: muscular or joint pain in the hand or arm; muscular or joint pain in the foot or leg; back pain; heart or circulation problems; high blood pressure; allergy; breathing problems; stomach problems; skin conditions; diabetes; and severe headaches. In addition to separate estimates for each condition, we also present estimates on the percentages of respondents who reported one condition and at least two of the conditions listed here. Data for Estonia were not available for these conditions. Finally, for each of the eleven conditions separately, respondents were asked if they were hampered in their daily activities by this condition. Since the items on being hampered were conditional upon there being an underlying condition, we decided not to present estimates on these items in this paper. Additionally, a separate question was included on cancer due to its sensitive nature, asking respondents on a showcard whether they currently, previously, or never had cancer. In this paper we show separate estimates of the percentage of people experiencing cancer currently and previously. For Czech Republic the data do not contain information on cancer.

Finally, respondents' Body Mass Index (BMI) was measured by asking respondents for their height and weight. The BMI was calculated using the standard formula ( $BMI = \text{weight} / ((\text{height}/100)^2)$ ), and the resultant BMI estimates were split following the National Health Service (NHS) guidelines<sup>20</sup> to determine whether the respondent was underweight, ideal, overweight, obese or very obese. In this paper we present estimates for the total percentage of people who are overweight, obese or very obese (i.e., a BMI of 25 or higher).

### *Analysis*

To compute estimates we used the full sample of the ESS without any age restrictions. Results are presented separately for men and women. All results were age-standardised by weighting up or down the unstandardized (crude) prevalence rates for five year age groups in each country to a common standard. We have weighted the age groups in accordance with the European Standard Population (ESP) of 2013.<sup>21</sup> This is a revision of the commonly used 1976 ESP, which accounts for the fact that the European population is ageing. The ESP 2013 is readily available in spreadsheet format from ISD Scotland.<sup>22</sup> Furthermore, data were weighted by using the poststratification weights (*pspwght*) in the ESS to account for different sampling designs and selection probabilities between different countries in the sample. The pooled estimates were additionally corrected for different population sizes between countries by using the population weights in the data (*pweight*). We present pooled estimates for the combined cross-national sample as well as country-specific results. Countries are roughly grouped by geographical regions in the tables to highlight the regional clustering of estimates that we find for several of the items. For each item we present percentages as described above.

## Results

Table 1 shows cross-national variation in self-reported NCDs. Overall we see that all conditions affect substantial percentages for most countries in the sample, yet for most conditions we also see considerable differences across countries. About 10 percent of respondents in the sample report heart and circulation problems during the past 12 months. This percentage is generally lower in Northern Europe (with the exception of Finland), and particularly high in Lithuania and Poland. High blood pressure is reported by over 18 percent of the respondents, with even higher percentages especially in Germany, Lithuania and Slovenia. Breathing problems affect about 10 percent of the sample, and in this case percentages in Central and Eastern Europe are relatively low. Allergies appear to be particularly problematic in Northern Europe. For back pain, arm pain and leg pain it is clear that large shares of the sample have experienced these conditions in the past year, with back pain being reported by more 50 percent in some countries. We do not find clear patterns of regional variation here. The same applies to stomach problems, which overall affect almost one fifth of the sample. Skin problems are reported by almost 10 percent, and are particularly high in Finland and relatively low in Central and Eastern Europe. For severe headaches we see a strong gender gap, and percentages in Germany, France and Portugal reporting this condition are more than three times higher than in Ireland. About 6% of the sample report diabetes, and there is no clear pattern of cross-national variation for this condition. Combining information on all conditions we see that in nearly all countries more than half of the sample reports either one or even two or more conditions for the past 12 months. For women in Finland, France and Germany this percentage is close to 90, meaning that only a small minority did not experience any of these conditions. For cancer we see that around 4 percent currently suffer from this condition, whereas around 6 percent have experienced

cancer previously. There are no clear patterns of cross-national variation here, but Norway and Sweden stand out with low current percentages reporting cancer but the highest percentages of women who experienced cancer previously.

[Table 1 about here]

In Table 2 we report results for the other health outcomes in the data. Estimates for poor or very poor self-rated health mirror figures from studies based on earlier waves of the ESS, with low percentages in Ireland and Switzerland and the highest scores in Estonia, Hungary and Lithuania.<sup>13,16</sup> The same applies to the percentage of respondents who are hampered at least to some extent by longstanding illness, although here Lithuania and Slovenia are the countries where the highest percentage reports problems. Looking at the percentage of people reporting serious depressive symptoms (i.e., scale scores above the depression threshold), we find a clear gender gap which is in line with studies on mental health in Europe based on earlier waves of the ESS. The low percentages reporting serious depressive symptoms in Finland, Norway and Switzerland and the high risk of serious depressive symptoms in Southern and Central and Eastern Europe also support earlier findings based on the ESS.<sup>18,19</sup> Finally, for overweight and obesity we find that men are much more likely to be overweight than women in our sample, and that overall more than half of the male respondents are either overweight or obese. Among women, the percentage with overweight or obesity is particularly high in Central and Eastern Europe.

[Table 2 about here]

## Discussion

In this paper we have used data from the new special rotating module on social inequalities in health in the 7<sup>th</sup> wave of the European Social Survey (2014) to derive the first comprehensive overview of physical and mental NCDs in 20 countries across all European regions plus Israel. Overall we found that all physical and mental NCDs in this rotating module are reported by considerable percentages of the 21 country samples, which emphasizes that these conditions are not marginal phenomena but public health concerns. Moreover, our results highlight that there is considerable cross-national variation in the physical and mental NCDs across European countries. This underlines the importance of comparative data and research on health problems and the social determinants of health, and the fact that generalizing findings on health problems from one European country to another can be problematic.

Overall our findings largely correspond with findings from previous (mostly single-country) studies on the prevalence of physical and mental NCDs. The prevalence of high blood pressure is fairly similar to figures reported in studies on the United States and Slovenia.<sup>23,24</sup> Allergies are reported slightly less often than in earlier research using the European Community Respiratory Health Survey.<sup>25</sup> However, this can be explained by the fact that contrary to this survey our data source also covers several countries in Central and Eastern Europe, and the reported prevalence of allergies is lower in this region than in the rest of Europe. Our figures for breathing problems are similar to those reported for COPD in various European countries, although slightly more prevalent in the Nordic countries than expected based on country differences in COPD in earlier research.<sup>26</sup> Our finding that severe headaches occur twice as often in women than in men mirrors research on Canada.<sup>10</sup> For

depressive symptoms we find a similar gender gap, in line with previous cross-national research.<sup>18,19</sup>

Percentages of people suffering from back, arm and leg pain were higher than expected based on earlier research in Cyprus and Slovenia.<sup>24,27</sup> The same applies to skin and stomach problems. However, whereas data sources used in these studies asked respondents whether they were ever diagnosed with these conditions, the ESS relies on self-reports. Given that many people experiencing back, arm and leg pain and skin and stomach problems will not seek treatment for their condition, it can be argued that the ESS exposes the experience of these problems in the European population more fully than data sources relying on diagnosis. Compared with previous international research the percentage of respondents currently or previously diagnosed with cancer is slightly lower than expected.<sup>28</sup> This may indicate that current and former cancer patients are underrepresented in our data due to cancer-related mortality and the lack of institutionalized individuals in this data source. For overweight and obesity we find that the figures observed are slightly higher for men and lower for women than those reported by the World Health Organisation, which may indicate gender differences in over- and underreporting of weight and height.<sup>29</sup> Taken together, this comparison with previous findings suggests that the new data source used in this paper forms a good basis for further examinations of the social determinants of these physical and mental NCDs in Europe in future research.

The distinction between men and women in this study has proved to be highly relevant: in line with previous research we find that the physical and mental NCDs examined here are generally more prevalent among women than among men.<sup>10,18,19</sup> The only exceptions we found are in the percentage of respondents reporting diabetes (with men being only slightly more likely to report diabetes than women), and in the percentage reporting overweight or obesity (which may be due to gender differences in over- and underreporting

of weight and height). The exact underlying causes of this disadvantage for women are likely to vary between specific physical and mental NCDs. Future research should aim to examine the observed gender gaps in more detail in order to explain why gender differences are larger for some outcomes than for others. In doing so, insights from the literature on social determinants of health need to be combined with perspectives on gender inequality in particular. For example, a study examining the gender gap in depressive symptoms has established that women's extent of disadvantage in mental health is not only dependent on their social position (e.g. employment and income), but also on the level of gender equity in the societies they live in.<sup>30</sup> The fact that the size of the gender gaps in the prevalence of physical and mental NCDs varied strongly across countries for most indicators underlines that social rather than merely biological factors are at the root of gender differences in NCDs and require further examination.

This paper provides a unique recent overview of estimates of physical and mental health in all European regions. Nonetheless, there are some limitations to the data presented here. Firstly, all measures included here are self-reported. For some measures respondents (e.g. height and weight) may have reported rough estimates rather than exact values. Related to this issue, although great effort has gone into maximizing cross-national comparability of the survey questions due to extensive consultation with translators, survey design experts and national coordinators of the data collection teams, cross-national differences in meaning and interpretation of the questions remain an issue that cannot be tackled entirely.<sup>31-34</sup>

Secondly, because the data are based on a survey rather than on register data or other sources that cover information on the full population we cannot treat the estimates presented in this paper as population prevalence data on the health outcomes presented here. As such, caution is needed in translating the estimates presented in this paper into statements about the population prevalence of certain conditions in the countries covered. As with all surveys, it

can be questioned whether the data are fully representative for the whole population, and bias may occur due to selective unit non-response (e.g., respondents with physical or mental health problems may have been more likely to refuse participation in the survey).<sup>35,36</sup> Response rates varied across countries, and this issue may have especially affected results for countries with a relatively low response rate (e.g., Germany). Finally, it should be noted that the data only cover the non-institutionalised population, which is likely to result in underrepresentation of individuals who are institutionalised due to serious physical or mental health problems.

Thirdly, although the 7<sup>th</sup> wave of the European Social Survey captures 21 countries from all European regions, several countries were not covered. This means that the estimates presented here cannot be generalized to all European countries, and that repetition and replication of the questions included in this survey is needed to obtain a fully comprehensive overview of physical and mental NCDs in Europe.

All in all, it is clear that a substantial share of Europeans experience the burden of physical and mental NCDs, but also that the extent to which people report these conditions often depends strongly on their country of residence. Future research should shed further light on the exact role of gender and the other social determinants of these conditions<sup>8,9</sup>, and should develop and test explanations for the cross-national differences in the prevalence of physical and mental NCDs observed here. This could contribute to the further development of policy interventions in European countries to reduce the burden of non-communicable diseases.



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Table 1. Self-reported non-communicable diseases in 21 European countries (separately for men and women)

|              | Gender<br>Male/<br>Female | Heart<br>(%) | HBP<br>(%) | Breath<br>(%) | Allergy<br>(%) | Back<br>pain<br>(%) | Arm<br>pain<br>(%) | Leg<br>pain<br>(%) | Stomach<br>(%) | Skin<br>(%) | Head-<br>ache<br>(%) | Diabe-<br>tes<br>(%) | 1 of<br>these<br>(%) | 2 or<br>more<br>(%) | Cancer<br>(current<br>%) | Cancer<br>(previous<br>%) |
|--------------|---------------------------|--------------|------------|---------------|----------------|---------------------|--------------------|--------------------|----------------|-------------|----------------------|----------------------|----------------------|---------------------|--------------------------|---------------------------|
| All (pooled) | M                         | 10.3         | 17.5       | 9.3           | 10.7           | 38.0                | 21.6               | 24.3               | 14.6           | 8.3         | 10.8                 | 6.0                  | 28.0                 | 46.1                | 3.7                      | 5.1                       |
|              | F                         | 11.4         | 19.0       | 10.5          | 14.4           | 45.9                | 26.8               | 27.6               | 19.1           | 10.1        | 21.5                 | 5.6                  | 23.3                 | 56.4                | 4.0                      | 6.8                       |
| North        |                           |              |            |               |                |                     |                    |                    |                |             |                      |                      |                      |                     |                          |                           |
| Denmark      | M                         | 8.4          | 20.3       | 9.5           | 16.2           | 45.7                | 21.8               | 23.9               | 14.0           | 10.0        | 7.6                  | 6.7                  | 30.6                 | 52.5                | 2.8                      | 7.0                       |
|              | F                         | 8.2          | 19.5       | 10.5          | 17.5           | 50.5                | 28.4               | 32.7               | 22.2           | 14.4        | 17.2                 | 5.3                  | 22.9                 | 60.2                | 4.5                      | 9.6                       |
| Finland      | M                         | 11.6         | 20.1       | 10.8          | 14.7           | 47.4                | 26.0               | 31.8               | 16.5           | 13.8        | 13.9                 | 7.8                  | 28.4                 | 58.2                | 2.8                      | 4.6                       |
|              | F                         | 9.9          | 21.8       | 13.5          | 19.0           | 57.8                | 27.7               | 34.3               | 27.2           | 20.3        | 23.4                 | 5.4                  | 21.2                 | 70.4                | 2.1                      | 5.7                       |
| Norway       | M                         | 8.6          | 15.5       | 10.5          | 15.7           | 36.5                | 23.2               | 22.2               | 14.1           | 10.5        | 5.1                  | 4.0                  | 32.3                 | 45.9                | 2.2                      | 5.1                       |
|              | F                         | 7.3          | 15.1       | 14.6          | 23.3           | 50.4                | 32.1               | 33.3               | 20.7           | 10.2        | 15.4                 | 3.7                  | 24.3                 | 60.8                | 0.7                      | 10.2                      |
| Sweden       | M                         | 7.1          | 17.1       | 7.8           | 15.1           | 42.3                | 22.9               | 25.0               | 16.2           | 7.7         | 6.9                  | 5.0                  | 29.3                 | 49.6                | 2.5                      | 5.4                       |
|              | F                         | 8.5          | 18.9       | 10.9          | 20.5           | 51.3                | 30.1               | 27.9               | 27.1           | 10.5        | 16.5                 | 4.8                  | 25.2                 | 59.5                | 2.4                      | 10.2                      |
| West         |                           |              |            |               |                |                     |                    |                    |                |             |                      |                      |                      |                     |                          |                           |
| Austria      | M                         | 11.1         | 16.9       | 5.3           | 6.9            | 30.5                | 13.6               | 17.8               | 8.2            | 6.3         | 8.5                  | 3.9                  | 22.5                 | 34.9                | 3.3                      | 8.1                       |
|              | F                         | 10.8         | 15.7       | 6.7           | 9.7            | 34.3                | 17.3               | 16.4               | 12.9           | 9.6         | 15.0                 | 3.0                  | 18.9                 | 41.0                | 3.4                      | 8.7                       |
| Belgium      | M                         | 9.1          | 13.5       | 9.1           | 10.6           | 48.0                | 24.7               | 27.6               | 15.3           | 6.8         | 8.8                  | 5.3                  | 29.2                 | 51.3                | 2.8                      | 4.4                       |
|              | F                         | 8.9          | 18.7       | 10.0          | 17.1           | 53.7                | 31.0               | 28.4               | 24.9           | 8.3         | 22.6                 | 4.0                  | 24.0                 | 61.6                | 3.3                      | 6.4                       |
| France       | M                         | 9.3          | 11.7       | 11.8          | 11.0           | 43.1                | 27.5               | 28.0               | 17.2           | 8.7         | 14.7                 | 6.0                  | 29.2                 | 50.8                | 3.5                      | 4.7                       |
|              | F                         | 9.3          | 16.0       | 12.0          | 15.0           | 52.0                | 33.0               | 28.5               | 19.0           | 8.2         | 30.2                 | 5.8                  | 21.1                 | 64.0                | 4.0                      | 6.4                       |
| Germany      | M                         | 11.5         | 22.0       | 10.9          | 14.1           | 49.0                | 22.0               | 24.8               | 18.1           | 12.3        | 15.6                 | 6.6                  | 26.4                 | 56.7                | 2.6                      | 6.1                       |
|              | F                         | 15.6         | 23.7       | 12.2          | 16.7           | 59.5                | 27.2               | 29.4               | 25.4           | 13.7        | 27.1                 | 6.5                  | 19.7                 | 69.0                | 2.9                      | 7.5                       |
| Ireland      | M                         | 5.8          | 12.8       | 6.9           | 4.4            | 21.5                | 9.9                | 14.2               | 7.8            | 5.2         | 3.8                  | 3.1                  | 21.7                 | 26.5                | 5.2                      | 3.5                       |
|              | F                         | 5.2          | 11.3       | 7.4           | 6.2            | 22.1                | 13.2               | 13.8               | 9.8            | 6.4         | 7.3                  | 2.7                  | 24.9                 | 26.6                | 3.9                      | 5.1                       |
| Netherlands  | M                         | 12.8         | 17.5       | 8.7           | 11.1           | 33.7                | 18.0               | 22.1               | 11.2           | 9.2         | 8.2                  | 7.4                  | 30.9                 | 44.5                | 4.0                      | 5.8                       |
|              | F                         | 8.5          | 18.5       | 11.3          | 14.1           | 44.9                | 21.2               | 24.5               | 16.0           | 10.0        | 17.7                 | 4.8                  | 31.7                 | 49.4                | 3.0                      | 8.1                       |
| Switzerland  | M                         | 8.7          | 14.5       | 5.7           | 9.5            | 37.0                | 18.2               | 24.9               | 12.9           | 8.4         | 11.8                 | 3.8                  | 31.3                 | 44.3                | 7.5                      | 7.2                       |
|              | F                         | 7.0          | 13.5       | 7.3           | 14.9           | 44.6                | 22.2               | 23.5               | 17.8           | 10.1        | 20.0                 | 3.0                  | 29.9                 | 49.9                | 10.1                     | 9.0                       |
| UK           | M                         | 7.6          | 18.5       | 13.1          | 8.8            | 35.3                | 22.8               | 26.3               | 16.4           | 10.0        | 8.2                  | 6.5                  | 30.3                 | 44.8                | 3.3                      | 5.2                       |
|              | F                         | 6.9          | 18.1       | 13.7          | 15.0           | 36.2                | 20.3               | 27.6               | 18.2           | 14.2        | 15.8                 | 4.6                  | 27.4                 | 51.5                | 3.2                      | 7.4                       |

|              |   |      |      |      |      |      |      |      |      |     |      |      |      |      |      |     |
|--------------|---|------|------|------|------|------|------|------|------|-----|------|------|------|------|------|-----|
| Central/East |   |      |      |      |      |      |      |      |      |     |      |      |      |      |      |     |
| Czech Rep    | M | 6.6  | 17.2 | 4.8  | 6.1  | 20.0 | 10.4 | 13.8 | 7.8  | 3.8 | 5.9  | 6.3  | 25.9 | 26.2 | -    | -   |
|              | F | 7.7  | 16.1 | 7.0  | 10.1 | 26.6 | 13.6 | 16.1 | 9.2  | 4.3 | 12.5 | 5.4  | 23.9 | 33.0 | -    | -   |
| Estonia      | M | -    | -    | -    | -    | -    | -    | -    | -    | -   | -    | -    | -    | -    | 6.5  | 5.8 |
|              | F | -    | -    | -    | -    | -    | -    | -    | -    | -   | -    | -    | -    | -    | 5.6  | 6.3 |
| Hungary      | M | 11.3 | 21.2 | 6.1  | 5.3  | 16.9 | 11.6 | 14.8 | 6.5  | 1.7 | 6.7  | 4.4  | 17.8 | 27.4 | 15.3 | 5.2 |
|              | F | 12.9 | 22.8 | 5.4  | 8.4  | 17.7 | 15.9 | 18.7 | 8.0  | 4.8 | 14.1 | 6.5  | 14.7 | 33.6 | 15.4 | 6.8 |
| Lithuania    | M | 16.5 | 18.8 | 3.7  | 2.0  | 24.9 | 9.1  | 12.0 | 11.1 | 0.6 | 4.8  | 2.5  | 23.0 | 29.8 | 5.9  | 6.8 |
|              | F | 21.4 | 25.8 | 5.1  | 5.0  | 27.2 | 11.7 | 16.3 | 15.6 | 3.6 | 14.8 | 3.5  | 21.3 | 41.1 | 11.1 | 9.2 |
| Poland       | M | 16.3 | 17.7 | 5.0  | 8.4  | 29.5 | 22.3 | 22.0 | 10.4 | 4.0 | 9.0  | 4.9  | 26.3 | 39.7 | 5.2  | 3.4 |
|              | F | 20.0 | 20.3 | 7.0  | 11.8 | 38.7 | 29.6 | 25.6 | 17.1 | 5.1 | 18.1 | 6.4  | 22.8 | 51.8 | 6.1  | 5.0 |
| Slovenia     | M | 9.4  | 20.8 | 7.4  | 8.6  | 36.4 | 19.5 | 19.4 | 12.1 | 3.7 | 7.7  | 5.0  | 35.9 | 38.6 | 3.0  | 4.5 |
|              | F | 13.7 | 24.5 | 9.6  | 11.7 | 46.8 | 24.3 | 26.2 | 20.2 | 4.1 | 17.8 | 7.4  | 27.6 | 54.1 | 2.8  | 5.6 |
| South        |   |      |      |      |      |      |      |      |      |     |      |      |      |      |      |     |
| Israel       | M | 10.7 | 15.3 | 7.1  | 5.7  | 20.6 | 12.9 | 14.0 | 7.0  | 4.9 | 8.9  | 10.6 | 18.6 | 30.1 | 8.4  | 5.7 |
|              | F | 8.6  | 15.6 | 7.0  | 6.3  | 24.0 | 13.1 | 19.0 | 11.1 | 5.1 | 10.3 | 9.2  | 19.5 | 33.0 | 9.4  | 4.5 |
| Portugal     | M | 8.3  | 20.8 | 6.9  | 13.7 | 45.1 | 24.9 | 27.8 | 16.2 | 6.9 | 16.3 | 8.5  | 25.7 | 51.6 | 1.6  | 3.9 |
|              | F | 15.0 | 22.1 | 12.6 | 20.6 | 49.4 | 41.9 | 39.3 | 18.0 | 5.3 | 29.6 | 9.1  | 17.5 | 65.8 | 2.8  | 5.9 |
| Spain        | M | 9.1  | 15.0 | 7.9  | 11.0 | 33.9 | 20.3 | 23.6 | 12.8 | 5.5 | 9.0  | 5.5  | 31.4 | 39.8 | 1.9  | 4.8 |
|              | F | 9.8  | 17.0 | 8.3  | 12.2 | 46.5 | 33.9 | 31.6 | 17.1 | 9.5 | 22.2 | 5.2  | 24.8 | 53.4 | 2.0  | 4.2 |

Source: European Social Survey (2016). Notes: HBP = high blood pressure. No data for Estonia on non-communicable diseases except for cancer (current and previous). No data for Czech Republic on cancer (current and previous).

Table 2. Self-reported general health, limiting longstanding illness, mental health and overweight/obesity in 21 European countries (separately for men and women)

|              | Gender<br>Male/<br>Female | Poor / very<br>poor health<br>(%) | Hampered<br>by illness<br>(%) | Serious<br>depressive<br>symptoms<br>(%) | Overweight /<br>obese (%) |
|--------------|---------------------------|-----------------------------------|-------------------------------|--|---------------------------|
| All (pooled) | M                         | 6.9                               | 24.3                          | 10.2                                     | 57.8                      |
|              | F                         | 10.2                              | 28.6                          | 18.8                                     | 44.0                      |
| North        |                           |                                   |                               |  |                           |
| Denmark      | M                         | 6.1                               | 26.4                          | 8.1                                      | 52.0                      |
|              | F                         | 6.0                               | 33.5                          | 12.6                                     | 38.9                      |
| Finland      | M                         | 4.6                               | 29.9                          | 6.7                                      | 59.1                      |
|              | F                         | 5.3                               | 34.8                          | 8.2                                      | 47.9                      |
| Norway       | M                         | 4.6                               | 26.4                          | 6.2                                      | 57.4                      |
|              | F                         | 9.6                               | 32.6                          | 8.9                                      | 42.4                      |
| Sweden       | M                         | 2.8                               | 26.8                          | 6.0                                      | 56.8                      |
|              | F                         | 6.0                               | 35.3                          | 14.6                                     | 43.5                      |
| West         |                           |                                   |                               |  |                           |
| Austria      | M                         | 4.1                               | 21.5                          | 8.5                                      | 57.5                      |
|              | F                         | 4.7                               | 21.9                          | 13.6                                     | 38.9                      |
| Belgium      | M                         | 5.0                               | 25.3                          | 8.6                                      | 51.1                      |
|              | F                         | 5.8                               | 29.5                          | 14.3                                     | 39.5                      |
| France       | M                         | 6.4                               | 21.9                          | 8.2                                      | 52.8                      |
|              | F                         | 9.3                               | 27.1                          | 6.5                                      | 40.9                      |
| Germany      | M                         | 7.6                               | 29.5                          | 9.0                                      | 60.2                      |
|              | F                         | 12.4                              | 33.3                          | 20.2                                     | 44.4                      |
| Ireland      | M                         | 2.0                               | 17.3                          | 6.2                                      | 56.3                      |
|              | F                         | 2.7                               | 18.4                          | 9.1                                      | 41.0                      |
| Netherlands  | M                         | 4.1                               | 27.3                          | 8.3                                      | 51.4                      |
|              | F                         | 6.1                               | 33.7                          | 10.8                                     | 44.5                      |
| Switzerland  | M                         | 2.3                               | 20.4                          | 4.7                                      | 52.5                      |
|              | F                         | 3.9                               | 22.3                          | 9.3                                      | 29.9                      |



|              |   |      |      |      |      |
|--------------|---|------|------|------|------|
| UK           | M | 6.7  | 24.0 | 10.6 | 58.5 |
|              | F | 7.5  | 27.0 | 14.7 | 47.7 |
| Central/East |   |      |      |      |      |
| Czech Rep    | M | 4.9  | 27.5 | 19.1 | 67.4 |
|              | F | 8.3  | 29.8 | 28.6 | 49.4 |
| Estonia      | M | 11.2 | 28.7 | 14.8 | 56.4 |
|              | F | 12.4 | 26.6 | 20.8 | 48.1 |
| Hungary      | M | 13.5 | 29.5 | 21.5 | 63.8 |
|              | F | 13.8 | 31.8 | 27.5 | 52.8 |
| Lithuania    | M | 12.1 | 33.3 | 16.1 | 60.7 |
|              | F | 12.8 | 35.2 | 22.7 | 50.8 |
| Poland       | M | 8.3  | 27.8 | 11.3 | 60.8 |
|              | F | 12.5 | 32.3 | 25.3 | 44.1 |
| Slovenia     | M | 9.8  | 31.2 | 8.7  | 61.2 |
|              | F | 12.2 | 38.5 | 15.6 | 50.6 |
| South        |   |      |      |      |      |
| Israel       | M | 9.2  | 25.0 | 12.0 | 55.9 |
|              | F | 11.3 | 25.5 | 19.1 | 47.8 |
| Portugal     | M | 8.3  | 17.4 | 15.8 | 56.0 |
|              | F | 12.1 | 21.9 | 30.9 | 49.8 |
| Spain        | M | 8.8  | 14.8 | 12.8 | 60.4 |
|              | F | 14.9 | 19.3 | 24.7 | 43.3 |

Source: European Social Survey (2016).