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Psychological and social well-being of Poles aged 50+ compared to selected European societies

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Linking psychological well-being to social well-being might seem a somewhat arbitrary effort. However, people are social animals and it is difficult to imagine good life without satisfactory relations with other people, without team activity and trust in others. And although one can be happy with very limited social relations, openness to others and community activities reaching beyond the circle of family and friends should all act in favour of the quality of life, especially of elderly people, often ill and abandoned by their own family members. On the other hand, we prefer the company of cheerful people (Coyne, 1976). Sadness can be as contagious as joy, and we do not like to be sad, especially because of other people's sadness. Happy people are also more open to others, more willing to establish new contacts and to undertake activities together with others (Czapiński, 2004). Therefore good general disposition should also favour social well-being.

The international SHARE survey[1], carried out in 14 European countries, provides data allowing for answers to some important questions related to the quality of life of elderly Poles, both in the aspect of psychological and social well-being. We are able to check how the Polish elderly population compares to other regions of Europe in terms of subjective and objective measures of

[1] This paper uses the data collected by the SHARE project in 2006/2007 (Börsch-Supan et al., 2008). This data includes information about health, socio-economic status and social and family ties for over 30,000 people aged 50+. The project is carried out since 2004 in Austria, Belgium, Denmark, France, Greece, Spain, the Netherlands, Israel, Germany, Sweden, Switzerland and Italy, and in 2006/2007 data was also collected in the Czech Republic, Ireland and Poland. The "SHARE: 50+ in Europe" project is financed primarily by the European Commission, DG Research, under the 5th and 6th Framework Programmes (project no. QLK6-CT-2001- 00360; RII-CT- 2006-062193; CIT5-CT-2005-028857), by the US National Institute on Aging (grants no.: U01 AG09740-13S2; P01 AG005842; P01 AG08291; P30 AG12815; Y1-AG-4553-01; OGHA 04-064; R21 AG025169), and other national institutions. Analysis of the data was financed by he Polish Ministry of Science and Higher Education as a Special Research Programme (SPB nr 347/6.PRUE/2007/7).

mental health and social activity, what is the relation between objective measures of mental disorders and subjective indicators of psychological well-being, and whether psychological well-being is indeed related to social well-being.

The measures of psychological well-being used in this paper include symptoms of depression, diagnosis of depression and other mental disorders, treatment of affective disorders, stays in a psychiatric hospital, subjective well-being (life satisfaction and experiencing various affects).

The measures of social well-being include: carrying out unpaid work for others within the last month, general trust in people, taking care of sick or disabled adults, helping friends or neighbours, participation in sports, social or other type of club activities, taking part in the work of political or local governmental organizations, and generally the number of social activities (excluding religious activities[2]).

Psychological well-being

With regard to most measures of psychological well-being, the Polish sample of people aged 50+ differs from other European societies. The largest differences appear in negative indicators (depression and negative affect).

Let's take a look at the distribution of frequency of occurrence of 12 symptoms of mental depression (Figure 1). In most cases the fraction of Poles experiencing these symptoms is significantly larger than in other regions of Europe. Only with regard to feeling of guilt, loss of interest, tearfulness and concentration problems the societies of Southern Europe are on par with the Poles.[3] The largest differences between people from Poland and other regions of Europe appear in the frequency of experiencing lack of hope for the future, sadness, loss of enjoyment, sleeping difficulties, fatigue and irritability.

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figure 1

The figure also shows another interesting feature: the similarity between Czechs and Northern Europeans, and the similarity between Poles and the people of Southern Europe. It is possible that this is related to religion – Protestant in the North and in the Czech Republic, Catholic in Southern Europe and in Poland. For centuries, religion has influenced the culture and mentality of societies, thus shaping the attitudes and the way of experiencing the world also in those societies that today are secularized to a large extent (like France or the Czech Republic).

[2] The exclusion of religious activities is due to suspected low credibility of data on this subject.

[3] For comparison purposes, four regions have been distinguished in the analysis of results: apart from Poland and the Czech: Southern Europe – EU-south (France, Italy, Spain, Greece) and Northern Europe – EU-north (Austria, Belgium, Germany, Denmark, the Netherlands and Sweden).

If we assume that experiencing at least four symptoms of depression is a measure of a significant deterioration of mental health, the similarity between Czechs and Northern Europeans and the one between Poles and Southern Europeans is very clear, especially among women, who are generally more prone to affective disorders than men (Figure 2). Almost two thirds of Polish women aged 50+ experience at least four symptoms of depression, compared to one-third of Czech women and one-fourth of women from Northern Europe. In men these differences are smaller, but the order of frequency in cross-regional comparison is the same as in women.

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figure 2

In all distinguished subgroups, Poles experience multiple symptoms of depression more often than people from other regions of Europe (Figure 3). The largest difference occurs in people aged 70, and the smallest, compared to Czechs and Southern Europeans, in the oldest group (80+).

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figure 3,4,5

In the comparison by labour market status multiple symptoms of depression appear most often among disabled people (long-term ill), but Polish pensioners differ the most from the rest of Europe (Figure 4). However, subjective symptoms of depression are more widespread in Poland also among employed and jobless people.

A simple indicator of worsened mood in the last week also reflects the above mentioned relations. The percentage of Poles experiencing bad mood is four times higher than that of Czechs, twice as high as in Southern Europeans and two and a half times higher compared to Northern Europeans (Figure 5). Bad mood was experienced most often by Poles aged 70 (Figure 6) and disabled (long-term ill) people (Figure 7).

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figure 6,7

A completely different picture of patterns in cross-national and age group comparison appears in responses to the question if the respondent has ever suffered from symptoms of depression lasting at least two weeks (the clinical criterion of affective disorders qualifying for medical intervention). In this case Poles have the best results, and Czechs the worst, especially among women (Figure 8). With age, this indicator drops, contrary to subjective assessment of current symptoms of depression (Figure 9). In Poland, from among all groups distinguished by

labour market status, only the disabled (long-term ill) show increased probability of clinical depression undergone in the past (Figure 10).

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figure 8,9,10

The frequency of cases of treated depression puts the Polish sample on par with Northern Europe, much below the Czech Republic and Southern Europe (Figure 11). Anti-depression therapy was applied most frequently in the youngest group, both in Poland and in other regions of Europe (Figure 12). And only disabled people, similarly to the case of subjective indicators, turn out to be the worst in this respect (Figure 13).

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figure 11, 12,13

The inhabitants of Southern Europe had the most frequent diagnosis of mental disorders other than depression. The Polish sample does not differ in this respect from the Czechs and – in case of men – from Northern Europeans (Figure 14). The disparity of the frequency of such diagnosis by age is very weak (Figure 15), and by labour market status – similar to disparity of other indicators (the most frequent diagnosis of other mental disorders occurs in the disabled group – in Poland on a level similar to that of Northern European countries) (Figure 16).

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figure 14, 15, 16

Psychiatric consultations, another objective indicator of mental health, are in Poland on the level similar to that of North European countries, lower than in South European countries and much below the Czech Republic. And, similarly to previously mentioned objective indicators of affective disorders, the frequency of psychiatric visits decreases with age (Figure 18), and remains highest in the group of disabled persons (Figure 19).

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figure 17, 18, 19

The comparison of frequency of occurrence of two subjective (at least four symptoms of depression and bad mood in the last week) and two objective (being treated for depression and diagnosis of other mental disorders) indicators of lowered psychological well-being in a cross-national breakdown (Figure 20) shows two regularities: Poles show the highest level of subjective

indicators and a level of objective indicators similar to other regions. This may signify that mental disorders, those officially diagnosed and treated, stigmatize socially to a much higher degree in Poland than in other surveyed countries, and therefore, though Poles more frequently suffer from such disorders, they go to a doctor less often and are less often treated. It is possible, however, that a certain role in this asymmetry of subjective and objective indicators in Poland's comparisons to other regions is played by a stronger tendency in Poland to complain about one's health and bad mood. The last hypothesis is supported by the distributions of other indicators of subjective well-being. For example, life satisfaction in Poland is also lower than in other regions (Figure 21); similarly the frequency of experiencing negative emotions is highest in Poland (Figure 22). Only the distribution of experiencing positive emotions breaks away from this rule – here Poland is second only to Northern Europe (Figure 23). This can mean that the Poles' culture-based tendency to complain does not, however, hinder the expression of positive emotions, but significantly facilitates the expression of negative emotions, which is to some degree reflected also in general judgements (e.g. life satisfaction), based on the balance of positive and negative emotions.

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figure 20, 21, 22, 23

In general, in Poland, like in other countries, objective indicators of mental health are weakly correlated with subjective indicators: persons treated for depression, with medical diagnosis of other mental disorders, and visiting psychiatric clinics do not simultaneously show higher intensity of current symptoms of depression or lower life satisfaction, and they do not experience negative emotions more often and positive emotions less often. Subjective indicators form a factor of psychological well-being separate from objective indicators. This is supported by the results of factor analysis (Table 1).

Table 1

Similar socio-demographic factors are significant predictors of various indicators of psychological well-being in all four distinguished regions of Europe.

In all regions, except Poland, possession of a partner has a significant influence on the probability of occurrence of various symptoms of mental depression. Lack of life partner increases the probability of occurrence of at least four symptoms of depression by 25 percent in Southern Europe to 50 percent in Northern Europe. The material level of life has even higher predictive power. Persons from the lowest quartile of personal income, compared to persons from the highest quartile, are from 50 percent (Southern Europe) to as much as 240 percent (Czech Republic) more likely to experience various symptoms of depression. In Poland low income increases this

probability by 85 percent. Younger persons are less prone to multiple symptoms of depression compared to the oldest group (80+ years old). In Poland, however, this relation is very weak[4]. The relation linked to gender is strong, though, also in Poland. Women in all regions are 50 percent more likely to experience multiple symptoms of depression[5].

Some role is played also by education – largest in the Czech Republic, smallest in Northern Europe. In total, all 5 predictors allow for explanation of 5.7 percent (Northern Europe) to 11.9 percent (Poland) and 12.3 percent (Czech Republic) of the variance of dependent variable (Table 2).

Table 2

In general, the region is a significant predictor of the probability of experiencing various symptoms of depression. In Poland it is almost three times higher than in other regions of Europe (Table 3).

Table 3

Similar as in case of multi-symptomatic depression, though somewhat weaker (with the exception of demographic factors – age and gender) relations refer to the probability of being treated for depression (Table 4). In this case all predictors in question explain from 4.4 percent (Northern Europe) to 8.7 percent (Czech Republic) of the variance of dependent variable. In this case, however, the probability decreases with age, and in Poland it is 50 percent lower than in other European countries (Table 5).

Table 4, 5

As for life satisfaction, in Poland, similarly to other regions, a positive role is played by a life partner, wealth and education. Age is in Poland a negative predictor (older persons are less satisfied with life), the same as in the Czech Republic. But in North European countries it is the older persons who are more satisfied with their lives, and in South European societies age has no significance for life satisfaction. Gender, however, similarly as in Northern Europe, does not

[4] This stands in strong contrast to the results of other surveys carried out in Poland using the shortened version of the Beck Depression Inventory. Throughout the years of studies under the programme "Quality of life of the Poles in the transformation period" (Czapiński, 1998), and then in the "Social Diagnosis" programme (Czapiński, Panek, 2007), starting from the first measurement on a nationwide sample in 1992, an extremely high correlation is maintained between age and symptoms of depression (Pearson *r* coefficient between 0.64 and 0.70), and age itself, after controling the effects of other predictors, explains approx. 15 percent of the variance of depression symptoms' intensity. This difference could be explained in part by different measurement scales and other age ranges in surveyed samples. Indeed, limiting the age group to 50+ causes the correlation coefficient between age and depression in the data from the 2007 Social Diagnosis to drop from 0.64 to 0.49. But it is still a much higher value than in SHARE (0,19), with a twice larger sample size.

[5] All worldwide epidemiological data prove higher risk of depression in women (Weissman, Klerman, 1978)

differentiate the satisfaction in the Polish sample. Overall, the four socio-demographic predictors explain from 3.9 to 8.3 percent of the variance of this variable (Table 6).

Table 6

As for the number of negative emotions, all the predictors explain significant proportions of variance, except for education in Northern Europe; in total from 6.1 percent in Northern Europe to 12.2 percent in Southern Europe (Table 7).

Table 7

Summarizing, we may conclude that Polish population aged 50+ has the worst subjective indicators of mental well-being and at the same time a low, comparable to North European countries, level of objective indicators of mental disorders. This means that either the symptoms of poor mental condition rarely – less often than in other regions of Europe – exceed the threshold of clinical criterion requiring medical intervention, or the stigma of mental disorders in Poland is so strong that Poles are less willing than other nations to seek professional help in order to improve their mental health. Subjective symptoms of depression grow stronger with age, but the probability of occurrence of a clinical form of depression and of depression treatment drops with age. This confirms the thesis about the decreasing age of occurrence of depression and about an epidemic of depression in younger generations.

Social well-being

Social well-being is understood here similarly to how some economists and sociologists define social capital (e.g. Putnam et al., 1993; Putnam, 2000; Fukuyama, 1995, 2000), but considered individually (as an individual resource) rather than collectively (as a resource of a group). Operatively this notion covers trust to people and voluntary social activity (voluntary work, membership in organizations, readiness to help others).

The percentage of Poles carrying out unpaid work for other people in the last month is similar as in the population of Czechs and significantly lower than in the societies of the "old" European Union: seven times lower than in Northern Europe and five times lower than in Southern Europe (Figure 24); it is slightly higher in men (Figure 24) and among younger respondents (Figure 25). 4 percent of Poles helped disabled or ill adults, a figure similar to that of Southern Europe and much lower than in Northern Europe (50 percent lower) and the Czech Republic (almost 50 percent lower). In all regions help was given more often by women (Figure 26) and younger persons (Figure 27).

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figure 25, 26, 27

Especially low in Poland compared to other regions, Northern Europe and the Czech Republic in particular, and regardless of gender, is the indicator of help given to friends and neighbours (Figure 28). Such help, also in Poland, was more often given by men (Figure 28). This indicator significantly drops with age (Figure 29), which is most probably related to deteriorating health and dropping number of friends. Also participation in club activities (sports, social and others) is many times lower in Poland compared to other countries, especially those of Northern Europe, and similarly to giving help to others it depends on gender (higher percentage of men than women, Figure 30), and drops with age (Figure 31).

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figure 28, 29, 30, 31

Participation in activities of political and self-governmental organizations is low in all regions of Europe, but again it is lowest in Poland; it depends on gender (higher in men than women) (Figure 32). Social activity of this kind decreases with age (Figure 33).

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figure 32, 33

The general indicator of various types of social activities (from among 11, excluding religious activities) weighted by their frequency is in Poland from five to three times lower compared to other regions, and is not gender-dependent (Figure 34), but decreases with age (Figure 35).

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figure 34, 35

Trust in other people puts the Polish sample on par with South European countries, significantly statistically lower than the Czechs and North Europeans; similarly among women and men (Figure 36) and in all age groups except the oldest one, where this indicator rises to the Czech level and is higher than in other regions (Figure 37)[6].

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figure 36, 37

The sum of standardized indicators of trust in people and weighted social activities puts the Polish sample as a whole and in all of its distinguished groups significantly below the entire

[6] Similarly to the correlation between age and intensity of mental depression symptoms, this result stands in contrast to the results of other surveys. For example, the *European Social Survey*, where the scale of trust was the same as in SHARE, consistently shows in subsequent measurements from 2002, 2004 and 2006, that in Poland trust in other people is among the lowest in Europe (compare Czapiński, 2006).

SHARE sample (Figures 38-40). Apart from the Poles, also Southern Europeans are below average, and among oldest persons – people from all regions. The strongest differentiating criterion is the labour market status. The lowest level of social well-being among Poles and Czechs is experienced by unemployed persons, and among Southern and Northern Europeans – the disabled and long-term ill. Only in North European countries, social well-being is highest in the group of working persons, and in other regions – in the group of pensioners. In general, the Czechs resemble North Europeans, and Poles – South Europeans (similarly as in case of many indicators of mental well-being).

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figure 38, 39, 40

Summarizing we may conclude that Poles aged 50+ have the lowest level of social well-being in the group of countries participating in the SHARE survey. Especially younger respondents, unemployed and pensioners are below European average. Closest similarities to respective groups in other countries appear in Poland in the group of unemployed, long-term ill and oldest persons. Disability and old age are among the primary factors diminishing the regional differences in Europe with regard to mental and social well-being. All people are equal in the face of old age and disability.

Relation between mental well-being and social well-being

Mental and social well-being can be treated as important measures of good ageing. Because relations with other people, as proven by hundreds of studies in various countries (e.g. Argyle, 2001; Myers, 1999), are one of the most important indicators of mental well-being, one should expect a significant correlation between those two aspects of life. In all regions the indicators of mental well-being are correlated with the indicators of social well-being (Table 8). However, only correlation coefficients of social well-being with subjective indicators of mental well-being are generally significant. More objective indicators of mental disorders correlate much weaker with the level of social well-being, with statistical significance only in Poland, and in case of psychiatric visits also in the Czech Republic. With correlation coefficients between social well-being and subjective indicators of mental well-being, which are generally weaker in Poland than in other regions, this supports the hypothesis of a culturally conditioned style of expression, which in our country favours the exposure of negative experiences, though without the increased risk of weakening social relations, which are especially weak in comparison to other countries in the non-family area. Complaining Poles risk the loss of friends less than other nations. Only when the expression of negative experiences reaches a level indicating a serious mental disorder, they risk

social rejection, even more so that in Poland the stigma of mental illness is a much stronger deterrent.

Table 8

Conclusions

SHARE results show that Poles aged 50+ are – compared to their peers from other European countries – less or more mentally healthy depending on indicators of mental well-being. In general their condition is worse with regard to subjective indicators, and better – in case of objective indicators. The probability of occurrence of at least 4 subjective symptoms of depression in the Polish population is almost three times higher than the European average. On the other hand, the probability of being treated for depression is two times lower in Poland than in Europe. Therefore the question is: which of these indicators better diagnoses the mental well-being of elderly Poles. Maybe both are equally accurate: higher intensity of mental disorders of sub-clinical character in Poland does not increase the risk of crossing the threshold of an illness qualifying for treatment. In other words, symptoms of depression and negative emotional states, common in the Polish population aged 50+, less often fulfil the medical criteria of mental illness with regard to intensity and duration. But it is also possible that the stigma of mental illness, stronger in Poland than in other societies, causes these criteria to be much more strict in the mindset of both the doctors and potential patients and therefore the diagnosis of mental disorders qualifying for treatment is made less often. Possibly a large number of cases that in other countries would be qualified for treatment is not diagnosed as illness in Poland.

Regardless of which of these interpretations is closer to the truth, Poles, especially women, aged 50 and more, are in a much worse mental condition than people from other regions of Europe. This might partially explain the motivation for early escape from the labour market, either into disability benefits or pensions, which is very pronounced in Poland.

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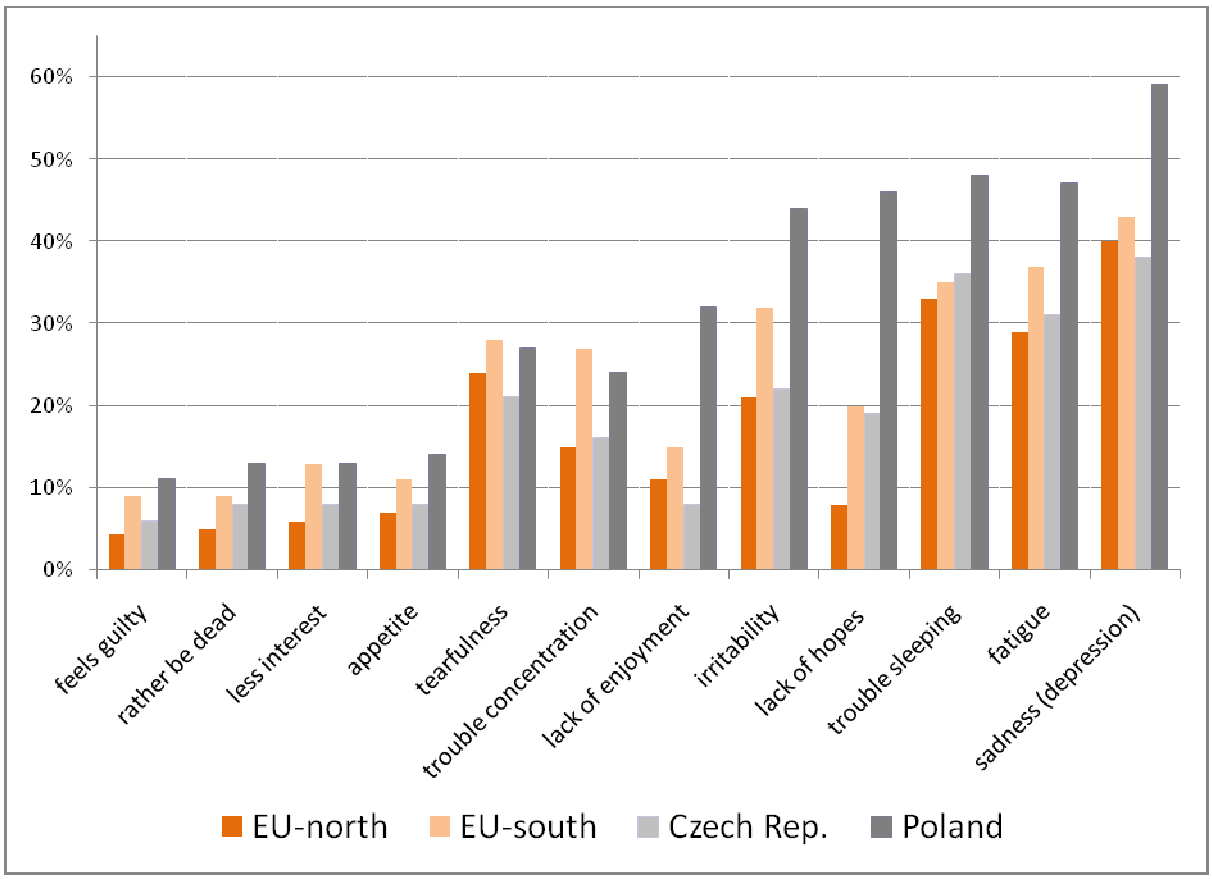

Note: gender and age are covariates; regional differences in all symptoms are statistically significant.

Figure 1. Percentage of respondents with different symptoms of depression by region.

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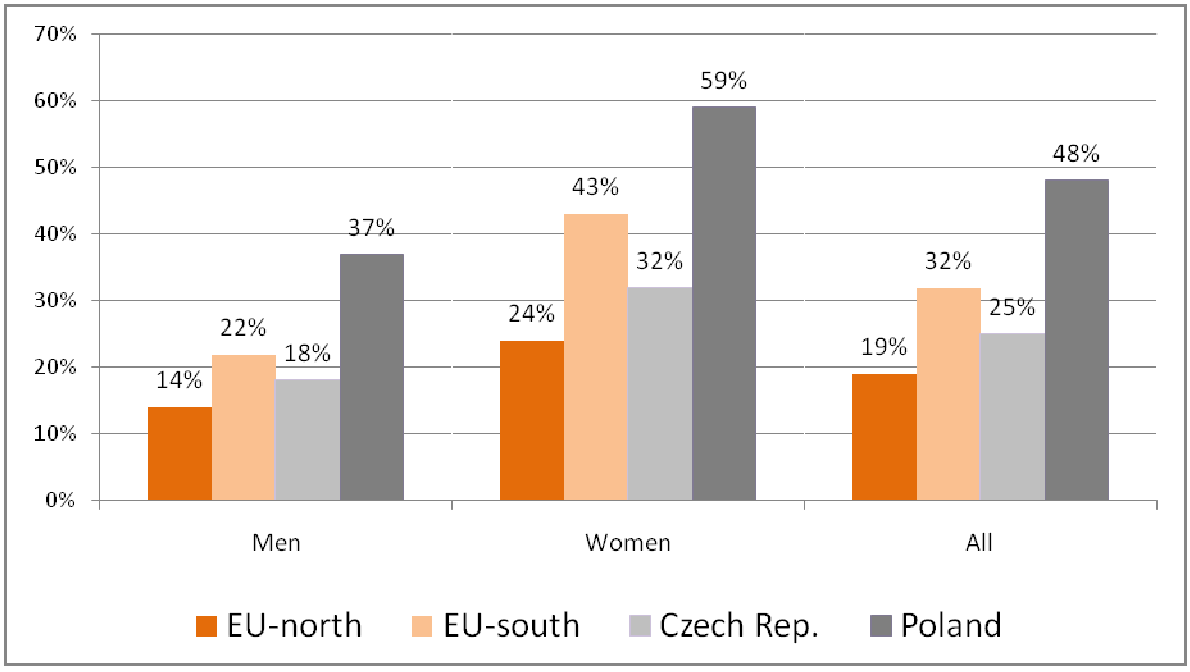
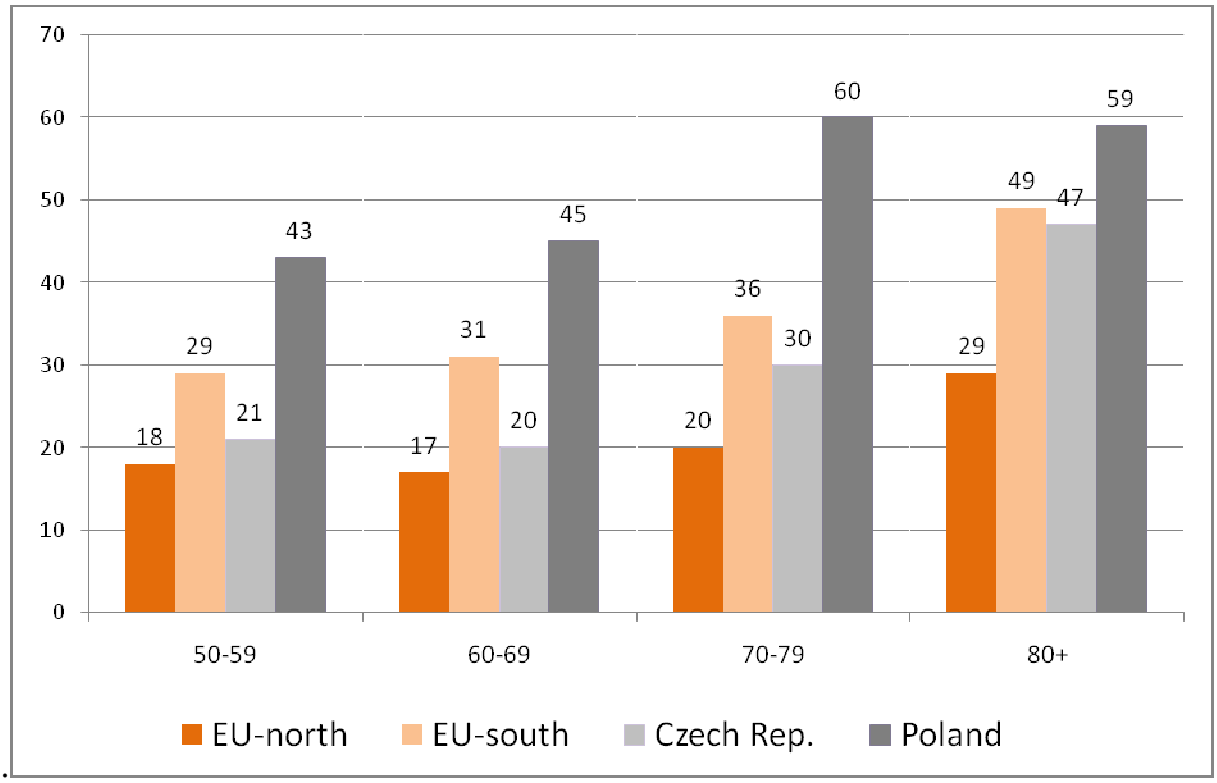


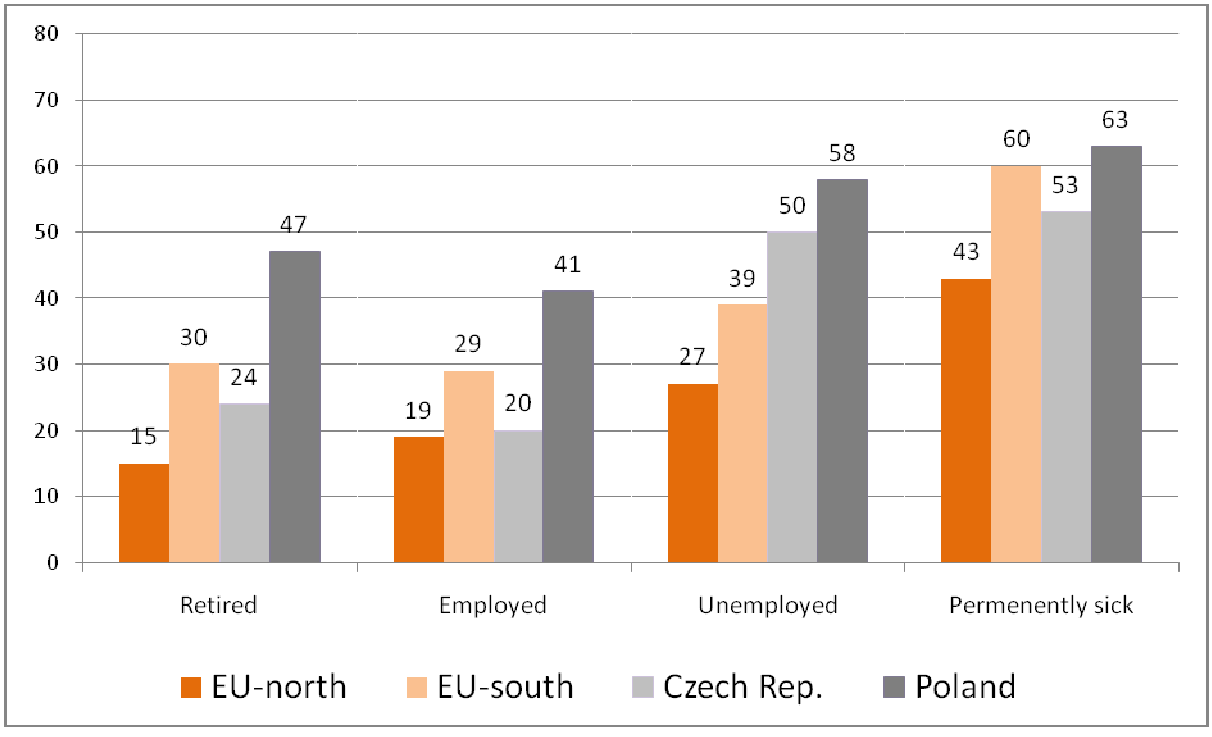
Note: age is covariate; effects: gender $F_{(1,27483)} = 586.149$, $p < 0.000$; region $F_{(3,27483)} = 356.689$, $p < 0.000$; interaction of region and gender $F_{(3,27483)} = 34.436$, $p < 0.000$.

Figure 2. Percentage of respondents with at least 4 symptoms of current depression by gender and region.



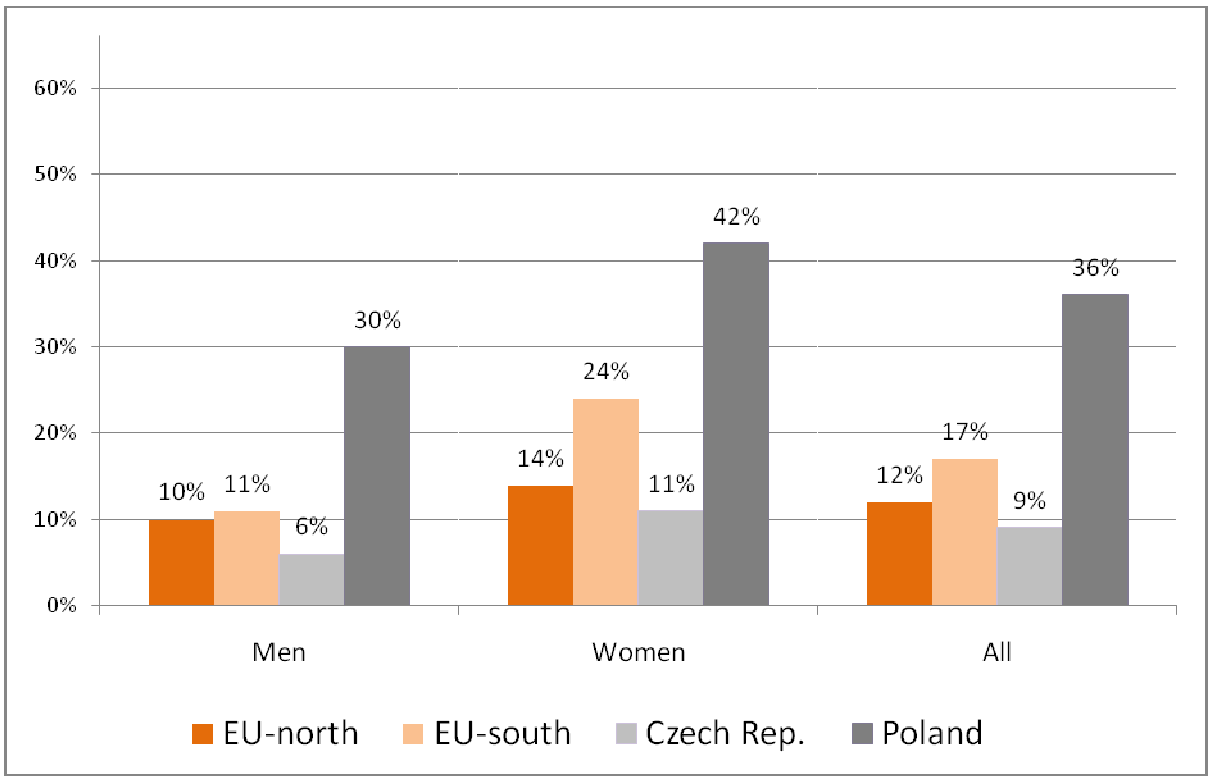
Note: gender is covariate; effects: age $F_{(3,29448)} = 100.729$, $p < 0.000$; interaction of region and age $F_{(9,29448)} = 7.949$, $p < 0.000$.

Figure 3. Percentage of respondents with at least 4 symptoms of current depression by age and region.



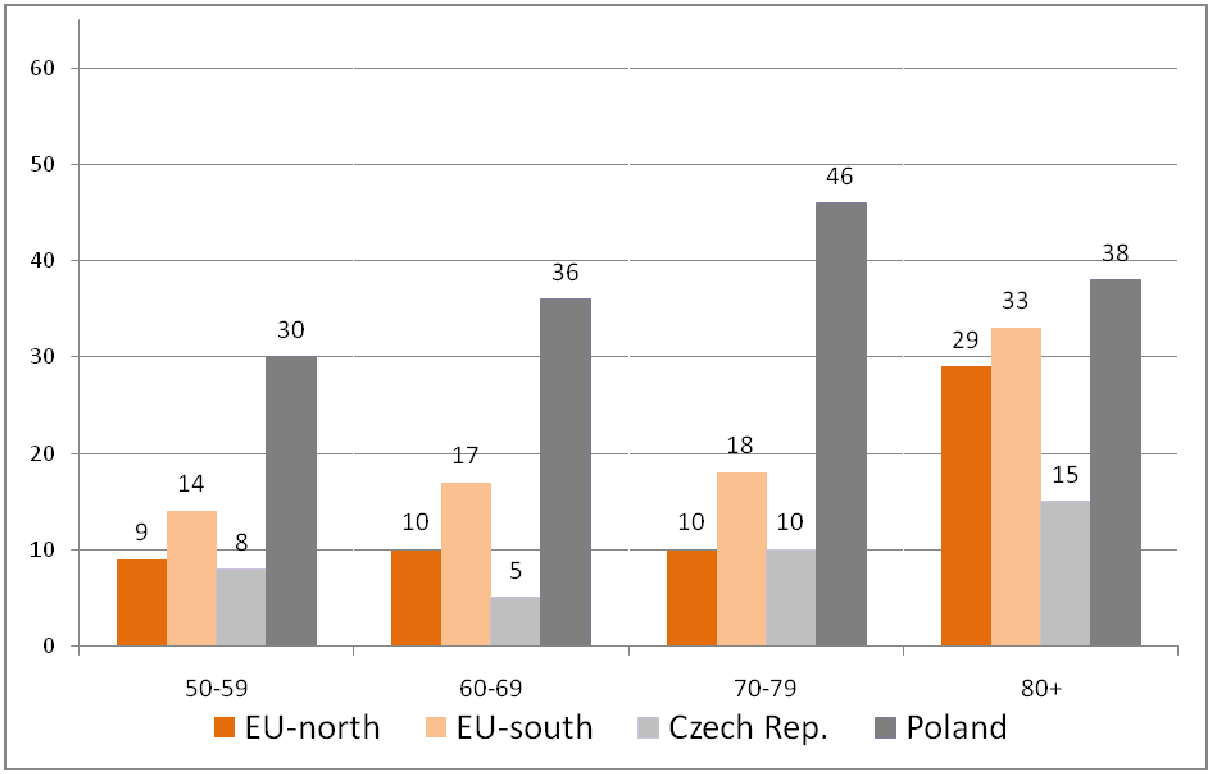
Note: gender and age are covariates; effects: status $F_{(3,23169)} = 82.279$, $p < 0.000$; interaction of status and region $F_{(9,23169)} = 6.415$, $p < 0.000$.

Figure 4. Percentage of respondents with at least 4 symptoms of current depression by region and status on the labor market.



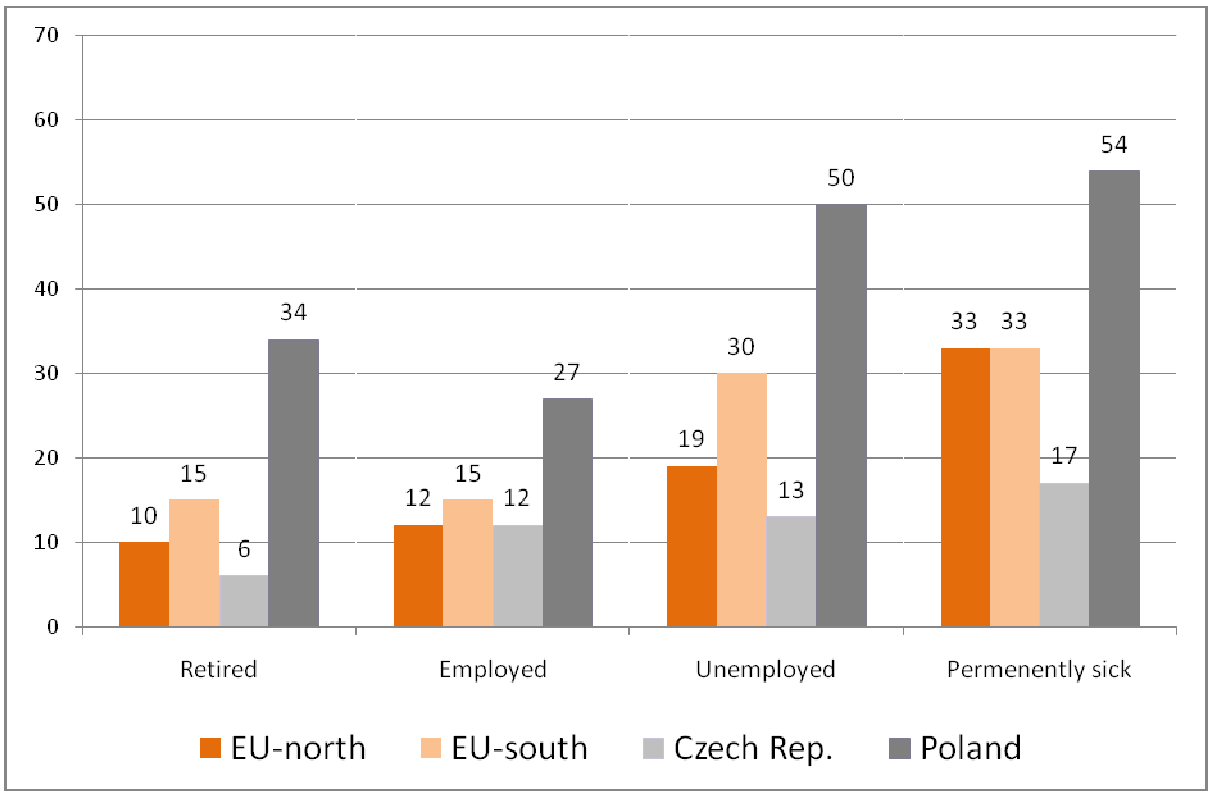
Note: age is covariate; effects: gender $F_{(1,13918)} = 111.181$, $p < 0.000$; region $F_{(3,13918)} = 185.312$, $p < 0.000$; interaction of region and gender $F_{(3,13918)} = 15.198$, $p < 0.000$.

Figure 5. Percentage of respondents who felt depressed last week by gender and region.



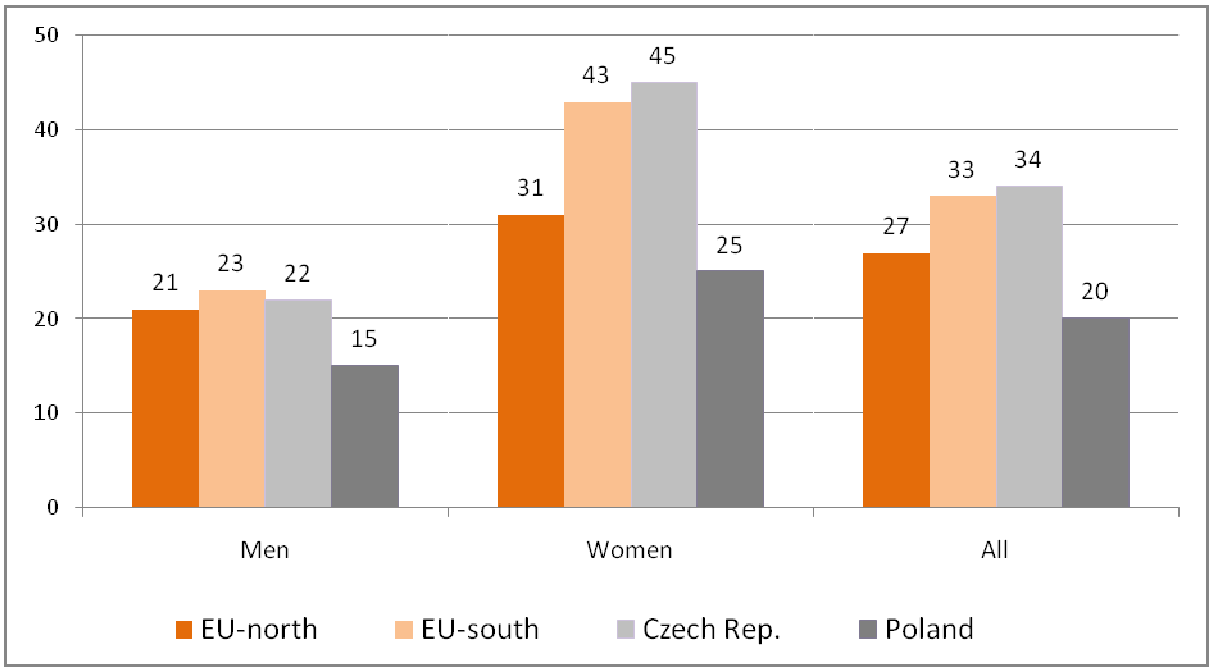
Note: gender is covariate; effects: age $F_{(3,13893)} = 33.541$, $p < 0.000$; interaction of region and age $F_{(9,13893)} = 6.294$, $p < 0.000$.

Figure 6. Percentage of respondents who felt depressed last week by age and region.



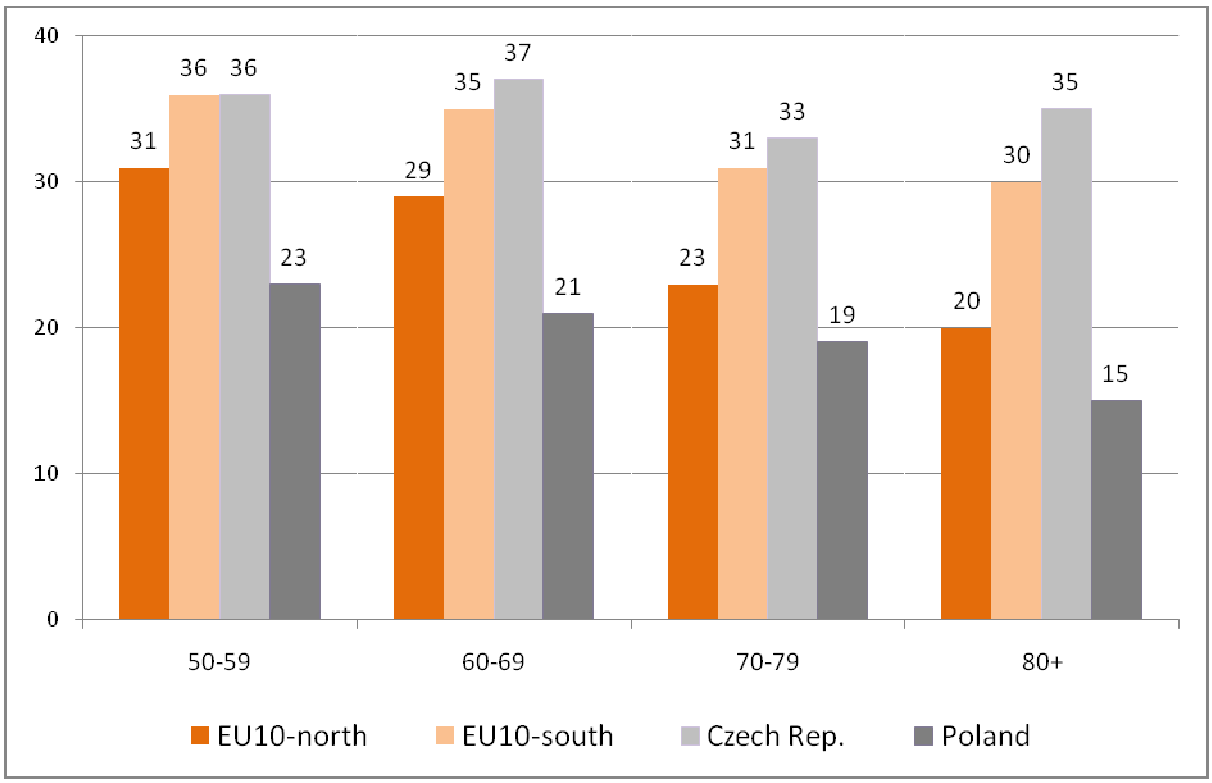
Note: gender and age are covariates; effects: status $F_{(3,11732)} = 25.696$, $p < 0.000$; interaction of region and status $F_{(9,11732)} = 2.989$, $p < 0.005$.

Figure 7. Percentage of respondents who felt depressed last week by status on the labor market and region.



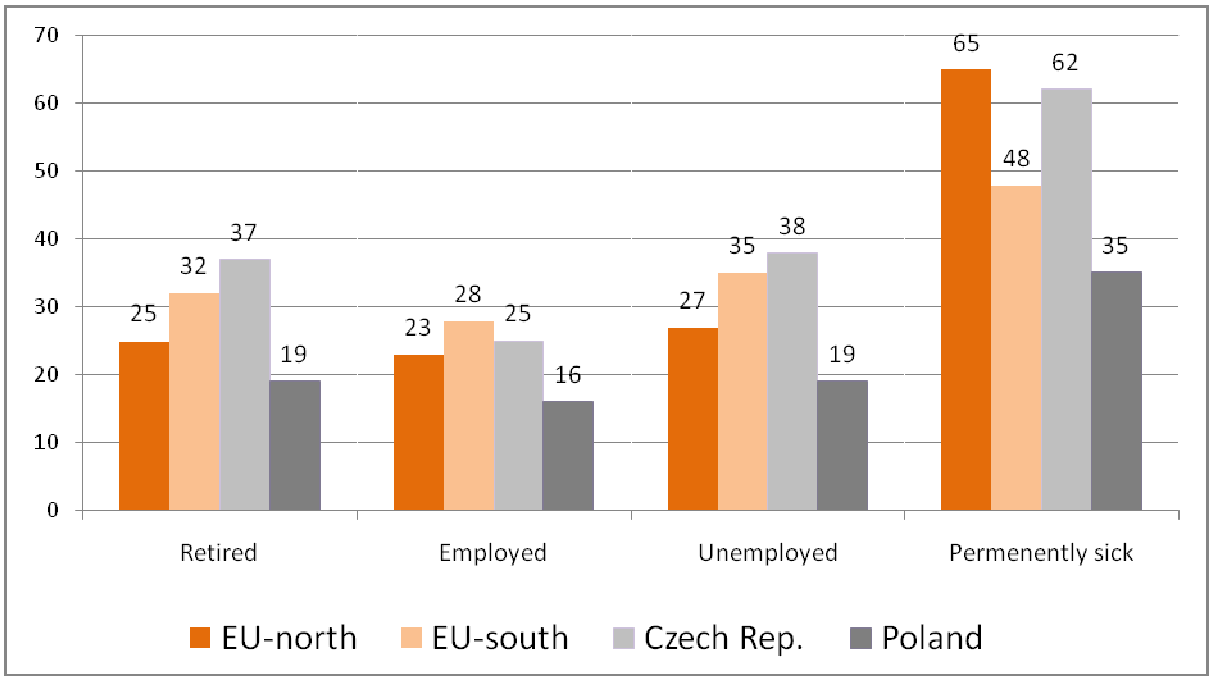
Note: age is covariate; effects: gender $F_{(1,27956)} = 515.031$, $p < 0.000$; region $F_{(3,27956)} = 40.214$, $p < 0.000$; interaction of region and gender $F_{(3,27956)} = 37.121$, $p < 0.000$.

Figure 8. Percentage of respondents who ever suffered from symptoms of depression which lasted at least two weeks by gender and region.



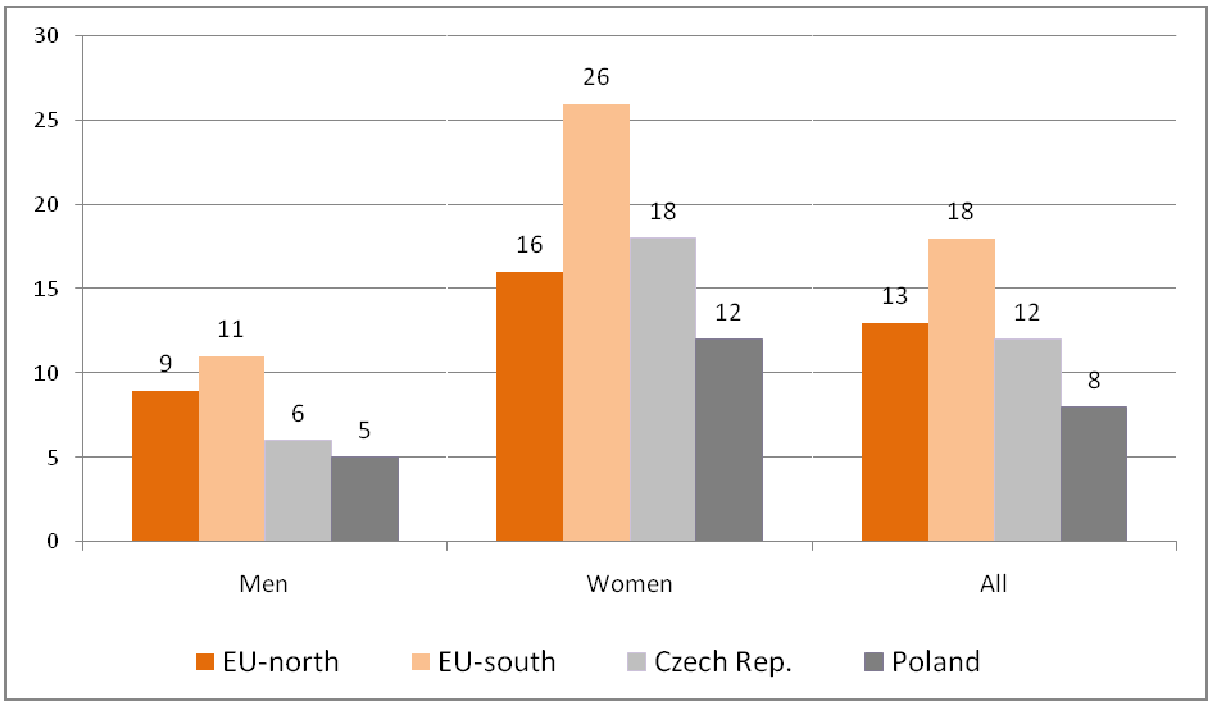
Note: gender is covariate; effects: age $F_{(3,27921)} = 16.039$, $p < 0.000$; interaction of region and age $F_{(9,27921)} < 2$, ns.

Figure 9. Percentage of respondents who ever suffered from symptoms of depression which lasted at least two weeks by age and region.



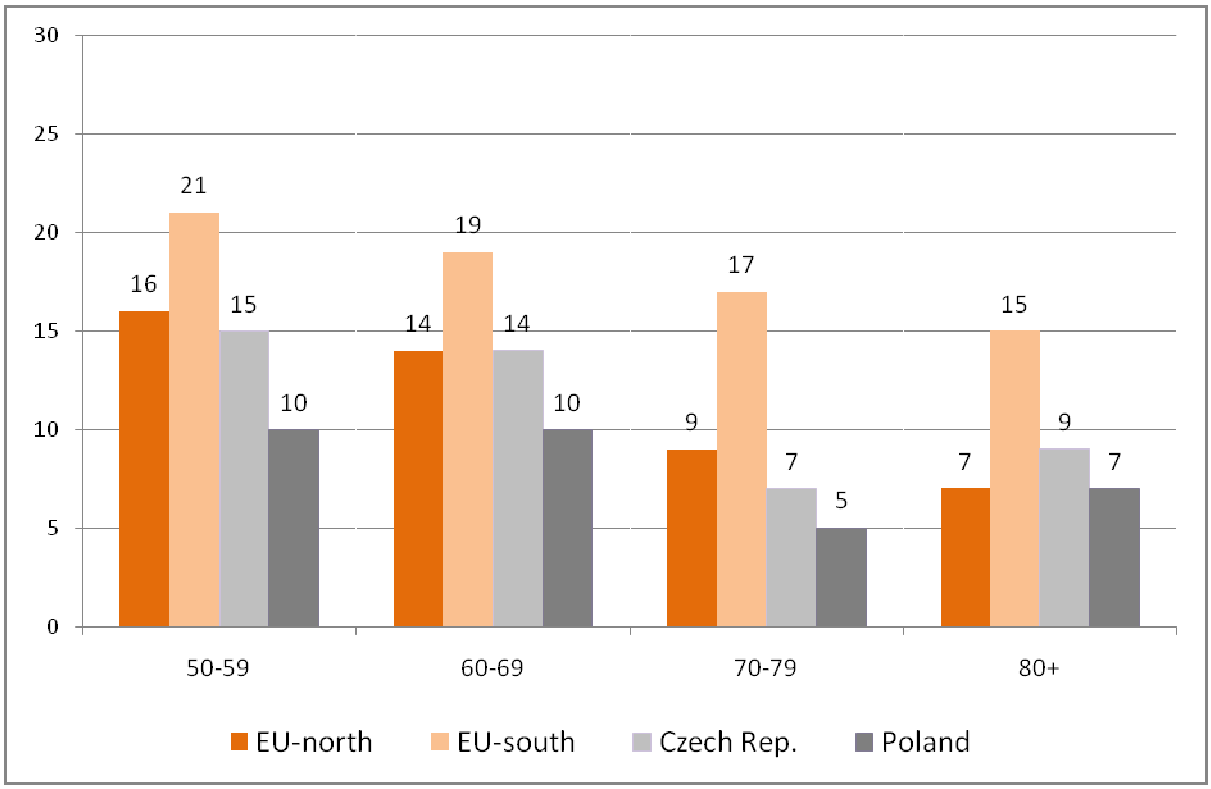
Note: gender and age are covariates; effects: status $F_{(3,23538)} = 68.392$, $p < 0.000$; interaction of region and status $F_{(9,23538)} = 8.539$, $p < 0.000$.

Figure 10. Percentage of respondents who ever suffered from symptoms of depression which lasted at least two weeks by status on labor market and region.



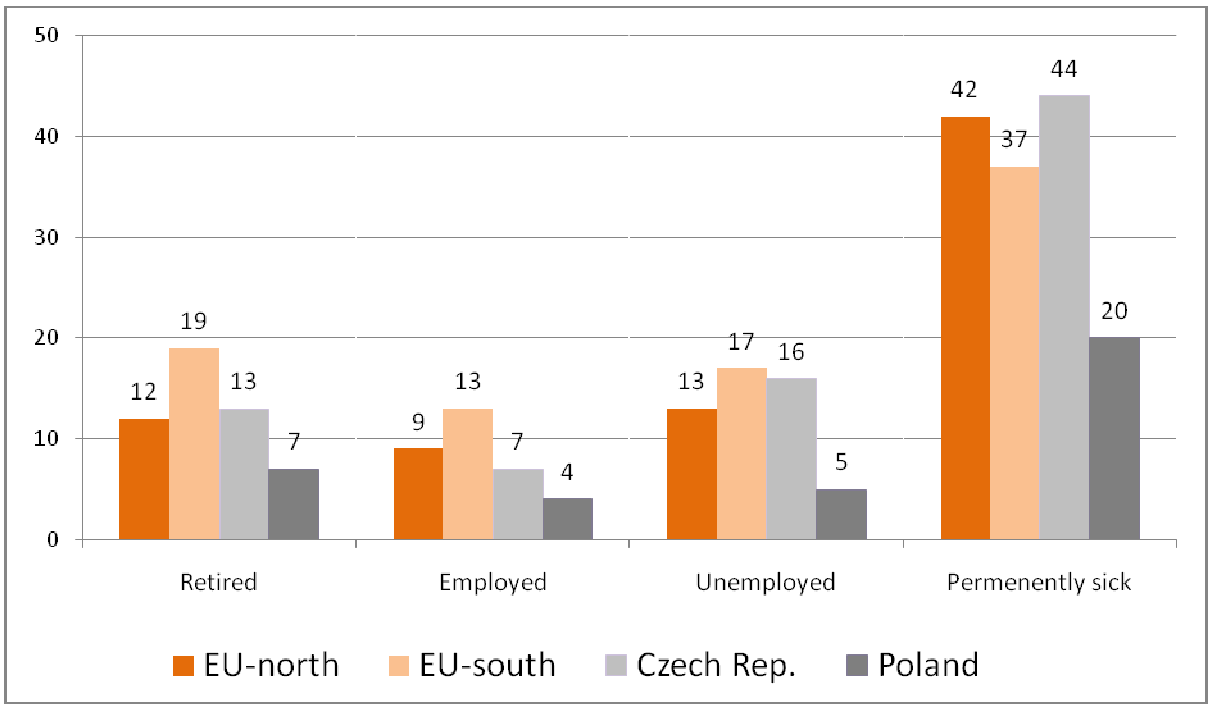
Note: age is covariate; effects: gender $F_{(1,27956)}$ = 324.031, p < 0.000; region $F_{(3,27956)}$ = 93.214, p < 0.000; interaction of region and gender $F_{(3,27956)}$ = 23.421, p < 0.000.

Figure 11. Percentage of respondents ever treated for depression by gender and region.



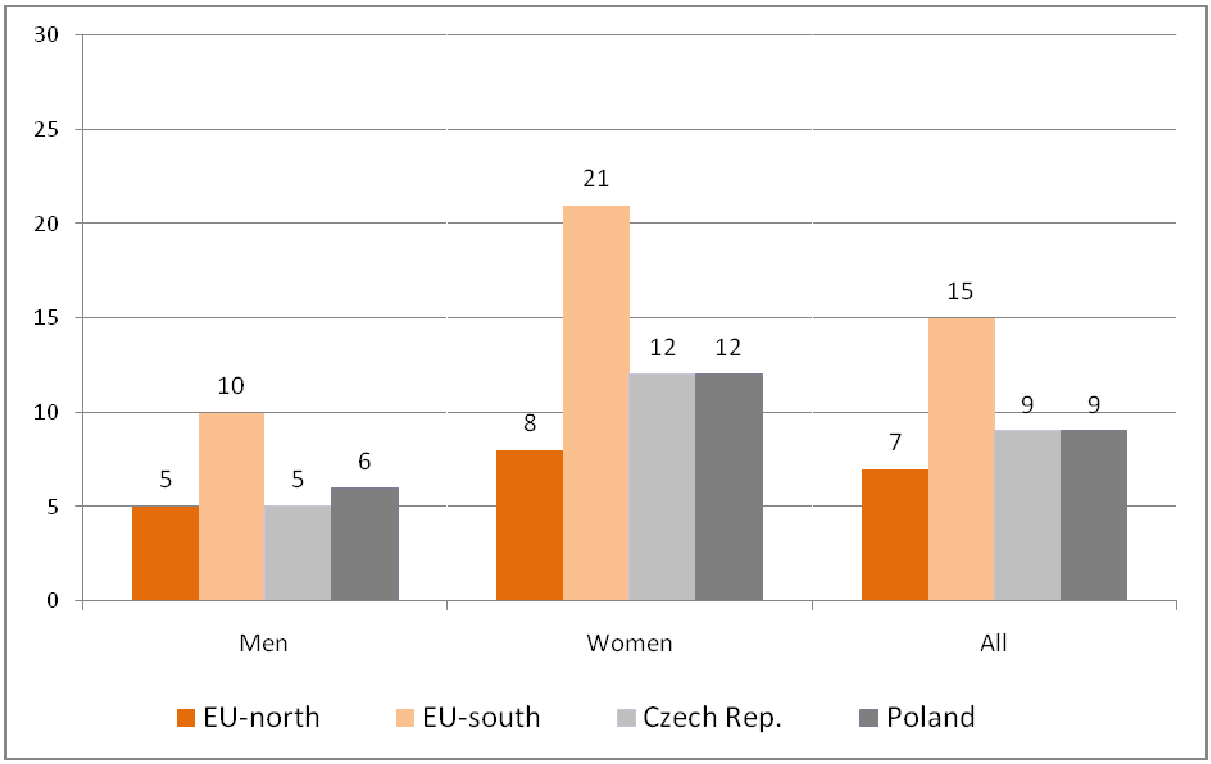
Note: gender is covariate; effects: age $F_{(3,27921)}$ = 29.039, p < 0,000; interaction of region and age $F_{(9,27921)}$ < 2, ns.

Figure 12. Percentage of respondents ever treated for depression by age and region.



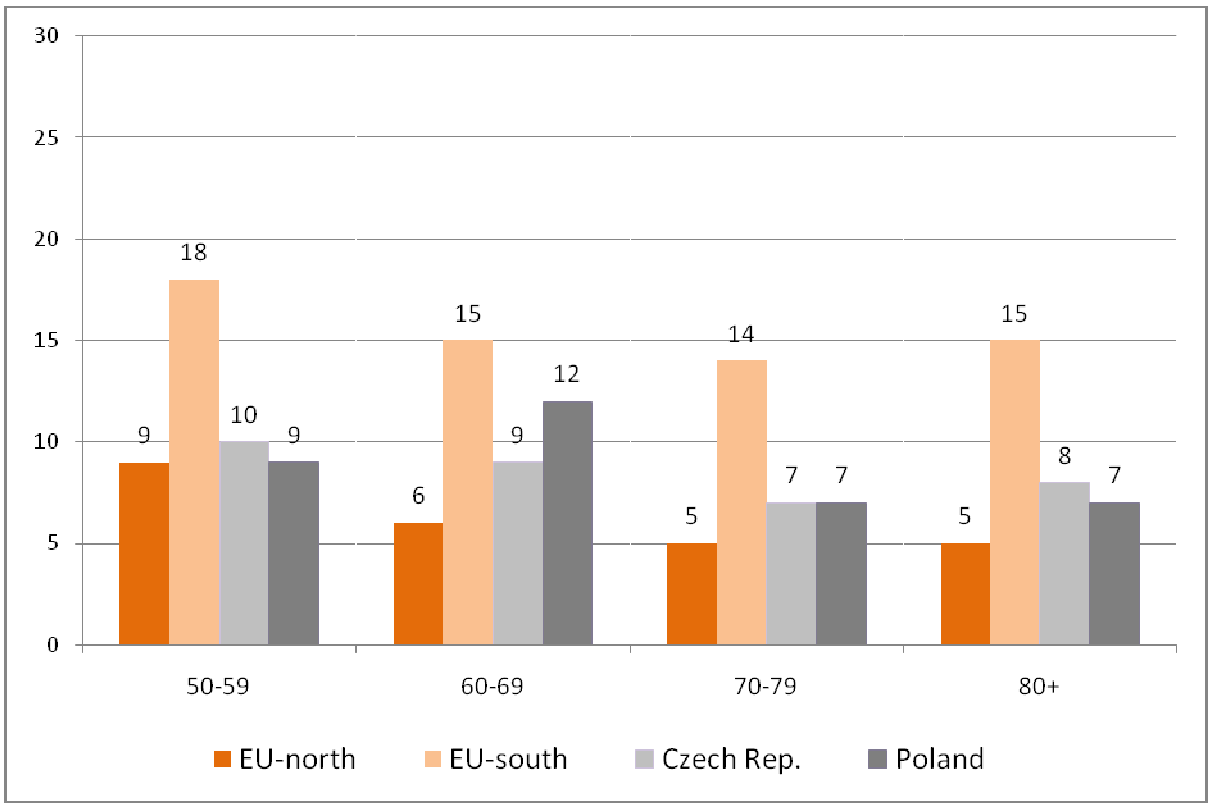
Note: gender and age are covariates; effects: status $F_{(3,23538)} = 95.392$, $p < 0.000$; interaction of region and status $F_{(9,23538)} = 6.239$, $p < 0.000$.

Figure 13. Percentage of respondents ever treated for depression by status on labor market and region.



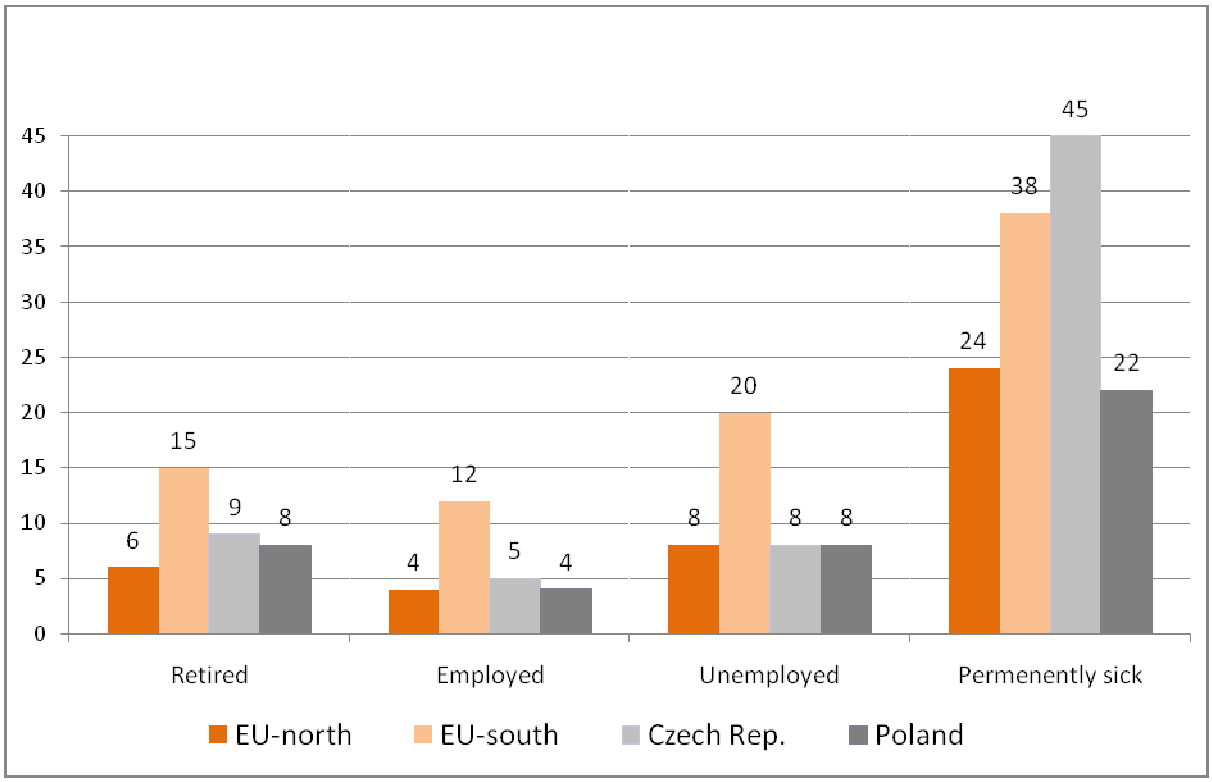
Note: age is covariate; effects: gender $F_{(1,27956)} = 198.031$, $p < 0.000$; region $F_{(3,27956)} = 153.214$, $p < 0.000$; interaction of region and gender $F_{(3,27956)} = 26.821$, $p < 0.000$.

Figure 14. Percentage of respondents ever told by doctor that they suffer from other psychological disorders by gender and region.



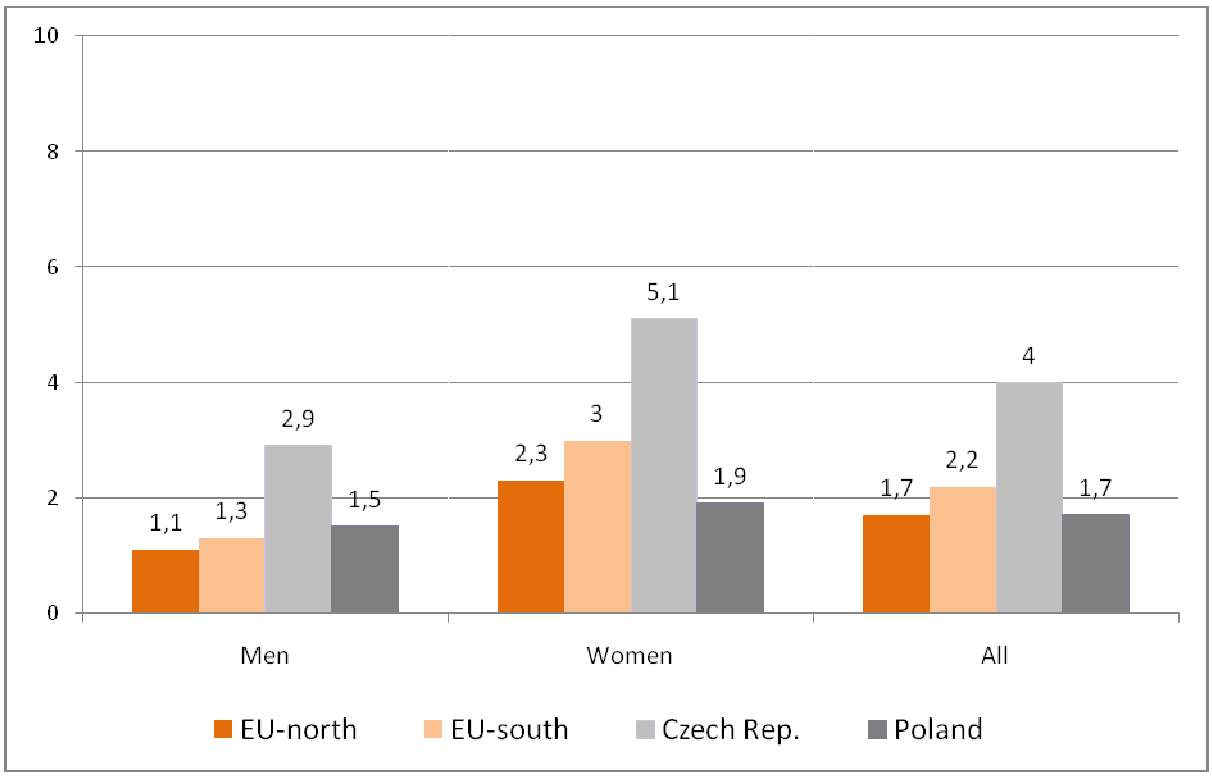
Note: gender is covariate; effects: age $F_{(3,27921)} = 9.039$, $p < 0.000$; interaction of region and age $F_{(9,27921)} = 2.017$, $p < 0.05$.

Figure 15. Percentage of respondents ever told by doctor that they suffer from other psychological disorders by age and region.



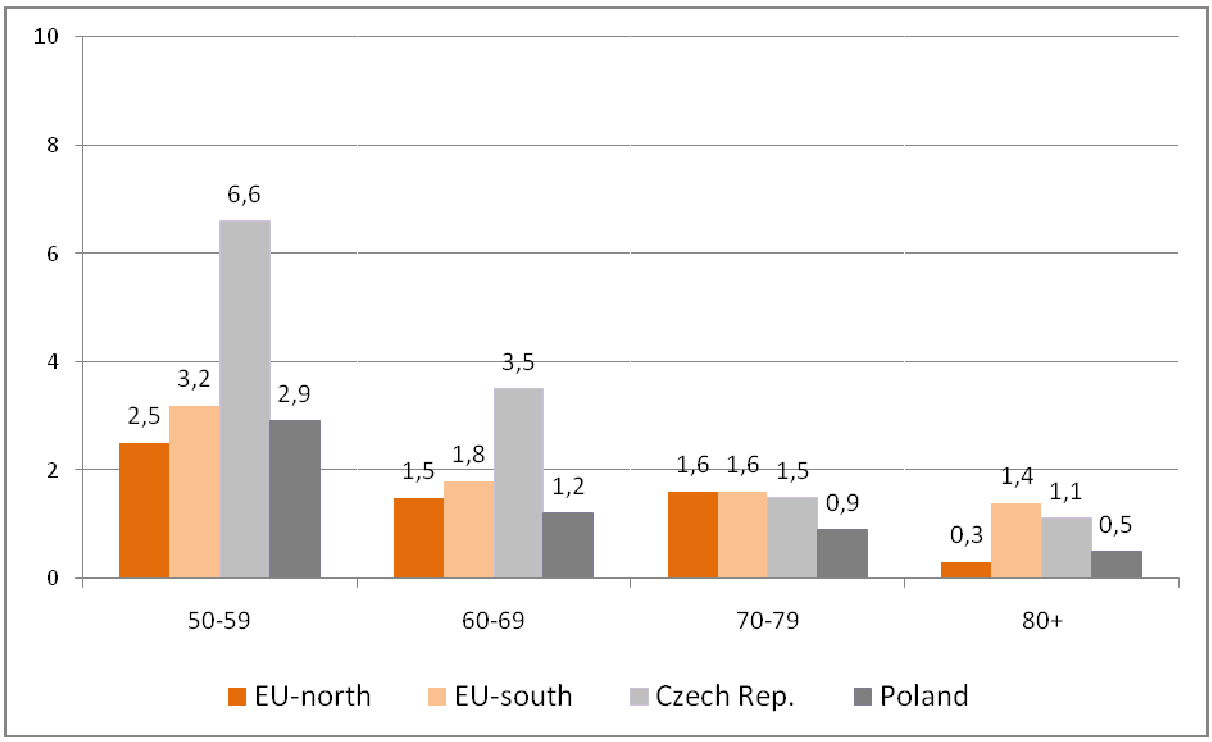
Note: gender and age are covariates; effects: status $F_{(3,23538)} = 110.392$, $p < 0.000$; interaction of region and status $F_{(9,23538)} = 3.839$, $p < 0.000$.

Figure 16. Percentage of respondents ever told by doctor that they suffer from other psychological disorders by status on labor market and region.



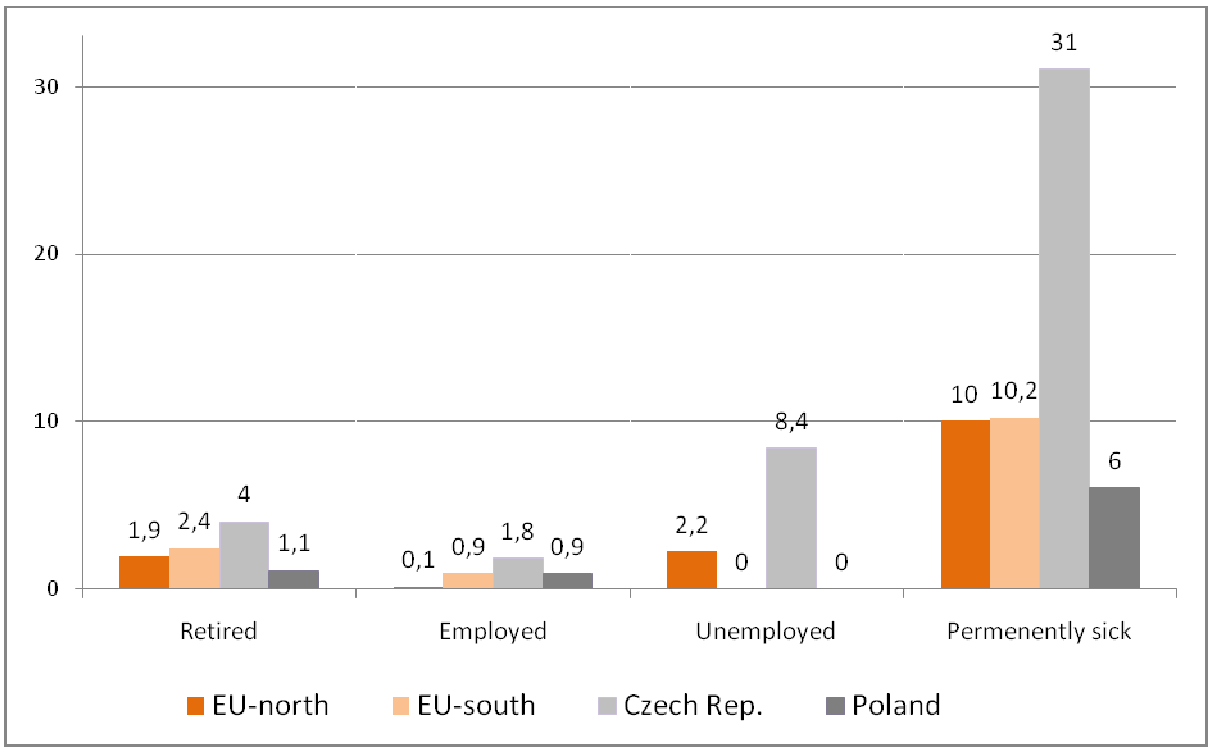
Note: age is covariate; effects: gender $F_{(1,27956)} = 40.531$, $p < 0.000$; region $F_{(3,27956)} = 17.314$, $p < 0.000$; interaction of region and gender $F_{(3,27956)} = 2.286$, $p < 0.1$.

Figure 17. Percentage of respondents who visited psychiatrist (last consultation to specialist during the year) by gender and region.



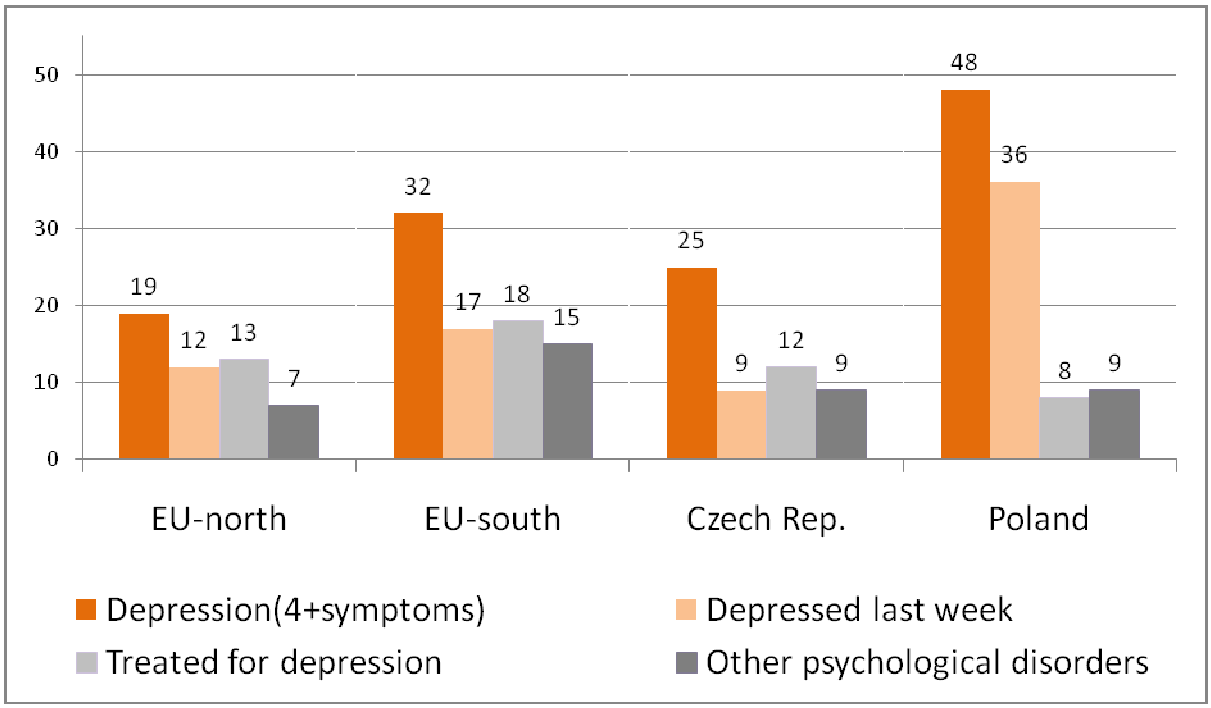
Note: gender is covariate; effects: age $F_{(3,27921)} = 33.939$, $p < 0.000$; interaction of region and age $F_{(9,27921)} = 3.367$, $p < 0.05$.

Figure 18. Percentage of respondents who visited psychiatrist (last consultation to specialist during the year) by age and region.



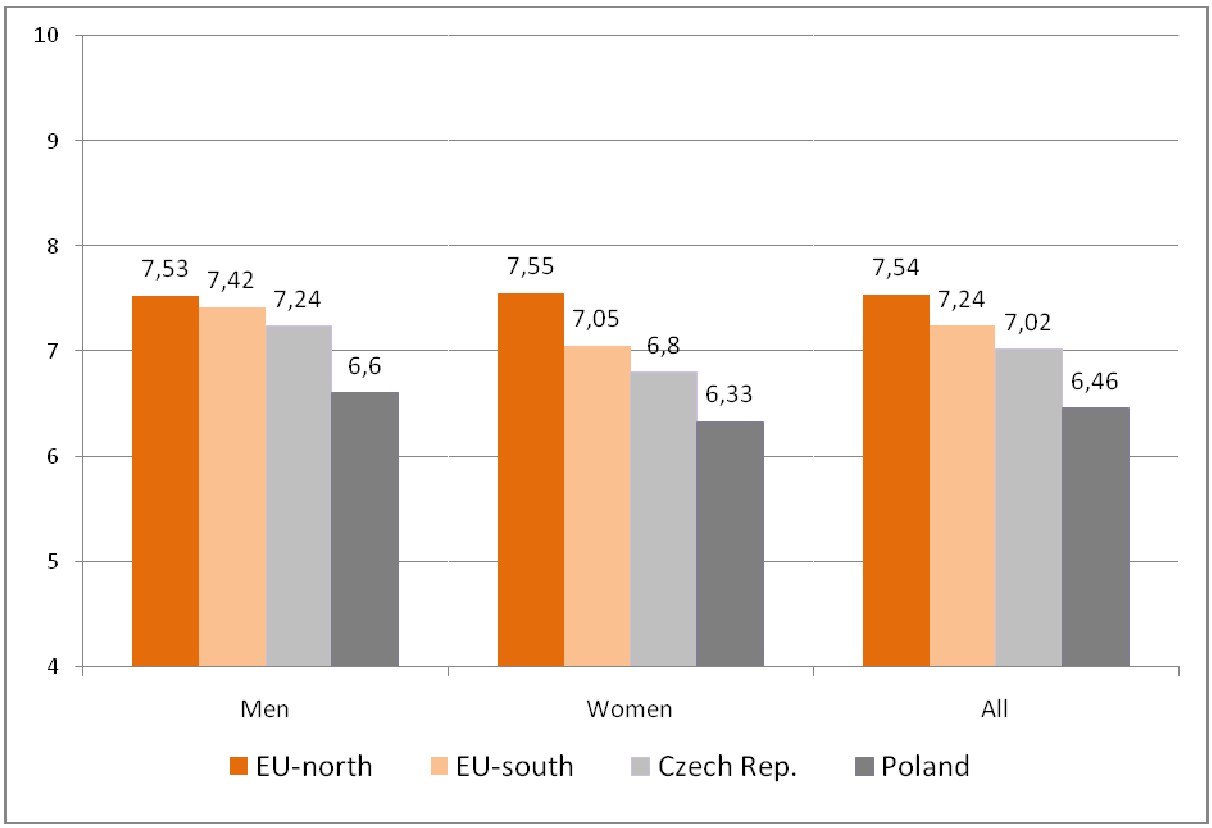
Note: gender and age are covariates; effects: status $F_{(3,23538)} = 131.392$, $p < 0.000$; interaction of region and status $F_{(9,23538)} = 13.839$, $p < 0.000$.

Figure 19. Percentage of respondents who visited psychiatrist (last consultation to specialist during the year) by region and status on the labor market.



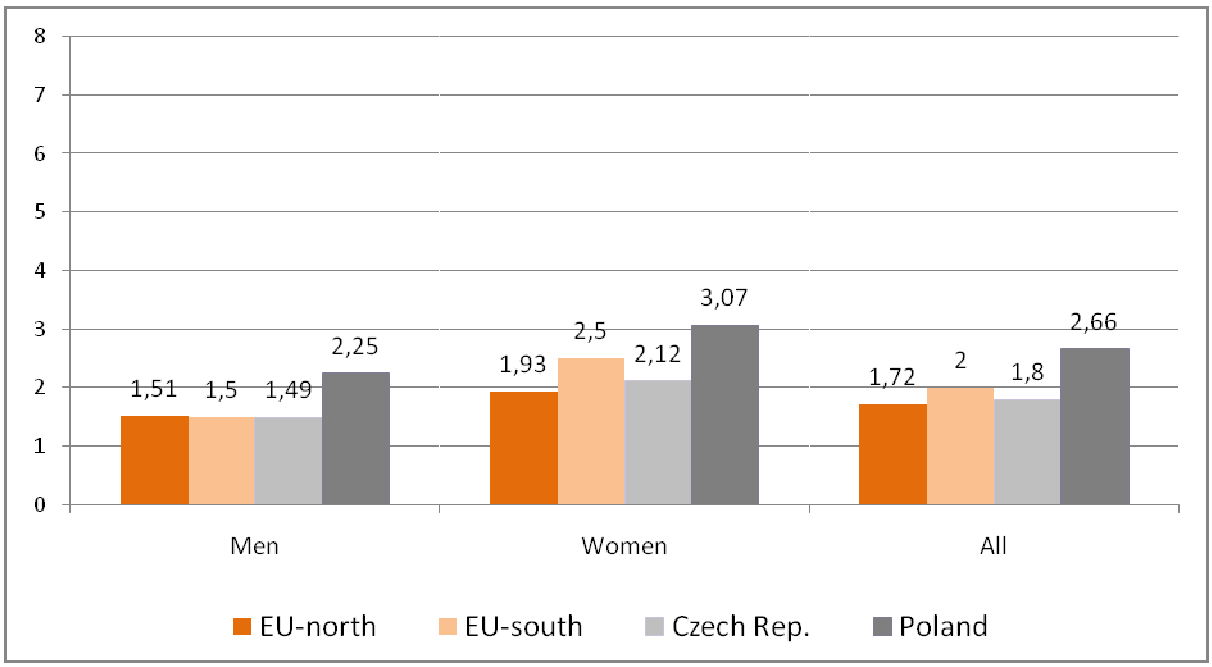
Note: gender and age are covariates.

Figure 20. Percentage of respondents with subjective and objective indicators of psychological ill-being by region.



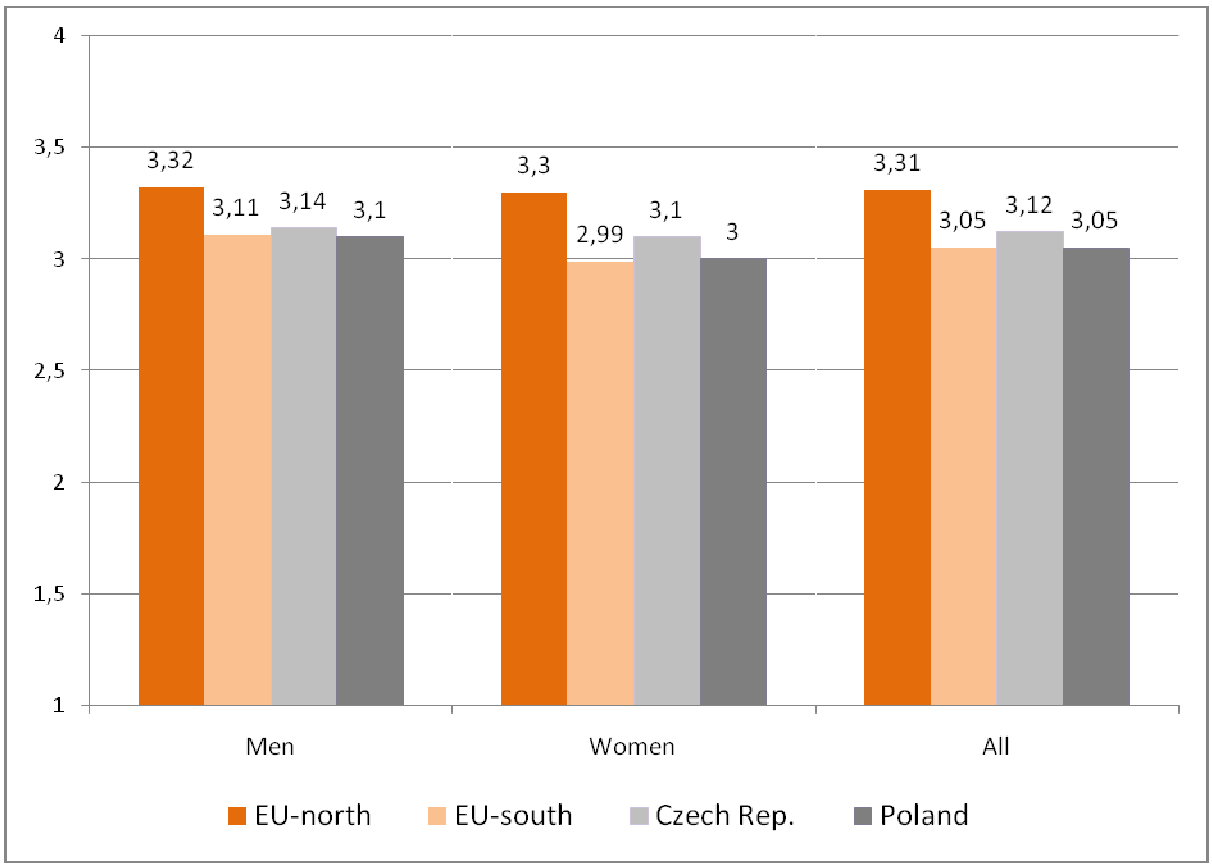
Note: age is covariate; effects: gender $F_{(1,26956)} = 83.531$, $p < 0.000$; region $F_{(3,26956)} = 247.314$, $p < 0.000$; interaction of region and gender $F_{(3,26956)} = 22.886$, $p < 0.000$.

Figure 21. Life satisfaction by gender and region.



Note: age is covariate; effects: gender $F_{(1,13343)} = 219.531$, $p < 0.000$; region $F_{(3,13343)} = 65.314$, $p < 0.000$; interaction of region and gender $F_{(3,13343)} = 15.886$, $p < 0.000$.

Figure 22. Subjective ill-being last week by gender and region.



Note: age is covariate; effects: gender $F_{(1,26343)} = 64.531$, $p < 0.000$; region $F_{(3,26343)} = 372.314$, $p < 0.000$; interaction of region and gender $F_{(3,26343)} = 13.886$, $p < 0.000$.

Figure 23. Subjective well-being by gender and region.

Table 1. Subjective (1-5) and objective (6-8) indicators of mental health in factor analysis

Indicators	**EU-north**		**EU-south**		**Czech Rep..**		**Poland**	
	Component		Component		Component		Component	
	1 (42%)	2 (17%)	1 (45%)	2 (17%)	1 (46%)	2 (18%)	1 (45%)	2 (21%)
1. Subjective well-being	**-0.82**	-0.05	**-0.81**	-0.04	**-0.80**	-0.05	**-0.83**	-0.06
2. Subjective ill-being last week	**0.88**	0.16	**0.89**	-0.04	**0.85**	0.25	**0.91**	0.10
3. Life satisfaction	**-0.73**	-0.01	**-0.74**	-0.04	**-0.75**	-0.06	**-0.70**	-0.06
4. Current symptoms of depression	**0.74**	0.21	**0.79**	0.26	**0.80**	0.23	**0.83**	0.15
5. Depressed last week	**0.69**	0.18	**0.75**	0.19	**0.52**	0.34	**0.79**	0.08
6. Depression treated	0.09	**0.77**	0.18	**0.79**	0.10	**0.85**	0.10	**0.82**
7. Other psychological disorders	0.14	**0.76**	0.21	**0.75**	0.25	**0.79**	0.24	**0.77**
8. Psychiatrist	0.08	**0.64**	0.00	**0.69**	0.12	**0.76**	-0.05	**0.77**

Note: extraction method: Principal Component Analysis, rotation method: Varimax with Kaiser Normalization, rotation converged in 3 iterations.

Table 2. Results of logistic analysis – probability of current depression (4 and more subjective symptoms)

Predictors		EU-north		EU-south		Czech Rep.		Poland	
		Exp(B)	p	Exp(B)	p	Exp(B)	p	Exp(B)	p
Partner – yes	Ref.								
Partner – no		**1.498**	0.000	**1.247**	0.000	**1.771**	0.000	1.205	0.090
Income – 4th quartile (highest)	Ref.								
Income – 1st quartile (lowest)		**1.658**	0.000	**1.450**	0.000	**2.358**	0.000	**1.849**	0.000
Income – 2nd+3rd quartile		**1.312**	0.000	**1.168**	0.048	**1.739**	0.000	**1.292**	0.029
Age – 80+	Ref.								
Age – 50-59		**0.802**	0.006	**0.456**	0.000	**0.398**	0.000	0.741	0.135
Age – 60-69		**0.559**	0.000	**0.491**	0.000	**0.364**	0.000	**0.673**	0.039
Age – 70-79		**0.655**	0.000	**0.620**	0.000	**0.434**	0.000	1.120	0.563
Gender – female	Ref.								
Gender – male		**0.586**	0.000	**0.414**	0.000	**0.651**	0.000	**0.479**	0.000
Education – higher	Ref.								
Education – primary		1.133	0.079	**1.293**	0.003	**2.479**	0.000	**1.846**	0.001
Education – basic vocational		**1.170**	0.020	**1.258**	0.010	**2.052**	0.000	1.246	0.206
Education – high		1.027	0.682	0.911	0.306	1.350	0.061	1.009	0.959
Constant		0.261	0.000	0.701	0.003	0.255	0.000	0.861	0.553
R Square Nagelkerke		0.057		0.113		0.123		0.119	

Note: values in bold are statistically significant

Table 3. Results of logistic analysis – probability of current depression (4 and more subjective symptoms) in Poland in comparison with other regions of Europe with control of age and gender.

Predictors	B	S.E.	Wald	df	p.	Exp(B)	95,0% C.I.for EXP(B)	
							Lower	Upper
Other regions (ref.)								
Poland	1.056	.044	586.001	1	.000	2.875	2.639	3.131
Men (ref.)								
Women	.841	.028	919.462	1	.000	2.319	2.196	2.448
Age	.025	.001	393.754	1	.000	1.025	1.023	1.028
Constant	-4.004	.094	1820.776	1	.000	.018		

Table 4. Results of logistic analysis – probability of being treated for depression.

Predictors		EU-north		EU-south		Czech Rep.		Poland	
		Exp(B)	p	Exp(B)	p	Exp(B)	p	Exp(B)	p
Partner – yes	Ref.								
Partner – no		**1.469**	0.000	**1.290**	0.000	**1.889**	0.000	1.003	0.988
Income – 4th quartile (highest)	Ref.								
Income – 1st quartile (lowest)		**1.308**	0.009	1.254	0.075	**1.901**	0.002	**1.624**	0.042
Income – 2nd+3rd quartile		**1.296**	0.004	1.086	0.452	**1.685**	0.007	1.217	0.381
Age – 80+	Ref.								
Age – 50-59		**2.746**	0.000	**1.609**	0.002	**2.223**	0.006	**2.387**	0.028
Age – 60-69		**1.560**	0.001	**1.464**	0.010	**1.926**	0.022	1.833	0.116
Age – 70-79		1.164	0.292	1.165	0.310	1.255	0.456	1.359	0.441
Gender – female	Ref.								
Gender – male		**0.560**	0.000	**0.360**	0.000	**0.359**	0.000	**0.384**	0.000
Education – higher	Ref.								
Education – primary		**1.275**	0.012	0.963	0.772	**0.322**	0.021	0.850	0.572
Education – basic vocational		0.958	0.651	1.035	0.796	0.828	0.373	0.737	0.282
Education – high		0.944	0.532	0.933	0.594	**0.673**	0.031	0.713	0.226
Constant		0.045	0.000	0.087	0.000	0.059	0.000	0.068	0.000
R Square Nagelkerke		0.044		0.055		0.087		0.056	

Note: values in bold are statistically significant

Table 5. Results of logistic analysis – probability of being treated for depression in Poland in comparison with other regions of Europe with control of age and gender.

Predictors	B	S.E.	Wald	df	p.	Exp(B)	95,0% C.I.for EXP(B)	
							Lower	Upper
Other regions (ref.)								
Poland	-.712	.072	97.139	1	.000	.491	.426	.565
Men (ref.)								
Women	.865	.035	613.209	1	.000	2.375	2.217	2.543
Age	-.018	.002	130.063	1	.000	.982	.979	.985
Constant	-1.901	.113	282.925	1	.000	.149		

Table 6. Results of multiple regression analysis of life satisfaction on socio-demographic variables.

Region	Predictor	Unstandardized Coefficients		Standardized Coefficients	t	Sig
		B	Std. Error .	Beta		
EU-north	(Constant)	6.446	.313		20.625	.000
	Partner (1-yes, 0- no)	.401	.090	**.113**	4.479	.000
	Income	5.04E-006	.000	**.083**	3.489	.000
	Age	.018	.003	**.153**	5.950	.000
	Gender (1-male, 2-female)	.025	.077	.008	.323	.747
	Years of education	.018	.008	**.054**	2.285	.022
EU-south	(Constant)	7.232	.130		55.481	.000
	Partner (1-yes, 0- no)	.656	.033	**.184**	19.874	.000
	Income	9.18E-006	.000	**.088**	9.654	.000
	Age	-.001	.001	-.004	-.422	.673
	Gender (1-male, 2-female)	.127	.029	**.041**	4.448	.000
	Years of education	-.005	.003	-.015	-1.639	.101
Czech Rep.	(Constant)	6.931	.182		38.104	.000
	Partner (1-yes, 0- no)	.630	.045	**.162**	13.869	.000
	Income	3.44E-006	.000	**.034**	2.979	.003
	Age	-.009	.002	**-.050**	-4.251	.000
	Gender (1-male, 2-female)	-.149	.040	**-.042**	-3.726	.000
	Years of education	.059	.004	**.160**	13.484	.000
Poland	(Constant)	5.981	.389		15.374	.000
	Partner (1-yes, 0-no)	.631	.085	**.151**	7.406	.000
	Income	2.60E-005	.000	**.073**	3.729	.000
	Age	-.008	.004	**-.041**	-2.008	.045
	Gender (1-male, 2-female)	.026	.078	.007	.335	.738
	Years of education	.077	.012	**.122**	6.168	.000

R^2 adjusted: EU-north 0.039; EU-south 0.083; Czech Rep. 0.054; Poland 0.066

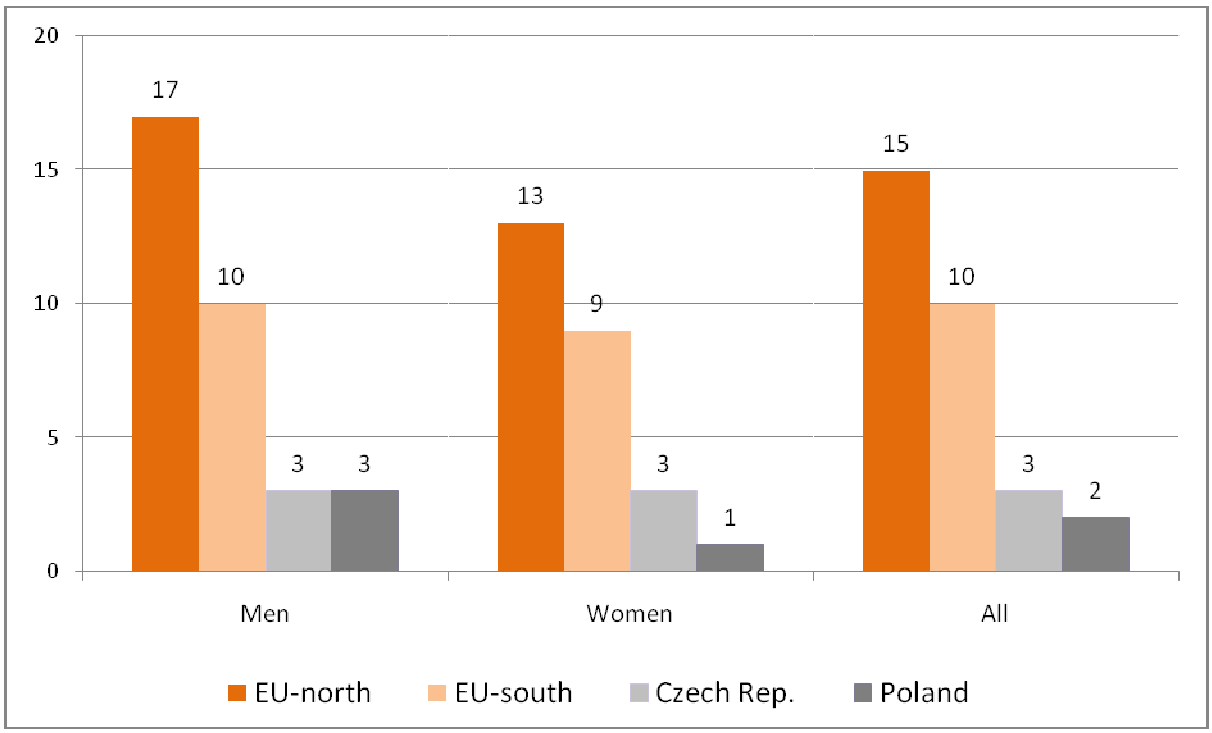
Note: values in bold are statistically significant

Table 7. Results of multiple regression analysis of subjective ill-being last week on socio-demographic variables.

Region	Predictor	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error .	Beta		
EU-north	(Constant)	.470	.216		2.175	.030
	Partner (1-yes, 0- no)	-.690	.054	**-.167**	-12.803	.000
	Income	-7.68E-006	.000	**-.063**	-4.920	.000
	Age	.015	.002	**.082**	6.266	.000
	Gender (1-male, 2-female)	.296	.047	**.082**	6.328	.000
	Years of education	.002	.005	.004	.313	.754
EU-south	(Constant)	.270	.325		.832	.406
	Partner (1-yes, 0- no)	-.661	.081	**-.131**	-8.159	.000
	Income	-3.58E-006	.000	**-.027**	-1.723	.085
	Age	.024	.004	**.108**	6.688	.000
	Gender (1-male, 2-female)	.755	.072	**.165**	10.467	.000
	Years of education	-.073	.008	**-.149**	-9.148	.000
Czech Rep.	(Constant)	2.190	.581		3.772	.000
	Partner (1-yes, 0- no)	-.740	.128	**-.160**	-5.762	.000
	Income	-1.75E-005	.000	**-.045**	-1.649	.099
	Age	.019	.006	**.089**	3.201	.001
	Gender (1-male, 2-female)	.278	.116	**.065**	2.393	.017
	Years of education	-.123	.019	**-.173**	-6.388	.000
Poland	(Constant)	1.535	.806		1.905	.057
	Partner (1-yes, 0-no)	-.777	.182	**-.131**	-4.261	.000
	Income	-1.60E-005	.000	**-.065**	-2.217	.027
	Age	.025	.009	**.100**	2.896	.004
	Gender (1-male, 2-female)	.750	.151	**.147**	4.963	.000
	Years of education	-.109	.025	**-.147**	-4.338	.000

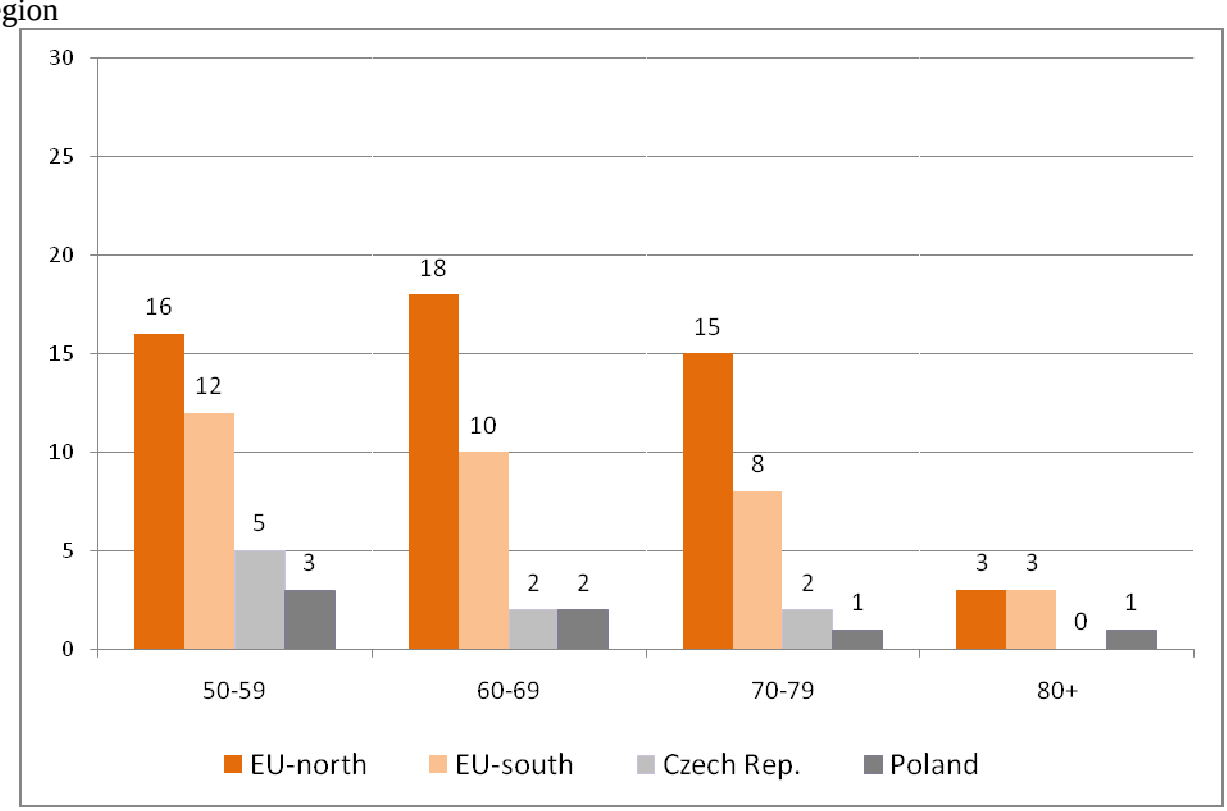
R^2 adjusted: EU-north 0.061; EU-south 0.122; Czech Rep. 0.098; Poland 0.115

Note: values in bold are statistically significant



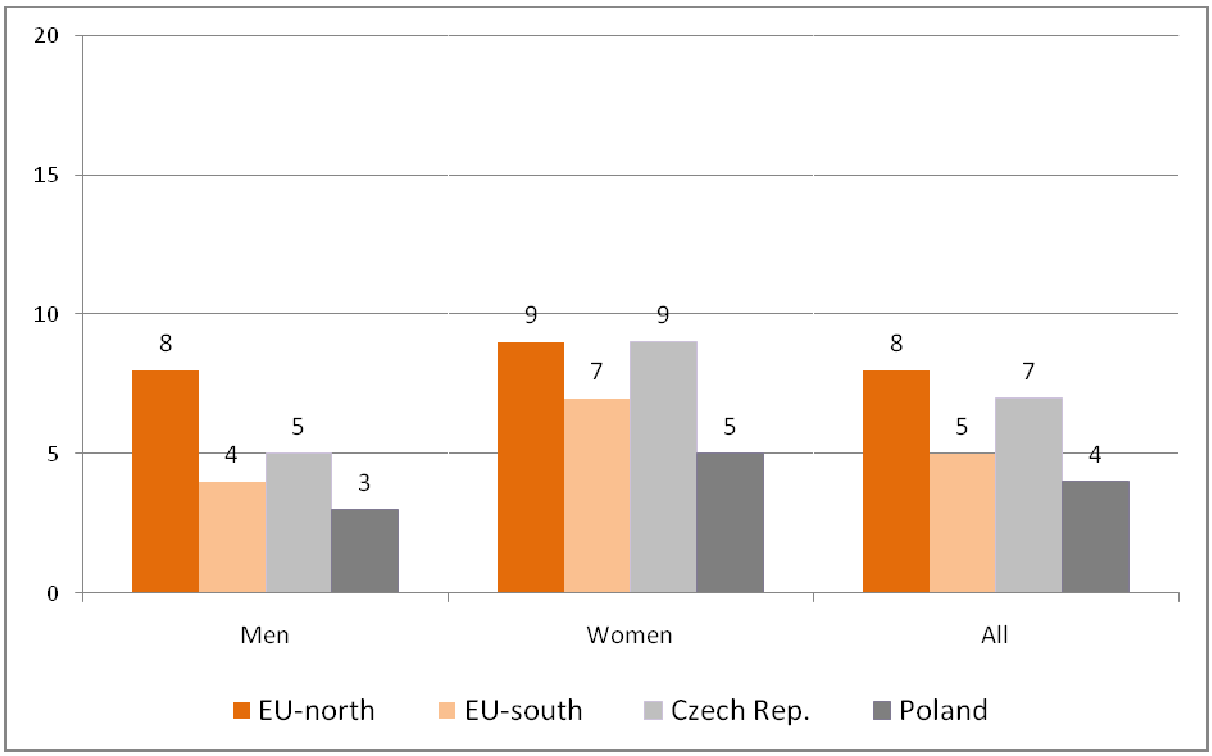
Note: age is covariate; effects: gender $F_{(1,27343)}$ = 17.531, p < 0.000; region $F_{(3,27343)}$ = 199.314, p < 0.000; interaction of region and gender $F_{(3,27343)}$ = 7.786, p < 0.000.

Figure 24. Percentage of respondents who have done voluntary work in last month by gender and region



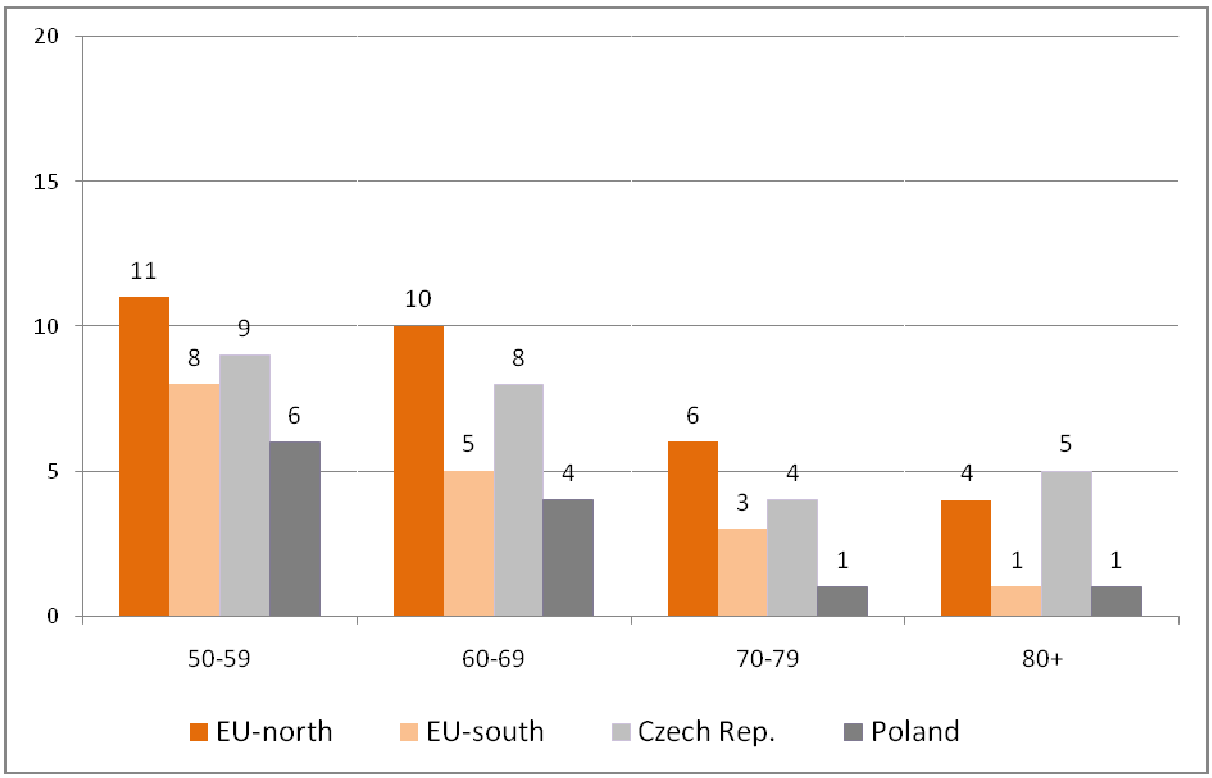
Note: gender is covariate; effects: age $F_{(3,27921)}$ = 27.689, p < 0.000; interaction of region and age $F_{(9,27921)}$ = 7.977, p < 0.000.

Figure 25. Percentage of respondents who have done voluntary work in last month by age and region



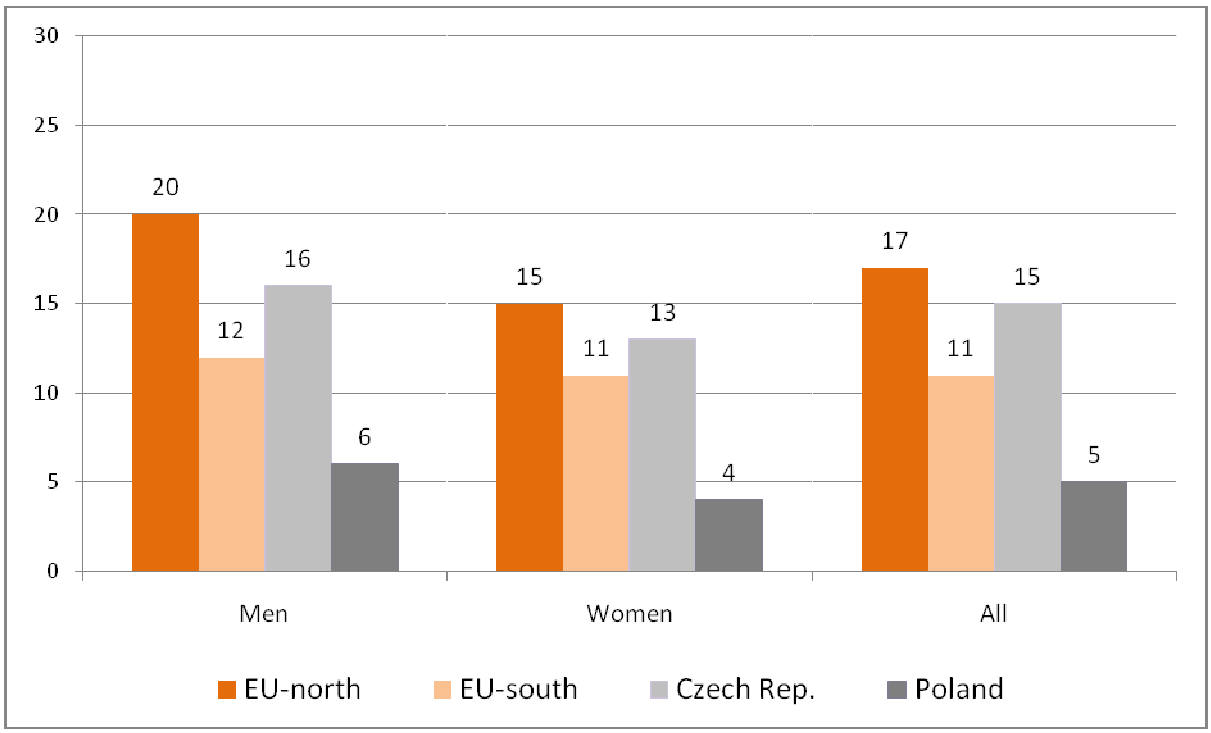
Note: age is covariate; effects: gender $F_{(1,27343)} = 44.331$, $p < 0.000$; region $F_{(3,27343)} = 41.345$, $p < 0.000$; interaction of region and gender $F_{(3,27343)} = 3.762$, $p < 0.01$.

Figure 26. Percentage of respondents who have cared for a sick or disabled adult in last month by gender and region.



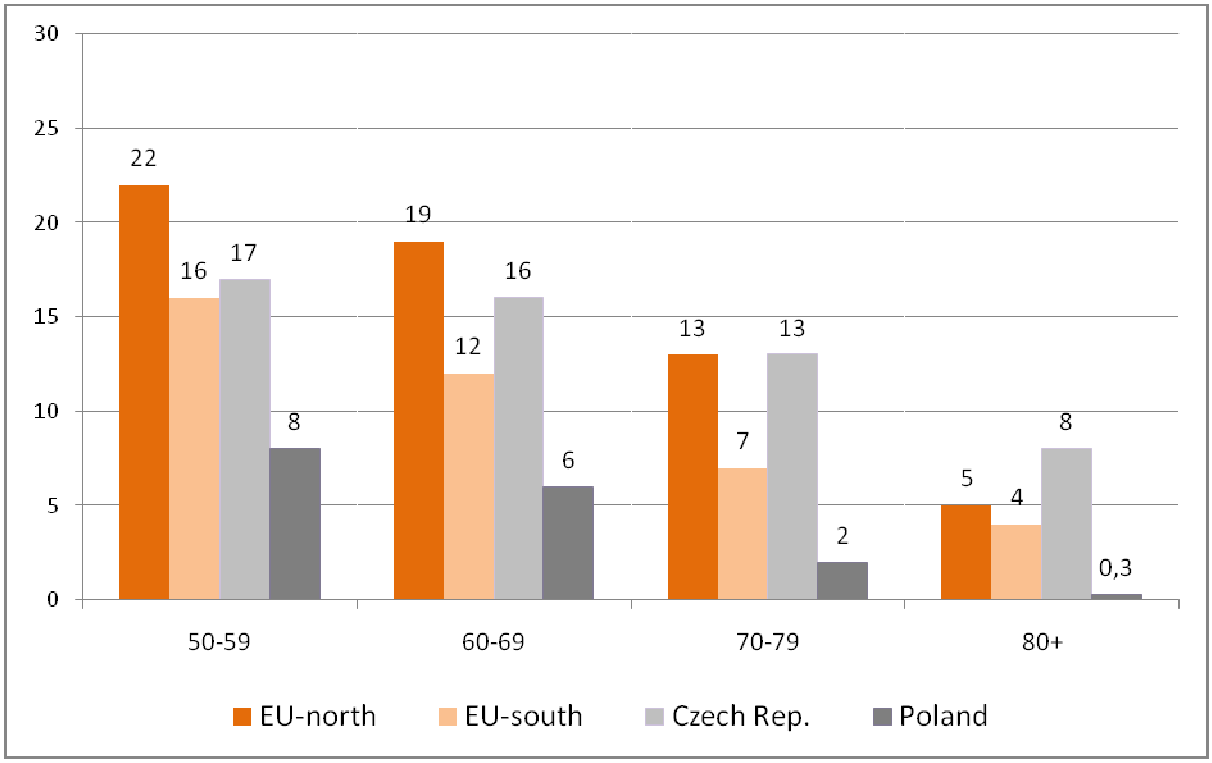
Note: gender is covariate; effects: age $F_{(3,27921)} = 45.839$, $p < 0.000$; interaction of region and age $F_{(9,27921)} = 2.00$, $p < 0.05$.

Figure 27. Percentage of respondents who have cared for a sick or disabled adult in last month by gender and region.



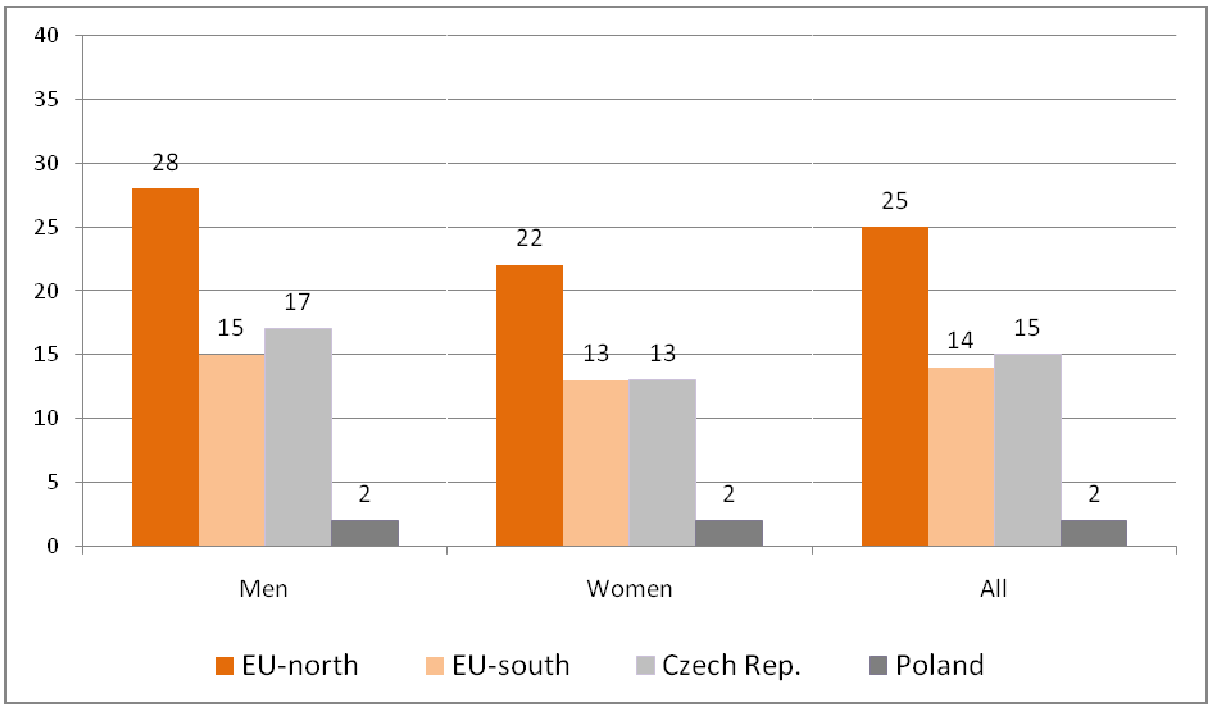
Note: age is covariate; effects: gender $F_{(1,27343)} = 24.031$, $p < 0.000$; region $F_{(3,27343)} = 120.482$, $p < 0{,}000$; interaction of region and gender $F_{(3,27343)} = 3.048$, $p < 0{,}05$.

Figure 28. Percentage of respondents who have provided help to friends or neighbors in last month by gender and region



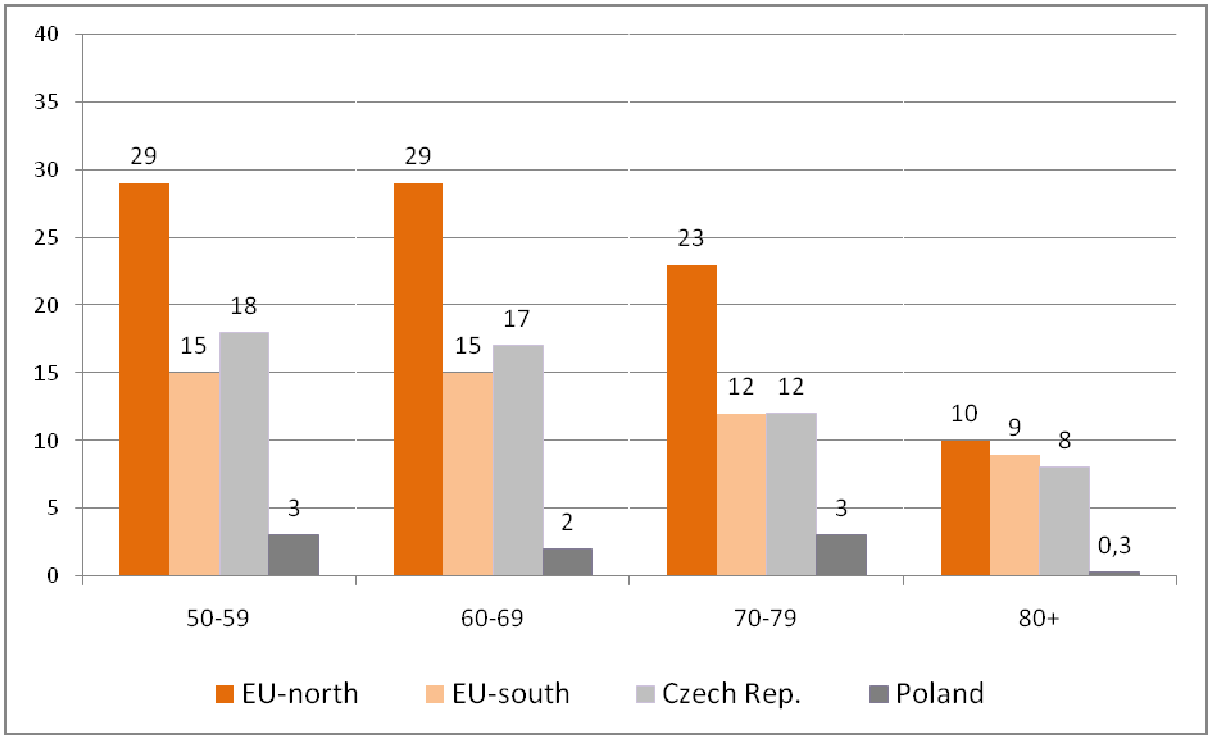
Note: gender is covariate; effects: age $F_{(3,27921)} = 71.323$, $p < 0.000$; interaction of region and age $F_{(9,27921)} = 3.508$, $p < 0.000$.

Figure 29. Percentage of respondents who have provided help to friends or neighbors in last month by age and region



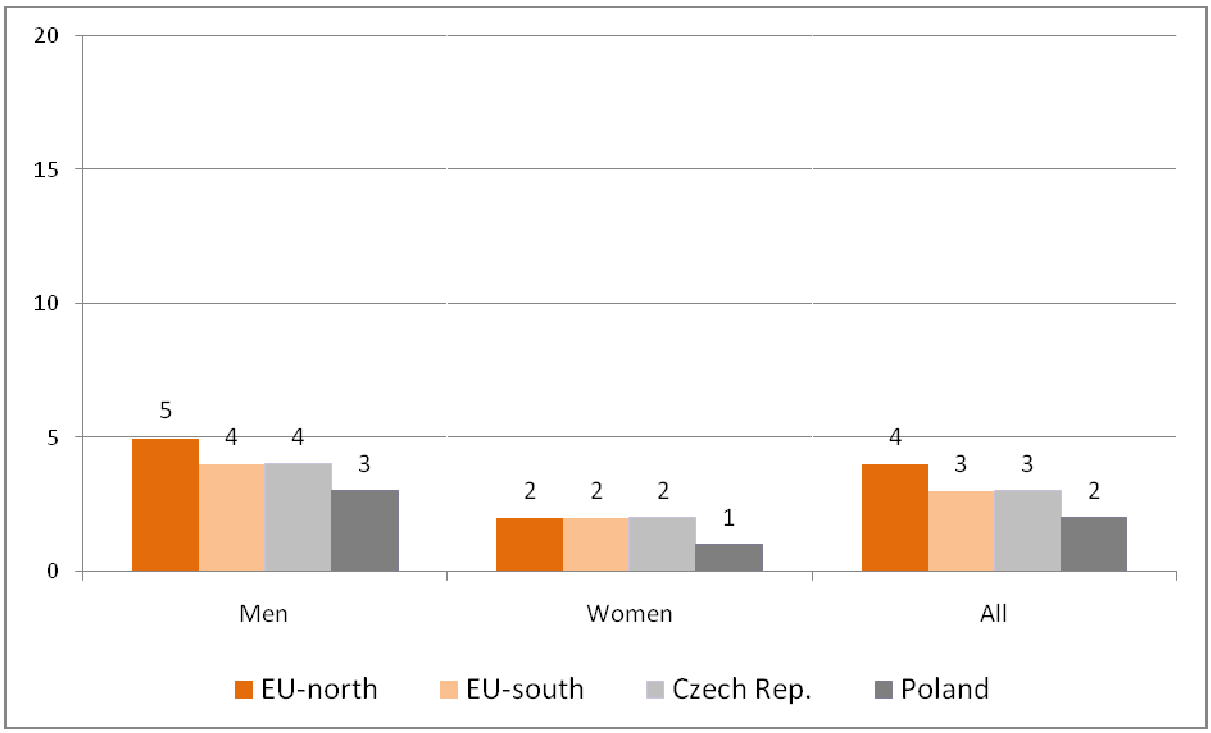
Note: age is covariate; effects: gender $F_{(1,27343)} = 27.167$, $p < 0.000$; region $F_{(3,27343)} = 345.963$, $p < 0.000$; interaction of region and gender $F_{(3,27343)} = 7.402$, $p < 0.000$.

Figure 30. Percentage of respondents who have gone to a sport, social or other kind of club in last month by gender and region.



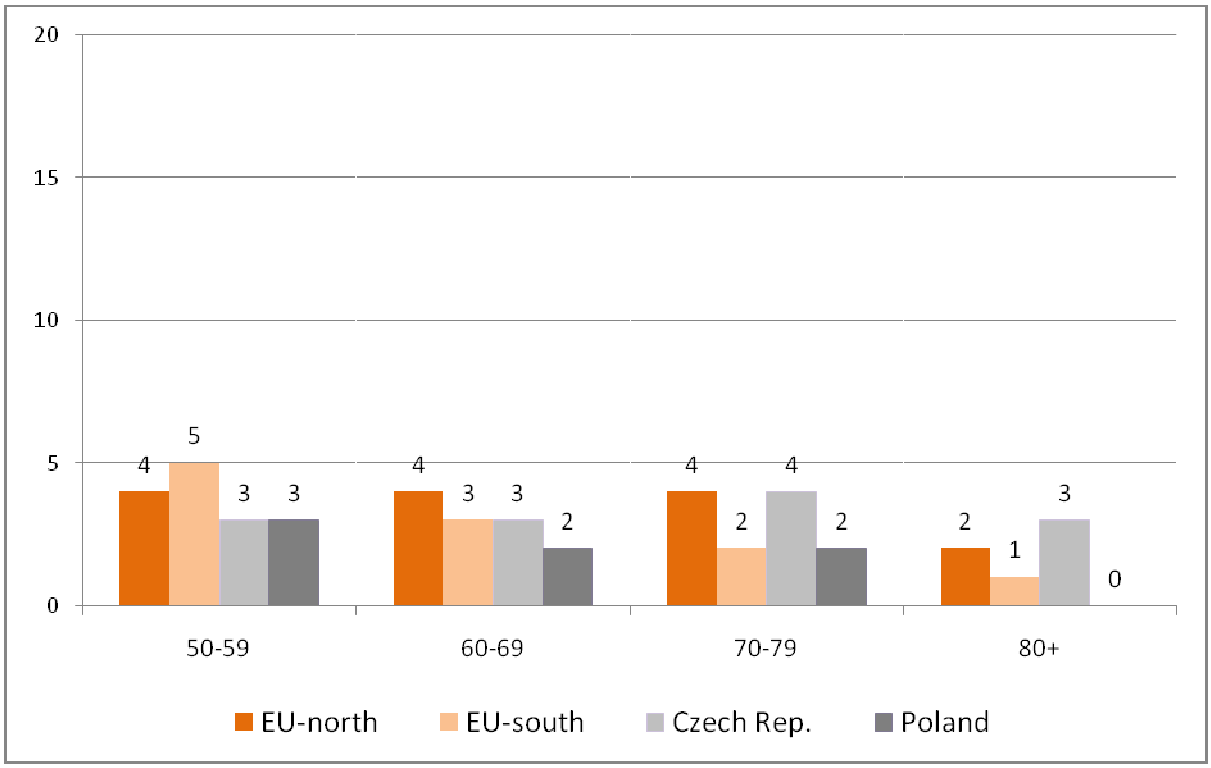
Note: gender is covariate; effects: age $F_{(3,27921)} = 35.470$, $p < 0.000$; interaction of region and age $F_{(9,27921)} = 9.399$, $p < 0.000$.

Figure 31. Percentage of respondents who have gone to a sport, social or other kind of club in last month by age and region.



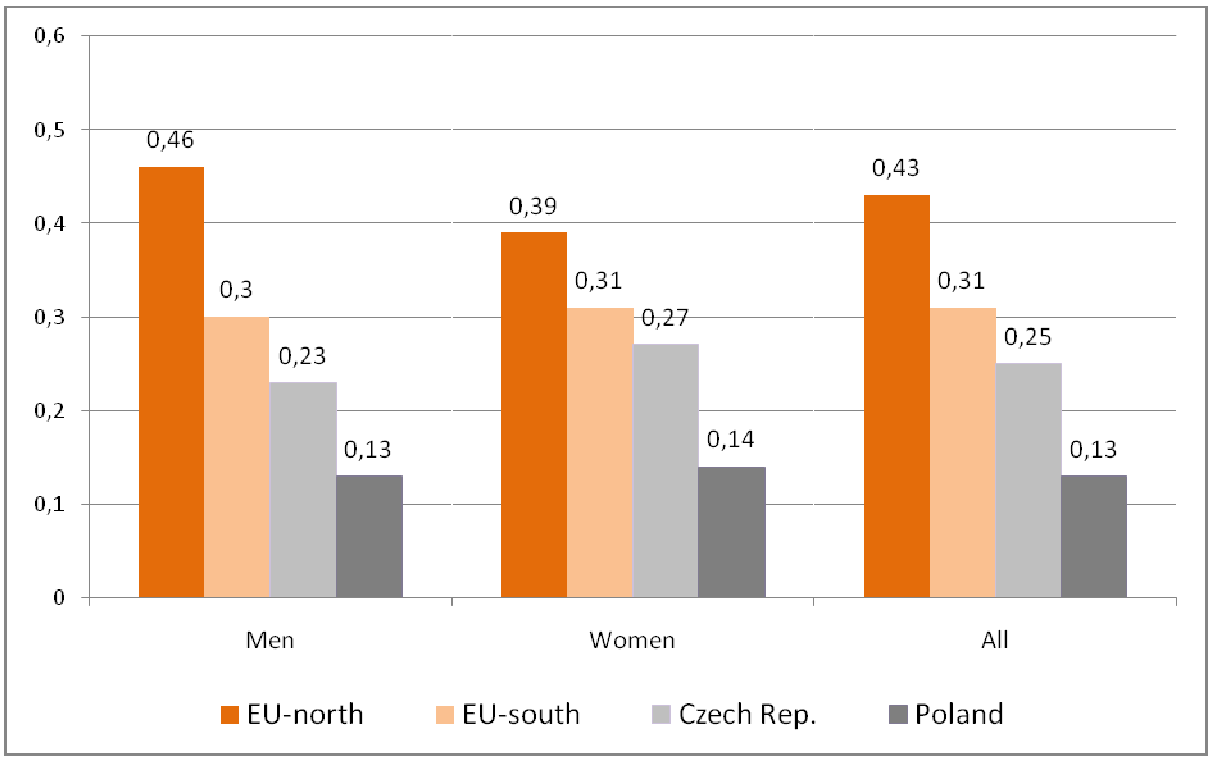
Note: age is covariate; effects: gender $F_{(1,27343)} = 53.031$, $p < 0.000$; region $F_{(3,27343)} = 9.013$, $p < 0.000$; interaction of region and gender $F_{(3,27343)} = 7.761$, $p < 0.000$.

Figure 32. Percentage of respondents who have taken part in a political or community-related organization in last month by gender and region.



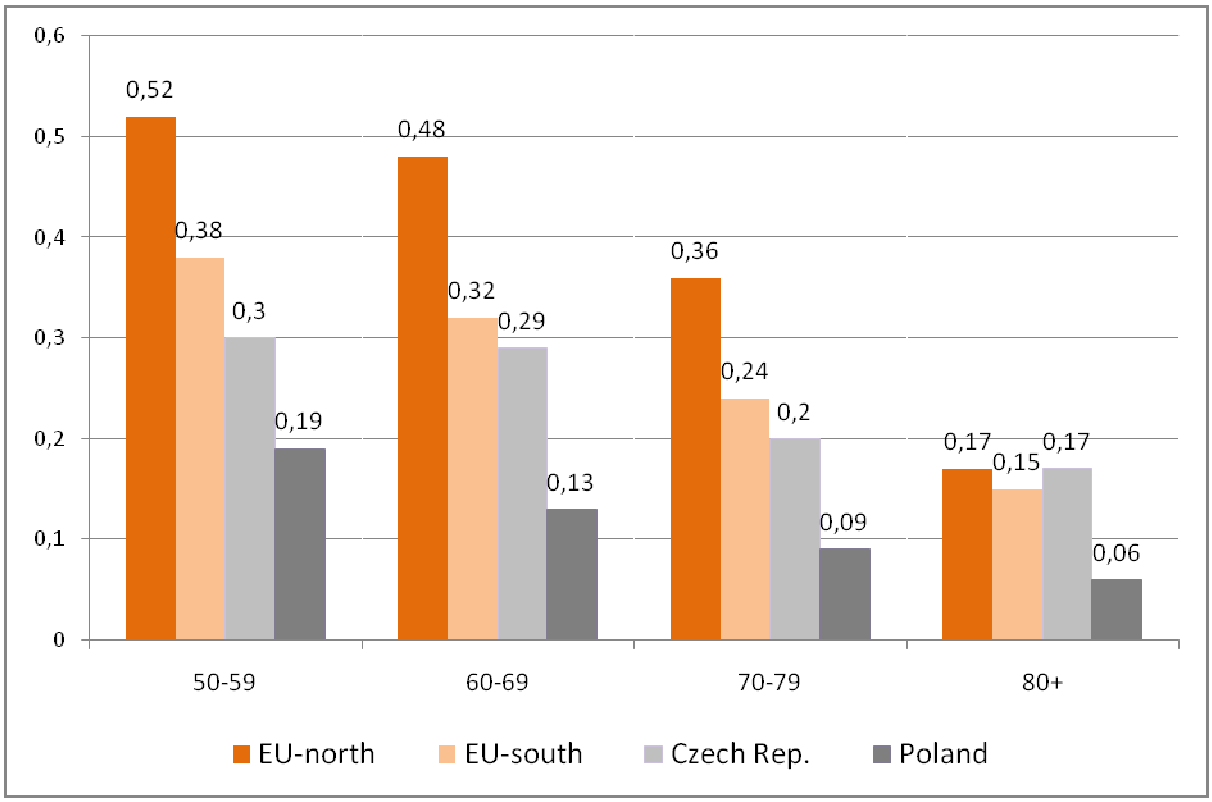
Note: gender is covariate; effects: age $F_{(3,27921)} = 8.616$, $p < 0.000$; interaction of region and age $F_{(9,27921)} = 3.462$, $p < 0.000$.

Figure 33. Percentage of respondents who have taken part in a political or community-related organization in last month by age and region.



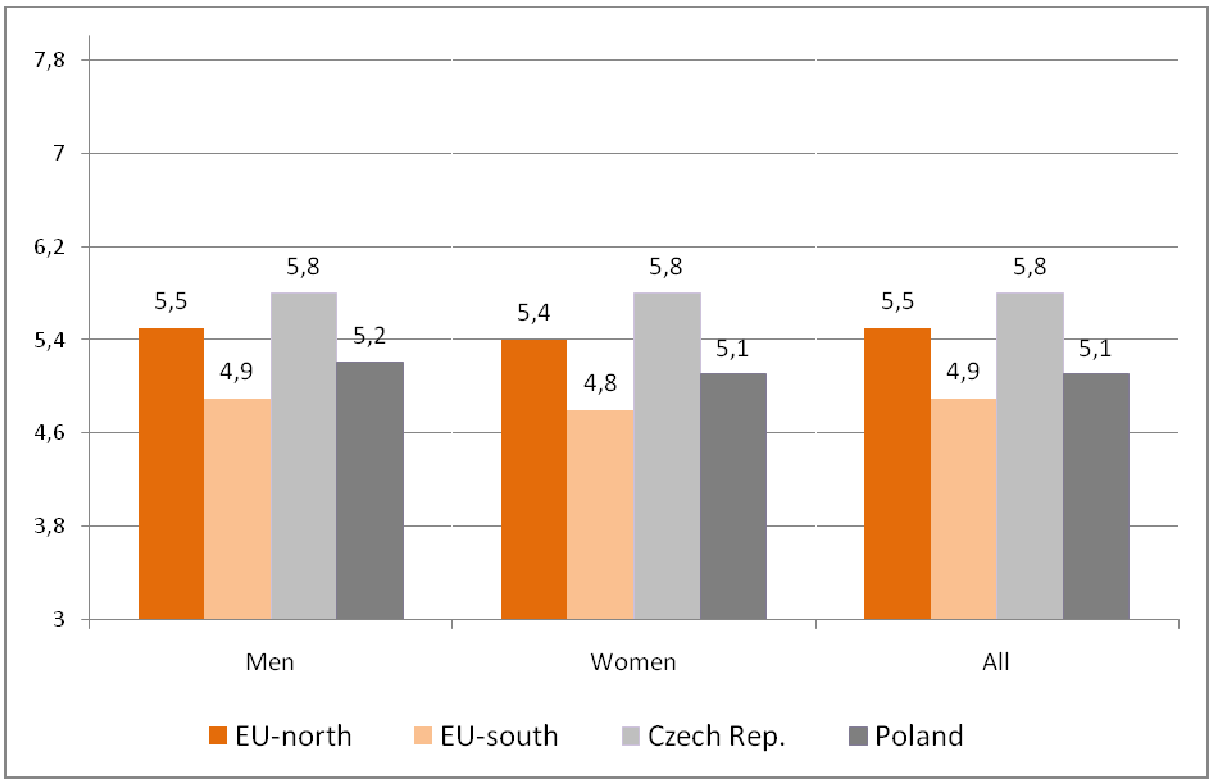
Note: age is covariate; effects: gender $F_{(1,27343)} < 1$, ns; region $F_{(3,27343)} = 254.221$, $p < 0000$; interaction of region and gender $F_{(3,27343)} = 11.441$, $p < 0.000$.

Figure 34. Number of social activities (without religious) weighted by frequency by gender and region.



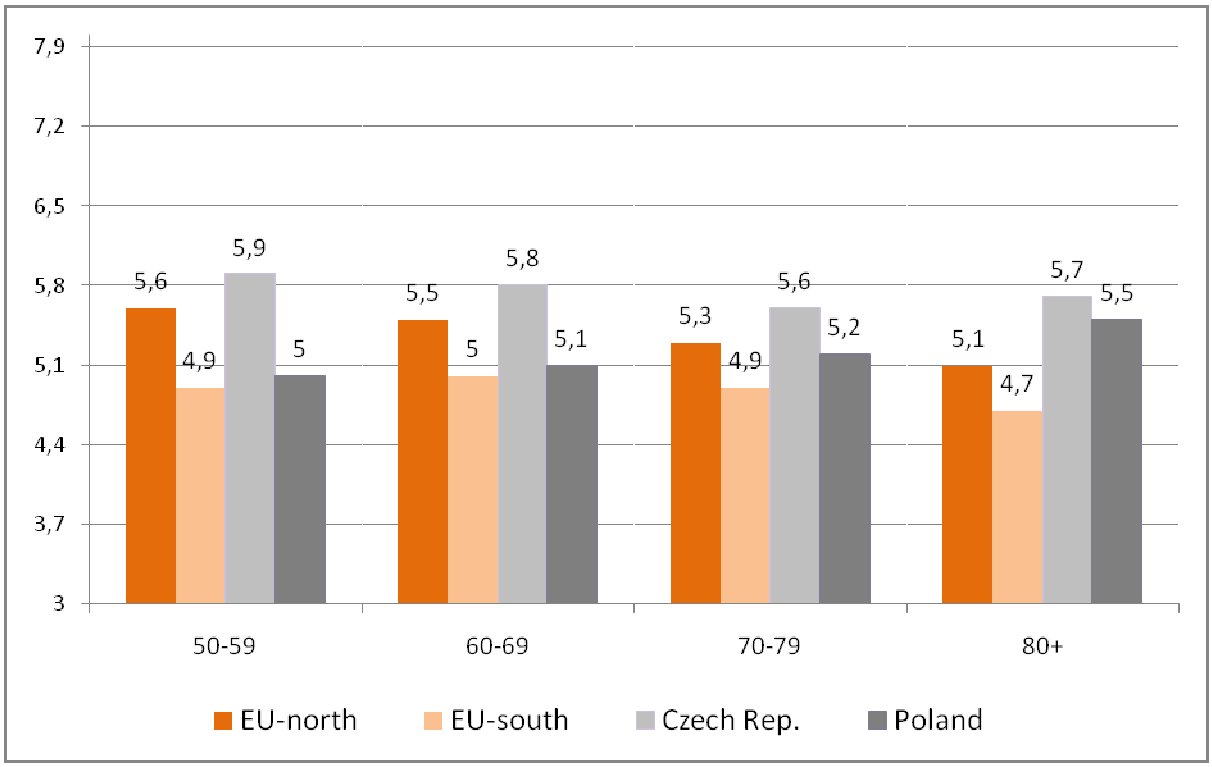
Note: gender is covariate; effects: age $F_{(3,27921)} = 91.393$, $p < 0.000$; interaction of region and age $F_{(9,27921)} = 7.383$, $p < 0.000$.

Figure 35. Number of social activities (without religious) weighted by frequency by age and region.



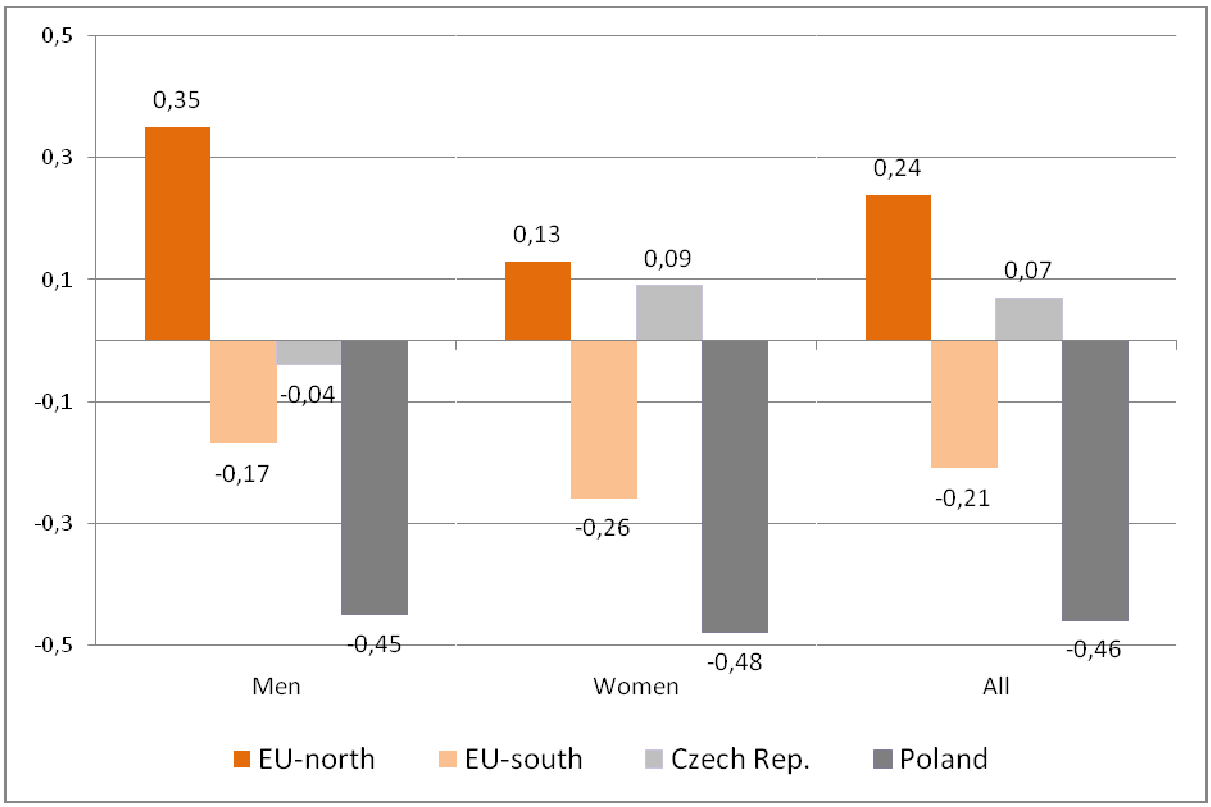
Note: age is covariate; effects: gender $F_{(1,27343)} = 4.931$, $p < 0,05$; region $F_{(3,27343)} = 131.446$, $p < 0,000$; interaction of region and gender $F_{(3,27343)} < 1$, ns.

Figure 36. Trust in other people (0 – minimum, 10 – maximum) by gender and region



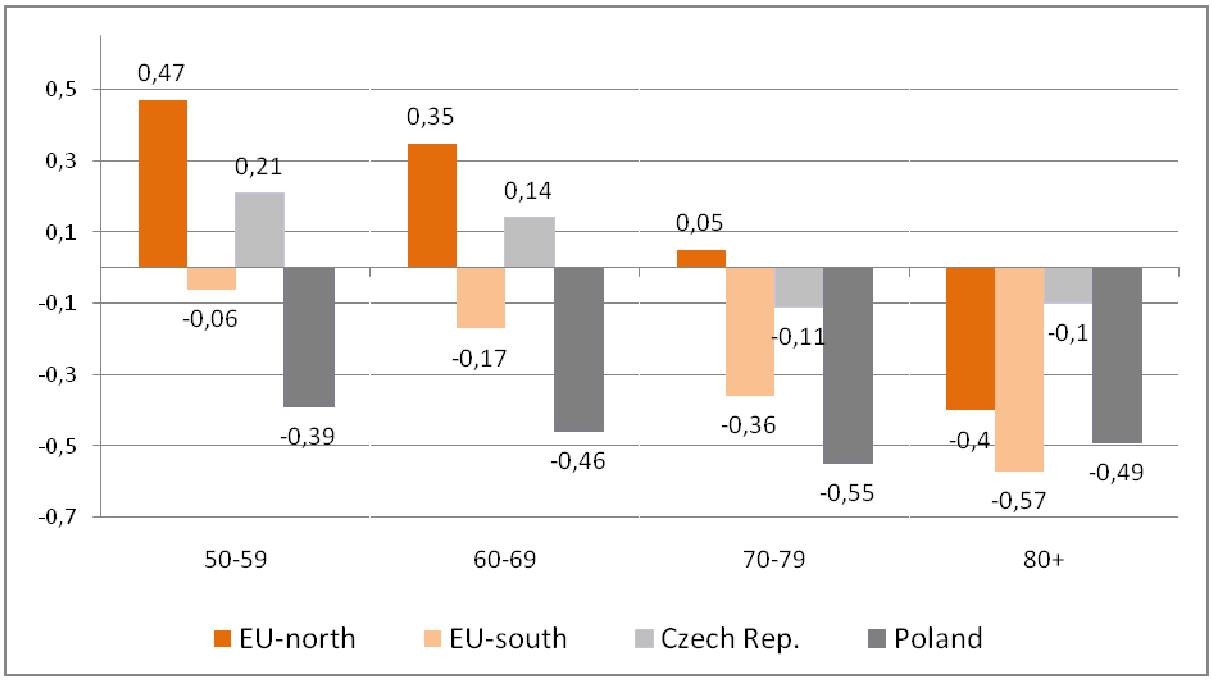
Note: gender is covariate; effects: age $F_{(3,27921)} = 2.349$, $p < 0.07$; interaction of region and age $F_{(9,27921)} = 3.977$, $p < 0.000$.

Figure 37. Trust in other people (0 – minimum, 10 – maximum) by age and region



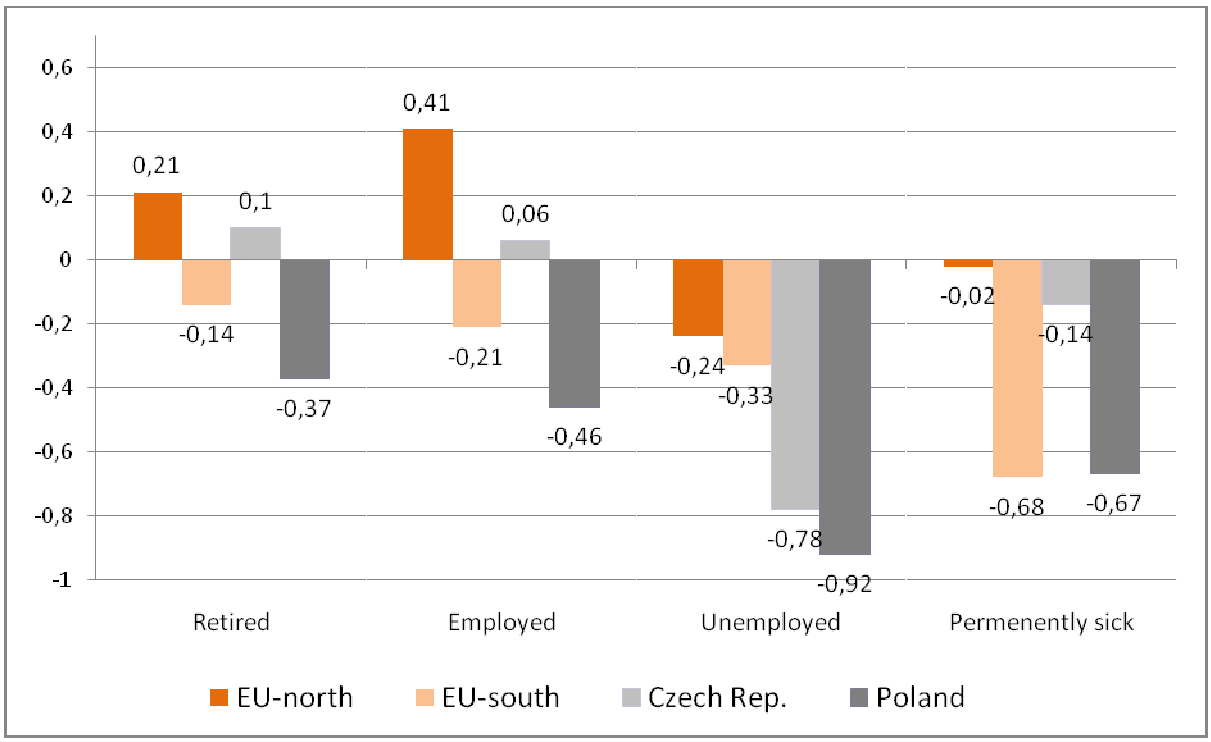
Note: social well-being -- sum of standerdized indicators of weighted social activities and trust in other people; age is covariate; effects: gender $F_{(1,27343)} = 10.131$, $p < 0.000$; region $F_{(3,27343)} = 264.309$, $p < 0.000$; interaction of region and gender $F_{(3,27343)} = 8.348$, $p < 0.000$.

Figure 38. Social well-being by gender and region.



Note: social well-being -- sum of standerdized indicators of weighted social activities and trust in other people; gender is covariate; effects: age $F_{(3,27921)} = 66.719$, $p < 0.000$; interaction of region and age $F_{(9,27921)} = 8.902$, $p < 0.000$.

Figure 39. Social well-being by gender and region.



Note: social well-being -- sum of standerdized indicators of weighted social activities and trust in other people; gender and age are covariates; effects: status $F_{(3,23538)} = 18.939$, $p < 0.000$; interaction of region and status $F_{(9,23538)} = 6.808$, $p < 0.000$.

Figure 40. Social well-being by status on labor market and region.

Table 8. Correlations of social well-being (sum of standerdized indicators of weighted social activities and trust in other people) with indicators of psychological well-being.

Psychological well-being indicators	EU-north		EU-south		Czech Rep..		Poland	
	Pearson r	p	Pearson r	p	Pearson r	p	Pearson r	p
Psychiatric hospitalization	**-0.019**	0.044	-0.017	0.053	-0.027	0.159	**-0.066**	0.001
Psychiatric consultation	-0.008	0.389	**-0.019**	0.032	**-0.054**	0.005	**-0.045**	0.024
Positive affect	**0.295**	0.000	**0.239**	0.000	**0.238**	0.000	**0.190**	0.000
Negative affect	**-0.225**	0.000	**-0.192**	0.000	**-0.207**	0.000	**-0.119**	0.000
Symptoms of depression	**-0.160**	0.000	**-0.147**	0.000	**-0.163**	0.000	**-0.160**	0.000
Life sartisfaction	**0.239**	0.000	**0.170**	0.000	**0.232**	0.000	**0.203**	0.000
Depression lasted at least two weeks	-0.003	0.747	-0.010	0.263	0.024	0.206	**-0.081**	0.000
Depression treated	-0.012	0.203	-0.007	0.392	-0.008	0.664	**-0.063**	0.002
Other psychiatric disorders	**-0.029**	0.002	**-0.021**	0.015	-0.029	0.133	**-0.060**	0.003

Note: values in bold are statistically significant