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BRIEF REPORT

Education and self-reported health care seeking behaviour in European welfare regimes: results from the European Social Survey

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Abstract
Objectives This study investigates educational inequalities in the perception of need for seeking health care in 24 European countries belonging to five different welfare regimes (Scandinavian, Anglo-Saxon, Bismarckian, Eastern and Southern).
Methods Based on the European Social Survey Round 2 ($N = 38{,}122$), associations between years of education and intended doctor consultation in case of four hypothetical symptoms (backache, sore throat, sleeping problems and headache) are analysed by multiple logistic regressions.
Results People with less years of education tend to be more likely to consult a doctor compared to people with more education years after adjustment for age and gender. Associations are significant in all welfare regimes, except for the Southern.
Conclusion Educational inequalities in the perception of need for seeking health care can be found in different welfare regimes.

Keywords Education · Health care seeking behaviour · Welfare regimes

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Introduction

Socioeconomic differences in the use of health care services have been widely reported. People in a lower socioeconomic position are less likely to use preventive health services (Veugelers and Yip 2003). Moreover, they tend to be more intensive users of general practitioners while higher socioeconomic groups report significantly more specialist contacts, even when taking into account the generally poorer health of lower socioeconomic groups (Droomers and Westert 2004; van Doorslaer et al. 2004; Mielck et al. 2007). A number of possible reasons for such disparities have been suggested, including systematic differences by socioeconomic position in interpretation of symptoms and perception of the need for health care (Adamson et al. 2003). However, only a few studies have been conducted to analyse such differences. For example, in the Netherlands a lower educational level has been found to be associated with a higher tendency to consult a doctor (van der Meer and Mackenbach 1998), and in the UK lower socioeconomic groups were more likely to report that they would access medical care immediately in response to a clinical scenario (Adamson et al. 2003). It is unclear whether these sparse results hold true for other countries and different welfare regimes. Welfare regimes are important determinants of health as they mediate the extent of health inequalities. For example, a study by Eikemo et al. (2008) found largest educational self-reported health inequalities in the Southern regime type, whereas the smallest were observed in the Bismarckian welfare regime. Against this background, this study investigates educational inequalities in the perception of need for seeking health care in five welfare regimes in Europe.

Methods

Population

Analyses are based on the European Social Survey Round 2 conducted in 2004 (http://www.europeansocialsurvey.org). Data from face-to-face interviews were available from 24 countries: Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Luxembourg, The Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, and the United Kingdom. Probability sampling from all private residents aged 15 years and older was applied in all countries ($N = 45{,}681$). Average response rate was about 62.1%, ranging from 43.6% in France to 78.8% in Greece (http://ess.nsd.uib.no). Because we use education as a measure of socioeconomic position, we exclude persons under the age of 25 to minimise the number of respondents whose education was not complete at the time of the interview. This restriction results in a total sample size of 38,122 participants.

With reference to Ferrera (1996) and Eikemo et al. (2008), countries were categorised into five welfare regimes: Scandinavian (Denmark, Finland, Iceland and Sweden), Anglo-Saxon (Ireland and the United Kingdom), Bismarckian (Austria, Belgium, Germany, France, Luxembourg, Netherlands and Switzerland), Eastern European (Czech Republic, Estonia, Hungary, Poland, Slovenia, Slovakia and Ukraine) and Southern (Greece, Portugal and Spain). There is an extensive debate about the theoretical and empirical value of different welfare state typologies for public health research (Eikemo et al. 2008; Eikemo and Bambra 2008).Although there is no typology that is accepted as a standard, the classification used in our study has been found adequate as it accounts for differences in the way welfare is delivered as well as in the quantity of welfare provided (Eikemo et al. 2008).

Measures

The ESS-Data file provides two variables of educational attainment: a recoded variable that focuses on levels of education achieved and years of full time education. For the analysis, full time education in years was chosen because there is a higher degree of international comparability and flexibility in its use (Eikemo et al. 2008). The variable was dichotomised with subjects in the lower tertile (country-specific) being categorised as having 'low education'. The country-specific dichotomisation accounts for the extent of variations of reported years of education in different countries. 437 respondents with a missing value on the education variable (all countries together) were excluded. Perception of need for seeking primary health care was measured by the reported tendency to consult a doctor in case of four hypothetical symptoms (very sore throat, serious headache, serious sleeping problems and serious backache). Respondents were asked to whom they would go first for advice or treatment. For every symptom there were eight answer categories: (1) nobody, (2) friends or family, (3) pharmacist/chemist/drugstore, (4) doctor, (5) nurse, (6) the internet/web, (7) a medical helpline and (8) other practitioner. A dichotomised variable was created to divide respondents into those who would consult a doctor in all four cases of hypothetical symptoms and those who would not. The proportion of these respondents differs between the welfare regimes. In the Scandinavian welfare regime 18.0% would consult a doctor in case of all four symptoms, 13.3% in the Anglo-Saxon, 24.2% in the Bismarckian, 17.2% in the Eastern European and 43.5% in the Southern.

Statistical analysis

To test associations between years of education and intended doctor consultation, multiple logistic regression analyses are conducted for the five welfare regimes. Analyses are adjusted for age and gender. In all analyses a design weight is applied to correct for slightly different probabilities of selection in some countries. In case countries are combined (for the pooled analyses), a population size weight is additionally used to ensure that each country is represented in proportion to its population size (http://ess.nsd.uib.no). Analyses were conducted with the statistical package SPSS 13.

Results

Table 1 shows the associations between education and intention to consult a doctor in case of the four symptoms under study in the different welfare regimes, adjusted for gender and age. In general, people with low education tend to be more likely to consult a doctor when they have a serious backache, a very sore throat, serious sleeping problems and a serious headache. Associations are significant in all welfare regimes, except for the Southern. Associations are strongest in the Anglo-Saxon welfare regime. Table 1 also reveals weak and non-significant associations in many countries and country differences within the welfare regimes, especially in the Scandinavian. Finally, people with low education tend to be less likely to consult a doctor in the Ukraine.

Discussion

In this study, we investigated educational inequalities in the perception of need for seeking health care in five

Table 1 Education years (lower tertile) and intention to consult a doctor in case of four symptoms (very sore throat, serious headache, serious sleeping problems and serious backache) in different welfare regimes, adjusted for age and gender (European Social Survey Round 2, 2004)

Welfare regimes country (*N*)	Odds ratios (95% CI)	*p*
Scandinavian	1.40 (1.04–1.88)	0.028
Denmark (1,296)	1.38 (1.00–1.90)	0.049
Finland (1,731)	1.41 (1.01–1.98)	0.044
Iceland (472)	1.94 (1.11–3.39)	0.020
Norway (1,525)	1.72 (1.26–2.34)	0.001
Sweden (1,669)	1.28 (0.95–1.74)	0.109
Anglo-Saxon	1.74 (1.42–2.13)	0.000
Ireland (1,980)	1.48 (1.12–1.94)	0.006
United Kingdom (1,670)	1.77 (1.26–2.48)	0.001
Bismarckian	1.41 (1.28–1.55)	0.000
Austria (1,769)	1.30 (1.01–1.68)	0.42
Belgium (1,484)	1.16 (0.88–1.52)	0.295
France (1,615)	1.43 (1.10–1.87)	0.008
Germany (2,399)	1.27 (0.99–1.63)	0.058
Luxembourg (1,348)	1.29 (0.98–1.70)	0.069
Netherlands (1,739)	1.43 (1.04–1.97)	0.026
Switzerland (1,943)	1.19 (0.81–1.75)	0.369
Eastern European	1.30 (1.12–1.52)	0.001
Czech Rep. (2,636)	1.11 (0.89–1.39)	0.355
Estonia (1,643)	1.21 (0.81–1.79)	0.353
Hungary (1,275)	1.18 (0.84–1.67)	0.336
Poland (1,352)	1.06 (0.77–1.46)	0.705
Slovakia (1,174)	1.45 (1.03–2.06)	0.036
Slovenia (1,171)	1.08 (0.77–1.52)	0.654
Ukraine (1,748)	0.76 (0.45–1.28)	0.297
Southern	1.06 (0.90–1.24)	0.490
Portugal (1,782)	1.07 (0.79–1.45)	0.670
Spain (1,398)	1.19 (0.90–1.58)	0.226
Greece (2,140)	0.92 (0.69–1.22)	0.555

welfare regimes in Europe. In four welfare regimes (Scandinavian, Anglo-Saxon, Bismarckian and Eastern European), people with less education years are more likely to consult a doctor in case of four different hypothetical symptoms (very sore throat, serious headache, serious sleeping problems and serious backache) after adjustment for age and gender. Associations marginally decrease and remain significant when self-rated health, compliance with doctors' advice, frequency of doctor consultations and social relationships (frequency of social contacts, perceived social support and social integration) are additionally controlled for (not shown). Associations are strongest in the Anglo-Saxon and weakest in the Southern European welfare regime. Separate analyses for women and men as well as for the four symptoms separately (not shown) reveal similar results. Our findings are in line with those of other studies (Adamson et al. 2003; van der Meer and Mackenbach 1998) and contribute to this field of research by giving a comprehensive overview of educational inequalities in health care seeking behaviour in different European welfare regimes.

In interpreting our findings several limitations need to be considered. First, the study relies on hypothetical rather than actual behaviour. We cannot be certain that people will act in the way that they indicate hypothetically. However, van der Meer and Mackenbach (1998) have shown that a reported tendency to consult a doctor was highly predictive of observed consultation rates. Thus, self-reported use of health care seems to offer a valid estimate of health care utilisation across socioeconomic strata (Reijneveld and Stronks 2001). Moreover, this is a cross-sectional study, and it was subject to the problem of common method variance as both the independent and the dependent variables are based on self reports. Thus, no causal inference can be drawn concerning the association between education and health care seeking behaviour.

In conclusion, our study shows significant associations between education and self-reported health care seeking behaviour in four European welfare regimes. Assuming that a general practitioner would be consulted for primary care in case of the hypothetical symptoms presented, findings indicate that the more intensive use of general practitioners by people in a lower socioeconomic position, found in some studies (Droomers and Westert 2004), can be partly explained by differences in the interpretation of symptoms (perception of need for health care). Our results indicate that this holds true for the Scandinavian, the Bismarckian, the Anglo-Saxon, and the Eastern European welfare regime. For public health research it is important to understand social determinants of health care seeking behaviour and health care utilisation as this is one key aspect of health care inequalities. The concept of welfare regimes is a helpful framework for this task. Tackling inequalities by removing access barriers and providing adequate health care requires further investigation, not only of patient behaviour, but also of the pathways of care, including the interaction between doctor and patient as well as treatment behaviour of practitioners.

Conflicts of interest statement None.

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