

Ill health and the risk of poverty in Europe: individuals and welfare institutions

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Background

Socioeconomic inequalities in health and their underlying mechanisms are a key question in social epidemiology and sociology. The positive association between socioeconomic status and health has been confirmed in a number of studies (e.g. Smith 1999; Marmot, 2005; van Kippersluis et al. 2010). Interestingly, health inequalities seem to persist also in egalitarian countries (Dahl and van der Wel 2013; Lahelma et al. 2019), while at the same time welfare state generosity and institutions have been considered to be an important determinant of population health (Navarro et al. 2006; Chung and Muntaner 2007; Bambra 2011; Nelson and Fritzell 2014).

Two hypotheses are usually considered in regards to health inequalities and their origins. First, health problems may lead to low socioeconomic status or even poverty for example through incapacity to work (*social selection*); and second, poverty may deteriorate health through, *inter alia*, poorer health behaviour, access to health care and housing conditions, or stress and anxiety related to the experience of poverty (*social causation*). In this paper, the aim is not to study the causal link or its direction, but rather focus on the country-level variation in the association between poverty and ill health and changes in the association over time. This view complements the research on “poverty penalties” by Brady et al. (2017).

In general, a number of studies (e.g. Bäckmann 2008; Brady et al. 2017) have shown that welfare generosity explains variation in poverty rates between countries and among different socio-demographic groups. Similarly, welfare institutions and societal structures are likely to affect the association between health and poverty and the mechanisms behind it. First of all, the association might be affected by the composition of the poor and severity of poverty in terms of duration (see McDonough et al. 2005) and poverty gap that vary substantially from one country to another. Second, social security and health care systems mitigate the risks of ill health in various degrees in Europe. For example, Álvarez-Gálvez and Jaime-Castillo (2018) found that educational health inequalities are lower in European countries with higher social expenditure. Similarly, more generous spending on elderly care and minimum pensions has been found to be associated with smaller health inequalities among the elderly population (Högberg et al. 2018). However, studies looking specifically at the connection between poverty and health are few and far between.

Research questions and hypotheses

In this study, we examine the penalties associated with poverty for persons with ill health and the role of institutions in moderating these penalties using EU-SILC data for 25 European countries encompassing years 2004–2018. With “penalty” we refer to the increased probability of poverty associated with ill health (see Brady et al. 2017). We answer the following questions: 1) How does

the association between ill health and risk of poverty vary between countries? 2) Has the association changed over time? and 3) Does welfare generosity moderate the association between poverty and ill health? Moreover, we also investigate how the results change when we look at material deprivation instead of monetary poverty.

Based on earlier research we hypothesize that penalties associated with poverty for persons with ill are higher in countries with higher economic inequality and that penalties associated with poverty change over time together with institutional changes and macro-economic fluctuations. Finally, we expect welfare generosity to reduce the penalties associated with poverty for ill health.

Data, variables and methods

We use the European Income and Living conditions survey (EU-SILC) from 2004-2018 for 25 European countries. We use the cross-national data in order to capture the yearly trends in health and poverty risks. We limit the analysis to working age population (18-64 years old) with a total sample of 4,424,023 individuals.

For the analysis we use two indicators for poverty as our dependent variable: *income poverty* measured as having equivalised disposable household income below 60 per cent of the median income of the country and *material deprivation* that identifies individuals who cannot afford at least three of the following nine items: 1) to pay their rent, mortgage or utility bills; 2) to keep their home adequately warm; 3) to face unexpected expenses; 4) to eat meat or proteins regularly; 5) to go on holiday; 6) a television set; 7) a washing machine; 8) a car; 8) a telephone.

Our principal independent variable of interest is *ill health* that is based on self-assessed health. The variable is measured with a scale from 1 to 5 (1=very good, 5=very bad), and we define ill health as bad or very bad health (dummy 0/1). Our control variables include gender, age, education, employment status (employed/not employed), household composition, immigrant status, year and country.

Furthermore, in order to capture the role of institutions in the association between ill health and risk of poverty, we use macro-level factors related to economic inequality (Gini index, GDP per capita) and welfare generosity (public spending in social protection and health care).

The analyses are based on logistic regression analysis where we report predicted probabilities or average marginal effects. We conduct analyses on the pooled sample, but also separately for each country. To study the association between macro-level factors and poverty penalty, we use multilevel regression analysis and logistic regression analysis in which clustering of observations within countries is accounted for.

Preliminary results

Based on logistic regression analysis where we control for various background characteristics of individuals, our preliminary results show that poverty penalty associated with ill health is high in countries where overall poverty rates are above the EU average (e.g. Greece and Estonia), but also in countries where the overall poverty rate is below the EU average (e.g. Czech Republic, the Netherlands, and France). The results also indicate that while the probability of experiencing

poverty has declined from 2004 to 2018 for persons with ill health in all countries examined, the change has not been equal compared to those with good health. For instance in some Central and Eastern European countries (e.g. Latvia, Lithuania, and Poland), it seems that the probability of experiencing poverty has decreased significantly for persons with good health while for those with ill health the decrease has only been modest.

[These preliminary results will be complemented with analyses including macro-level factors by the time of the conference.]

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