Assessing the contribution of poverty to educational differentials in disability in 26 European countries

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Short abstract

Objectives To what extent the European variation in the social inequalities in disability is associated to the variation in the level of poverty.
Methods: Using European Statistics on Income and Living Condition (EU-SILC) for 26 countries, we measure the prevalence activity limitation (AL) and the level of economic hardship (EH). Logistic regressions measure the AL excess-prevalence (*disadvantage*) of low-educated relative to the middle-educated and the AL reduced-prevalence (*advantage*) of high-educated, accounting or not for EH. We replicate the same analysis, estimating the extent of the contribution of EH via KHB logistic models to see the variation in the contribution of poverty across countries, for the low- and for the high-education groups.
Results: We found substantial country variations in the levels of EH and in the size of the AL-advantage/disadvantage across educational groups. EH contributes to the AL-advantage and disadvantage, but appears to be related differently according to the country. We describe four cases considering the variation of both the magnitude of the educational differences in disability and the contribution of EH to these differences in comparison to the average pattern. These cases gather countries with very different economic and welfare contexts.
Discussion: Contexts with large EH go along with an increased AL-advantage and/or disadvantage across educational groups. Policy actions to reduce poverty in Europe should help reducing the overall levels of disability and the related social inequalities. Meanwhile, the contribution of EH is not straightforward, and it changes according to the material deprivation of each population group. Further research is needed to understand the association between disability differentials and material deprivation.

INTRODUCTION

In a context of intense promotion of healthy aging worldwide, reducing and preventing the risks of disability is a priority [1]. At mid-adult ages, the objective of increasing labor force participation in late working life and to postpone age of retirement only holds if people are healthy enough to remain at work. At late-adult ages the goal is to maintain quality of life as well as to reduce and postpone the need for caregiving. There are large and persistent social inequalities in the chance of reaching the retirement age in good health and in the chance maintaining independence in later ages [2-4].

Reducing social differentials in disability within and across countries has become a priority for public policies, which constitutes a mean for increasing healthy aging [5-7]. Meanwhile the changing size of the differences across Europe raises the question of the determining factors on which policies could act at the European level. Indeed, although the low-educated groups steadily show an excess-prevalence (*disadvantage*) of disability in European countries, it is significantly smaller than average in Sweden, Finland, Romania, Bulgaria and Spain, but larger in the Czech Republic, Denmark, Belgium, Italy and Hungary. The high-educated groups have a systematic reduced-prevalence (*advantage*) of disability, but significantly small than average in Denmark and larger in half of the Baltic and Eastern European countries, Norway and Germany [8]. These varying patterns illustrate the complex interaction between individual and contextual social determinants of health and disability. Interestingly, the differentials also vary substantially within regions with similar welfare regimes [9, 10].

Among the drivers of health inequalities, poverty is interesting as being a determining factor at the individual level and also a major issue for social policies. At the individual level, poverty limits the access to basic goods and services (possibly health care when not universally accessible) and challenges the chances to remain healthy or to adjust to poor health [11, 12]. Although poverty is not the only factors at plays, it partly mediates the disability disadvantage of the low-educated groups compared to the middle-educated groups. Where it is largely spread in the population and

not only concentrated in the low-educated groups, poverty might also mediate the disability advantage of the high-educated groups due to their better life condition and better access to efficient health care. At the country level, social policies can limit the poverty risk through multiple schemes of transfers, pensions and benefits with potentially differentiated impact on health [13]. Poverty might be a large or small contributor to the health differentials depending on the country context. In this study, we propose to measure and compare the contribution of poverty to the disability advantage/disadvantage across educational groups in 26 European countries.

More precisely, we investigate to what extent the varying *disability disadvantages* of the European low-educated groups compared to the middle-educated groups are explained by their respective levels of poverty. Several scenarios are plausible. A large disability disadvantage could be moderately mediated by poverty, if poverty cumulates with other important factors at play in the differentials (harmful work conditions, limited access to efficient health care, detrimental practices). In contrast, poverty could have a large contribution to the disability disadvantage of the low-educated groups in contexts where poverty is low but concentrated on low-educated groups. Regarding the high-educated groups, poverty could have an important contribution to their *disability advantage* relative to the middle-educated groups, where poverty is risk high. In contrast it could be moderate where poverty is scarce among both high- and middle-educated and differentials between the groups be driven by other factors.

DATA AND INDICATORS

The "European Union Statistics on Income and Living Conditions" (EU-SILC) is a database monitored by the national statistical offices, designed to provide comparable data across the EU. We used the 2009 EU-SILC cross-sectional data. In most countries, data is collected by *ad hoc* interview surveys, providing self-reported information for health and socioeconomic (SES) variables. Elsewhere, socio-demographic variables are collected through population registers and health data is being collected by a complementary survey, often using telephone interview. We

examined sample selection, survey designs, collection mode and question wording to ensure comparability. Due to varying response rates, representativeness of country samples regarding age, occupation and education distributions was assessed. We finally excluded Iceland, Luxembourg, and Malta and recommend caution for some countries. We excluded individuals aged 80-plus due to missing information. Our study comprises 289,816 individuals aged 30-79 from 26 European countries (Supplementary Table S1).

Disability

Disability measures the functional health of the population; it corresponds to the consequences that disabling diseases or symptoms have on people's body functions, possibly limiting the performance of daily activities [14, 15]. This health dimension is relevant to monitor the health consequences of aging as it focusses on the situation in which the health challenges people autonomy and help anticipating care needs [1].

In this study, disability is measured by the *Global Activity Limitation Indicator* measuring health related activity limitation (AL) with a single question: "*For at least the past six months, to what extent have you been limited because of a health problem in activities people usually do?".* We consider AL includes all people who reported *"Being severely limited"* or *"Being limited but not severely"*. AL is self-reported and so varies across European countries, partly due to varying propensity to report health disorders [16, 17]. However the indicator has proved to be highly and similarly correlated to other disability measures across European countries [16, 18, 19], and to be predictive of increased health expenditures and mortality risk [20, 21].

Education and Poverty

We considered three groups based on the level of education achieved, using the International Standard Classification of Education[1]: low (0-2 primary and lower secondary education), middle (3-4 upper secondary education) and high (5-6 tertiary education).

[1] http://www.uis.unesco.org/education/pages/international-standard-classification-of-education.aspx

In 2009 EU-SILC poverty can be approached by a thematic module on self-perceived situations of deprivation, as an alternative to an income-based measure [22][2]. This approach includes both the individual's income as well as available social transfers; it accounts for the potential policy schemes preventing from deprivation. In this study, we focused on the "economic stress" dimension of the thematic module which is assessed by three items[3]. The first item relates to "*the household ability to cope with unanticipated expenses*" (Yes/No). The second item (introduced by "*A household may have different sources of income and more than one household member may contribute to it. Thinking of your household's total income*") relates to "*the household ability to make ends meet, namely, to pay for its usual necessary expenses?*". The answer categories are "*With great difficulty; with difficulty; with some difficulty; fairly easily; easily; Very easily*". The third items relates to "*difficulty to reimburse mortgage*….". Due to substantial missing values for the third item, we only used the first two. We consider as situation of economic hardship (EH) all people who reported "great" or "some" difficulty to make ends meet and difficulty to cope with unexpected expenses.

ANALYSIS

First, we assess the variation in the disability (AL) advantage and disadvantage of the high- and low-educated groups in the 26 countries, using a logistic regression model, for the 26 countries (Model 1). The risk of AL is estimated as a function of three independent variables age (and age squared), sex, and education, which are interacted with country. The AL-advantage and disadvantage in each country correspond to the ORs associated with the education#country term; from these ORs, we identify which country departs from the average pattern. Second, Model 2 repeats the same analysis adding the EH interacted with countries in the model (Model 2) [*not shown here*]. The new estimates of AL-advantage and disadvantage across educational levels,

[2] Measuring poverty in international studies raises a number of difficulties: based on individuals' income, variation in income levels and standard of living impose to adjust the definition. Data on income needs to be also of equivalent quality, which might often not be the case depending on the data collection mode used in the different countries.

[3] *Basic deprivation* comprises three items related to a meal with meat or a vegetarian alternative, adequate home heating and leisure activity. *Consumption Deprivation* comprises three items related to a personal computer (PC), a car or internet connection. These two dimensions could be more sensitive to variation across countries in the perception or definition of the items.

adjusted on EH, show whether the country-specific patterns observed in Model 1 remained stable or changed after controlling for EH.

(Model 1) $\text{logit}(p\text{AL}) = ß1_i\ X1_i + ß2_iX2_i + ß3_iX3_i + ß4_{ij}X4_{ij} + ß5_{iz}X5_{iz}$

(Model 2) $\text{logit}(p\text{AL}) = ß1_i\ X1_i + ß2_iX2_i + ß3_iX3_i + ß4_{ij}X4_{ij} + ß5_{iz}X5_{iz} + ß6_{iz}X6_{ik}$

Where *p*AL (probability of reporting activity limitation) is a function of $X1_i$ for Country with *i=(1-26)*; $X2_i$ for Age#Country; $X3_i$ for Age^2#Country with *i=(1-26)*; $X4_{ij}$ for Country#Sex with *i=(1-26) and j=(1-2)*; $X5_{ij}$ for Country#Education with *i=(1-26) and z=(1-3)*; $X6_{ik}$ for Country#EH with *i=(1-26) and k=(0-1).*

Finally, we quantify the contribution of country- and education-specific levels of EH to the AL-advantage and disadvantage across educational groups. To do so, we use a "KHB" logistic regression model which allows us to quantify for each country the ORs effect before and after accounting for EH (Kohler, Karlson, and Holm 2011, Karlson, Holm and Breen 2011). These models provide the percentage contribution of EH in the association between AL and education for each country.

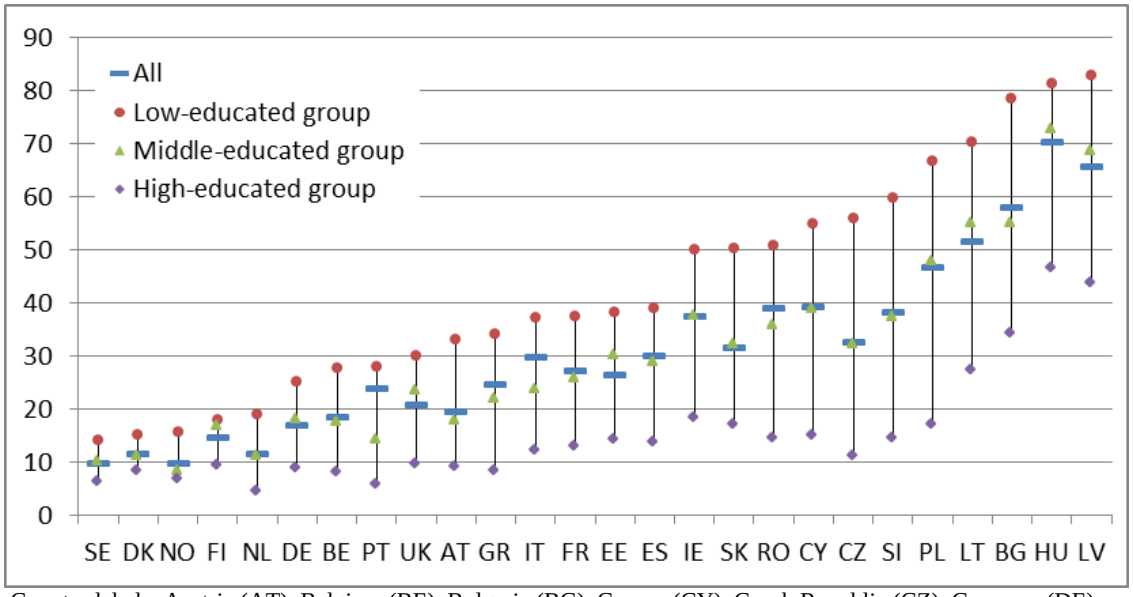
RESULTS

Figure 1 shows a range from the lowest to the highest values of the level of EH across educational groups in the 26 European countries. Although the low-educated groups are systematically more affected by EH, there are large variations. The lowest levels of EH for the low-educated ranged between 15% and 20% and are found in Sweden, Denmark and Norway and Finland. These countries have small differences in EH between high- and low-educated groups, partly due to their welfare regimes comprising poverty reduction schemes. Among these countries, Finland shows a similar poverty risk for the low-educated and middle-educated groups. For the three other countries, the risk is rather similar for the high-educated and middle-educated groups.

The Netherlands presented the among the lowest level of EH for both the low- and high-educated groups. Germany, Belgium, Portugal and UK constitute the next group of countries with a level of EH for the low-educated group between 20% and 30%. Between 30% and 40% of low-educated

groups report EH in other Western and Southern European countries plus Estonia; and except Ireland and Cyprus where half of low-educated groups report EH. The largest differences in EH between high- and low-educated groups are Latvia, Hungary, Bulgaria Lithuania and Poland with more than 60% of the low-educated group reporting EH; meanwhile, more than 40% of the high-educated groups also report EH in Hungary and Latvia.

Figure 1. Percentage of people reporting economic hardship by educational groups across the 26 European countries: individuals aged 30-79



Country labels: Austria (AT), Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Germany (DE), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Greece (GR), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Netherland (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), United Kingdom (UK)

The AL advantage and disadvantage of the high- and low-educated groups

Models 1 and 2 indicate that AL-disadvantage of the low-educated groups varies across the 26 countries (Figure 2). A number of countries show an increased AL-disadvantage compared to the average pattern, before and/or after accounting for EH (CZ, DK, HU, IT)[4]. Other countries show a reduced disadvantage compared to the average before and/or after accounting for EH (BG, FI, RO, SE). A number of countries show an increased AL advantage for the high-educated groups (CZ, EE, HU, LT, NO) and some a reduced AL advantage (BG, DK, UK). The introduction of EH in the model changed both the AL-advantage and disadvantage but to varying extent. Although most patterns identified earlier

[4] Austria (AT), Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Germany (DE), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Greece (GR), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Netherland (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), United Kingdom (UK)

remained, the estimates suggest a varying contribution of the EH. We plotted the percentage contribution in Figure 2 as obtained for each country using the KHB method (right side axis).

Contribution of economic hardship to the association between education and disability

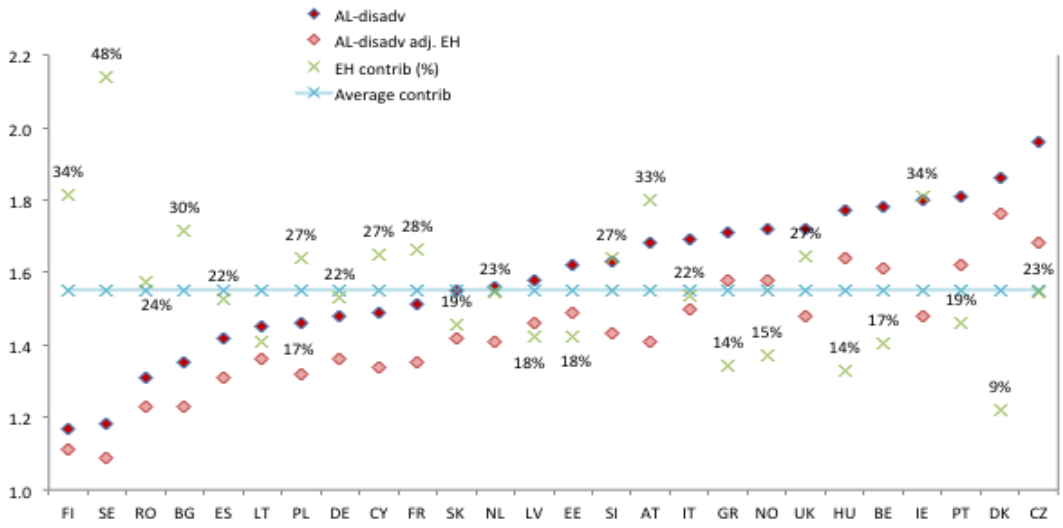
EH contributes significantly to both the disadvantage of the low-educated and the advantage of the high-educated relative to the middle-educated group: the average of the country specific contributions of EH is 23% to the AL-advantage of the high-educated group related to the middle-educated group and 23% to the AL-disadvantage of the low-educated group. Regarding the low-educated groups (Panel A), we found a general pattern where the smaller the AL-disadvantage, the larger the EH contribution. Meanwhile this is not systematic and we found disparities, for instance, among the four Nordic countries. For commenting the results, we classified countries in 4 cases referring to both the average EH contribution and the average advantage/disadvantage.

a) Small AL-disadvantage and large contribution of EH

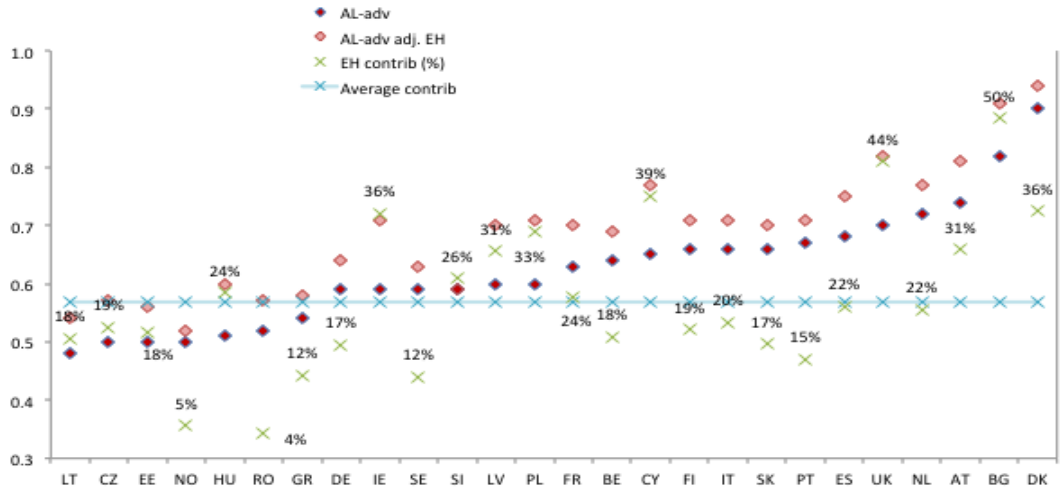
In Sweden and Finland and Bulgaria, the low-educated group has a smaller AL-disadvantage than the average and the contribution of EH is relatively large. In the two Nordic countries, the AL disadvantage of the low-educated group is no longer significant in Model 2 (after accounting for EH in the model). The disability difference between the middle-educated and low-educated groups is strongly associated with the EH distribution, although EH is very similar in these two groups in Finland. It could be a specific population selected on poor health and functioning status; a situation that it is more frequent in the low level of education than in the middle one. The AL-disadvantage of the low-educated groups could be potentially explained by the reverse causation of disability on poverty and on the level of education (when poor health occurred in the earliest stages of life).

Figure 2: ORs of AL by education attainment adjusted and not adjusted for economic hardship (EH) and % contribution of EH to the ORs.

Panel A: Low- *vs* middle-educated group (or AL-disadvantage)



Panel B: High- *vs* middle-educated group (or AL-advantage)



Country labels: Austria (AT), Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Germany (DE), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Greece (GR), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Netherland (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), United Kingdom (UK)

b) Small AL-disadvantage and small contribution of EH

In Romania and Lithuania, the AL-disadvantage of the low-educated group is smaller than the average, but in this case the contribution of poverty to this differential is smaller or close to the average.

c) Large AL-disadvantage and large contribution of EH

The contribution of EH is above or close to the average in Austria, Ireland, Slovenia, Poland, France and UK where the AL-disadvantage is relatively large, although not always statistically different from the average disadvantage. The EH explains a larger part of the differentials between low-educated and middle-educated groups, illustrating a larger impact of the material deprivation in these countries for mediating the relatively strong association between disability and education. These cases indicate a potential impact of further preventing poverty risks in the lowest part of the educational gradient.

d) Large AL-disadvantage and small contribution of EH

The contribution of EH to the disadvantage of the low-educated group is similar or lower than average in countries with a large AL-disadvantage: Latvia, Estonia, Greece, Norway Hungary, Belgium, Portugal, Denmark and Czech Republic. The differentials between low- and middle-educated groups might be explained by situations of materials deprivation in the low-educated group, but less than elsewhere. In general other factors than those directly linked to low income could play an important role: limited access to health care, detrimental practices or work exposure, or a weaker chance to cope with disabling conditions and maintain activity. In countries where EH is scarce (Norway or Denmark) the small contribution of EH could be explained by other social factors of disability being large contributors. But in countries where EH is widely spread, the small contribution of EH could be interpreted by the fact that the low-educated and middle-educated do not differ so much in terms of poverty, so this factors do not explain the over risks associated to the low-education. Policies to reduce poverty might improve the situation of both of these groups.

Regarding the high-educated groups, the contribution is generally larger than average in countries where the AL-advantage of the high-educated group (relative to the middle-educated group) tends to be smaller than average.

a) Small AL advantage and large EH contribution

In Denmark, Bulgaria, Austria, UK and Cyprus, the high-educated groups are moderately advantaged regarding AL compared to other countries. In these countries, while the two top educational groups are not so different, the role of EH is more important than elsewhere.

b) Small AL-advantage and small contribution of EH

This situation is found for France, Portugal, Slovakia, Belgium, Finland, The Netherlands, Italy and Spain. In these countries, the disability differentials are not driven so much by the high-educated groups running forward. They are not so different than the middle-educated group and when they are, the different distribution of EH in these groups moderately impact.

c) Large AL-advantage and large contribution of EH

Ireland, Poland, and Latvia show relatively large advantage for the high-educated group compared to the middle-educated, and with a larger contribution of the EH than the average. In these countries, preventing EH might allow substantial reduction in the differentials between middle-educated and high-educated groups. This result highlights the fact that disability differentials are found all along the educational gradient.

d) Large AL-advantage and small contribution of EH

The contribution of EH is smaller than average in Norway (while EH is quite scarce) where the high-educated groups have a larger AL-advantage than in the average pattern. The contribution of EH to the large AL-advantage of the high-educated is also found in a number of Baltic and Eastern European countries and in Greece. Where EH is scarce, like in Norway, other social factors deserve attention to understand why the high-educated are relatively more advantaged than elsewhere. Where EH is more spread, other factors than material deprivation contribute to the disability differences.

DISCUSSION

The level of EH varies largely across and within the 26 countries according to education. The Nordic countries, which benefit from a protective welfare regime, have the lowest levels and the smallest differentials in EH [23, 24]. In contrast the Eastern European and Baltic countries generally have the highest rates of EH, in line with their social and economic context and the move towards a market economy organization [25].

EH captures situations that are part of the association between education and disability across the all-educational gradient. We defined four cases linking the size of the disability differentials and the level of contribution of EH. These cases gather countries with very different economic and welfare contexts. Material deprivation has a greater contribution to the association between education and disability in all countries but the percentage contribution is not straightforward. For instance, we cannot conclude that EH has a greater contribution in the differences in the bottom part of the gradient than in the top part of the gradient: in a number of countries the contribution is larger in the top part (Denmark, Bulgaria, UK, Latvia, Cyprus, Hungary, Poland).

Further exploration of the country context, such as the level of social protection, should help interpreting these findings. Indeed, EH might be rare or frequent depending on both the economic situation of the country and the level of protection from material deprivation: there are several forces at plays in the contribution to disability gaps. The reverse causality in the association between material deprivation and disability might be found in countries where the risk of poverty is largely reduced by policy schemes; the contribution to the social differentials might be important as being strongly and directly linked to disability. In other countries, its contribution might be small in percentage because other factors (strong income gradient, variation in health behaviors, different chances to cope with health problems) might contribute to the differences.

The study has a number of limitations that need to be considered. The disability and economic hardship situations are self-reported. The reporting propensity might be different across countries

but also across educational groups. There are also a large number of estimates which means that our results might bear some statistical errors. Analysis need to be repeated in other datasets to confirm the robustness of the results. The EU-SILC data sets collect data across Europe in a comparable way. However there are some differences in the study design or collection mode that could impact our results and the comparability of the patterns from one country to another.

We also mentioned some limitations in the representativeness of the sample. In Sweden for instance, we found a smaller representation of the low-educated groups. If a deteriorated health is determinant for participating to the data collection, we could have underestimated the disability prevalence in this group. However, the pattern seems similar in Finland, for which the representativeness of the sample according to education seems accurate.

More research is needed to describe the different situations to which EH corresponds across European countries. However, this research shows the potential of analyzing separately the patterns in the upper and in the lower ends of the educational gradient. Depending on the context, our result suggest that schemes for reducing poverty might play an important role all along the educational gradient in countries where EH is frequent; however, in a number of countries, the return should be moderate while the part of the differentials explained by EH is small.

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Table S1: Summary of the 2009 EU-SILC information: collection mode, sample size for the individual information and coverage rates, sub-sample with health information, and reason for attrition from individual sample to the sub-sample with health information. Individuals aged 30-79.

	EU-SILC Collection mode*	EU-SILC individual sample		Sub-Sample (health questions)	Attrition from the total EU-SILC individual sample to sub sample with health information					
					Attrition (%)	Reasons for attrition**				
		Size (all ages)	*Coverage compared to the Total Household file*	Size (all ages)		*Unknown*	*Proxy*	*Register data*	*Non- response to the heath questions*	*Age under 16*
AT	F-F / CATI	13610	*71.1%*	11054	19%	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*18.7%*
BE	F-F	14721	*62.7%*	11651	21%	*0.0%*	*0.0%*	*0.0%*	*0.6%*	*20.2%*
BG	F-F	15047	*77.2%*	13148	13%	*0.4%*	*0.0%*	*0.0%*	*0.0%*	*12.2%*
CY	F-F	9283	*89.5%*	7553	19%	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*18.6%*
CZ	F-F	23302	*82.3%*	16827	28%	*0.0%*	*12.2%*	*0.0%*	*0.0%*	*15.5%*
DE	Self-Administered	28368	*76.5%*	23686	17%	*0.5%*	*0.0%*	*0.0%*	*0.4%*	*15.6%*
DK	Register / CATI	15025	*53.5%*	5866	61%	*0.0%*	*38.6%*	*0.0%*	*0.0%*	*22.4%*
EE	F-F	13542	*74.0%*	11220	17%	*0.0%*	*0.0%*	*0.0%*	*0.6%*	*16.5%*
ES	F-F / CATI	36865	*81.0%*	30418	17%	*0.0%*	*0.0%*	*0.0%*	*1.1%*	*16.4%*
FI	Register / CATI	25157	*79.2%*	9962	60%	*0.6%*	*38.5%*	*0.0%*	*0.1%*	*21.3%*
FR	F-F	25611	*82.7%*	20113	21%	*0.0%*	*0.0%*	*0.0%*	*0.4%*	*21.0%*
GR	F-F / CATI	18035	*84.0%*	15045	17%	*0.7%*	*0.0%*	*0.0%*	*0.0%*	*15.8%*
HU	F-F	25053	*84.5%*	20354	19%	*0.3%*	*0.0%*	*0.0%*	*2.1%*	*16.3%*
IE	Register / F-F	12641	*78.9%*	9900	22%	*0.0%*	*0.0%*	*0.0%*	*0.0%*	*21.7%*
IT	F-F	51196	*83.7%*	42159	18%	*0.4%*	*0.0%*	*0.0%*	*1.5%*	*15.8%*
LT	F-F / CATI	12852	*86.9%*	10700	17%	*3.0%*	*0.0%*	*0.0%*	*0.9%*	*12.8%*
LV	Register/ F-F /CATI	14403	*78.3%*	12066	16%	*0.0%*	*0.0%*	*0.0%*	*1.0%*	*15.3%*
NL	Register / CATI	23687	*83.4%*	9717	59%	*0.0%*	*35.6%*	*0.0%*	*0.0%*	*23.3%*
NO	Register / CATI	13855	*60.4%*	5349	61%	*0.0%*	*35.2%*	*1.2%*	*0.6%*	*24.4%*
PL	F-F	38541	*76.3%*	29228	24%	*0.0%*	*0.0%*	*0.0%*	*6.3%*	*17.9%*
PT	F-F	13013	*86.4%*	11091	15%	*0.5%*	*0.0%*	*0.0%*	*0.0%*	*14.2%*
RO	F-F	18703	*96.2%*	16282	13%	*0.3%*	*0.0%*	*0.0%*	*0.0%*	*12.7%*
SE	Register / CATI	18441	*73.0%*	7540	59%	*0.0%*	*39.3%*	*0.0%*	*0.0%*	*19.8%*
SI	Register/ F-F /CATI	29576	*77.7%*	9276	69%	*0.0%*	*0.0%*	*53.6%*	*0.0%*	*15.0%*
SK	F-F	16137	*88.5%*	13636	15%	*0.1%*	*0.0%*	*0.0%*	*1.1%*	*14.3%*
UK	F-F	19380	*71.3%*	15359	21%	*0.0%*	*0.0%*	*0.0%*	*1.3%*	*19.4%*

Source: Eurostat, *2009 comparative EU intermediate quality report*, version 3, July 2012.

Country labels: Austria (AT), Belgium (BE), Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Germany (DE), Denmark (DK), Estonia (EE), Finland (FI), France (FR), Greece (GR), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LV), Lithuania (LT), Netherland (NL), Norway (NO), Poland (PL), Portugal (PT), Romania (RO), Slovakia (SK), Slovenia (SI), Spain (ES), Sweden (SE), United Kingdom (UK).

*Collection modes: Registers; F-F (Paper and pencil or computer assisted interview); CATI= Computer Assisted Telephone Interview; Self-administered

**EU-SILC data collection for household is based on registers in a number of countries. In these countries, specific information on individuals is collected by a separate data collection, mainly processed by telephone and going with low participation. Furthermore, individual information on health is only available for a sub-sample of individuals: this is first due to the age threshold (information collected for the 16 year old and above only), then to country-specific rules for proxies (proxies not allowed in a number of countries for health information), non-response to the health question; use of register data for part of sample in a number of countries, not specified.