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Unmet health care needs among the working-age population. Evidence from the Great Recession in Spain

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Abstract

In this paper we tested the hypothesis that unmet health care needs can be interpreted in terms of employment status of individuals. The latest cross-sectional health surveys for Spain (2006 and 2011-2012) were used. The econometric approach is based on a Probit model estimation. When controlling for differences in other socioeconomic characteristics, our results for Spain supported stronger association for health status than for employment status. Moreover, empirical evidence was found that working-age people reported less unmet needs in the Great Recession than previously. Findings should be considered first in light of the Spanish National Health Service, completely decentralized to regions, which provides universal coverage for all residents. Second in terms of the likely worsening health-care-attendance experienced throughout the crisis.

KEYWORDS

Health care; Unmet needs, Spain, Discrete choice models, Employment.

Declarations

Ethics approval and consent to participate

‘Not applicable’.

Consent for publication

‘Not applicable’.

Availability of data and material

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Competing interest

The authors declare that they have no competing interest.

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Authors’ contribution

All authors developed the idea for the study and contributed to the concept and design. All authors contributed to the writing of the manuscript and read and approved the final manuscript.

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INTRODUCTION

There is growing consensus in the literature that inequality may be harmful for growth, because it deprives the poor of the ability to stay healthy and accumulate human capital (Blázquez-Fernández et al., 2015). In this paper, we tested for Spain the hypothesis that unmet health care needs (UHN) can be interpreted in terms of socioeconomic characteristics of individuals (SCI). Special attention was given to employment status, since it is associated both with health and other SCI. There exist a clear interrelationship between employment status, income and health (Stronks et al., 1997). The paper is closely related to recent works focused on UHN, both from the international perspective (Davis, McWhirter, & Gordon, 1996; Cavalieri, 2013; Chaupain-Guillot & Guillot, 2015; Jang et al., 2018) and the Spanish one (Fernández et al., 2015; García-Gómez et al., 2015). It contains various innovative approaches. First, to the best of our knowledge, it is among one of the primary to analyse UHN with Spanish National Health Survey (SNHS). Second, the study distinguishes between different stages of the economic cycle, namely 2006 and 2011-2012. The concerns of economic downturns are very much about the resources-distribution. From a policy perspective, equity of access to health care services is a key objective. We suggest that this contribution would be valuable for policymakers when planning to improve health outcomes.

METHODS

The econometric approach should take into account that the dependent variable *UHN* is dichotomic. Thus, we specify the empirical model as

$$UHN_i = \beta labour_i + X_i'\Gamma + \varepsilon_i \,, \qquad (1)$$

where *labour* denotes employment status, *X* is a matrix of a constant term and SCI, and ε indicates health endowments. In order to test to what extent the association between

UHN and *labour* was due to the relationship between the former and SCI we included these in the regression model. The study does not include income as regressor because it is not available for both surveys. Failing that, we hypothesize that income is associated with employment status, education and social-class this being the main breadwinner occupation of the household.

The present analysis requires both individual-level data on adult's characteristics and a source of time variation in them. Microdata is drawn from the SNHS, a research operation the Spanish National Institute of Statistics carries out on a partnership with the Ministry of Health. Surveys report national and regional data for different issues associated with health. We use 2006 and 2011-2012 surveys since these are the only available ones for periods just before and after the credit crunch in 2008. Here, some caveats need to be made: (i) the SNHS is not a panel survey in which a sample of households had been interviewed year after year, so we work with different individuals on each occasion; (ii) we restricted the sample to working-age population (16-65 years) since special emphasis is placed on the impact of employment status. Table 1 provides the definition of the variables used in the analysis. Table 2 shows that 'other reasons' represent nearly half of reported UHN (added 'wait-and-see', which did not explicitly appear in the 2006 survey).

[Table 1]

[Table 2]

RESULTS

Table 3 reports probit estimates from Equation (1), where the sign of the coefficients on explanatory variables shows the qualitative effect. The first SCI group in Table 1 was always used as a reference category. The results in column 1−2 for pre-crisis and crisis on average were roughly similar. Not surprisingly, the probability of UHN was weaker among men, national, very good health, no-diseases, and coastal regions. As the data presented here are cross-sectional, they do not provide an insight in the direction of the association. So, we then focus on the implications for primary results when controlling for potentially unmeasured factors that may affect UHN and correlate with SCI. This issue is investigated in column 3 by pooling surveys and adding time-varying controls into primary specifications. In doing so, the coefficient on time as a proxy for the crisis was significant negative at all. Moreover, some changes in the crisis were observed. Specifically, the elder the person the more aware he/she is about medical consultations. Also, the impacts on high-educated people being consistently different from the low-educated counterparts in the pre-crisis are not later. As for marital status, only the separated/divorced perceived a crisis-worsen effect than that of the single.

Focusing on employment status, we reject the hypothesis that being unemployed exerted different impact from the employed. Nonetheless, it should be noted the inactive collective did substantially reduce the probability. The outcomes also reflect the fact that less healthy individuals are more frequently faced with the decision to delay or decline treatment or medical care. Concerning social-class, no effects were found. Finally, it is important to highlight that Northern regions are less likely to report UHN, whereas mixed results were obtained on Mediterranean ones. This heterogeneity can be due to climatic or spatial conditions affecting needs and patients' preferences.

[Table 3]

DISCUSSION

Recent literature provides mixed answers concerning health inequalities (De Matteis et al., 2017). The aim of this paper was to explore whether inequalities associated with UHN can be understood in terms of differences in SCI over the business cycle.

Controlling for time provides further evidence that working-age people reported less UHN in the crisis than previously. Given the high proportion of waiting-list among reasons for UHN (Table 2), the effect of controlling for time is probably largely an effect of controlling for the worsening health-care-attendance throughout the crisis. So, when people realize that hard times are here to stay, they tight their belts accordingly. As a result, education-related differences narrowed to the point of disappearing. In addition, our findings support that demand-induced supply plays a major role, as health care is completely decentralized to regions. Further research is necessary to gain more insight into the contribution on this paper.

Besides, it is important to highlight the research limitations and extensions of this paper. Despite the SNHS allows incorporating individual-specific characteristics, data drawback is the lack of objectivity in the responses. But instead of dampening researchers' spirits, limitations should serve to spur further research into an issue of vital importance to Spain's citizens.

Because health inequality is an area in which greater effort must be made to generate empirical information for policymakers, this paper could be extended. For example, it would be valuable to test the results by using other methods and control variables or making a multi-country study. These and other extensions of this paper are left for further research, when there will be available new data on health indicators.

CONCLUSION

Our results for Spain prior to and throughout the Great Recession suggest that a worsening health-care-attendance is experienced throughout the crisis. The association was found to be stronger for health than for employment status. It is plausible that the former is largely due to a selection effect, as UHN is health-related. Thus, the more health care needs required, the higher the probability of reporting UHN. As for employment status, our results must be considered in light of the Spanish National Health Service, characterised by universal coverage and tax funding. It provides basic coverage for all residents to avoid inequalities on health care protection.

We hypothesize that our findings could be relevant for current debates in the literature on health economics. This issue is a crucial source of information when it comes to stay healthy and promote human capital attainments. Achieving health equity means that people can develop their full potential regardless of health status or other circumstances determined by social factors. Therefore as equity of access to health care services is a key objective, this contribution would be valuable for policymakers when planning to improve health outcomes.

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Tables

TABLE 1 Definition of variables

Variables		Definition
Unmet health needs	*UHN*	1 if the individual reported that, at least once in the last 12 months, he/she needed a medical examination or treatment but did not consult, whatever the reason was, 0 otherwise.
Gender	*Female*	1 if the person is a female, 0 otherwise.
Age	*< 26* *26-35* *36-45* *46-55* *56-65*	1 if the person is in this age intervals, 0 otherwise.
Citizenship	*National* *University*	1 if the person is Spanish, 0 otherwise.
Education level	*Primary* *Secondary* *Pre-university* *Labour training*	1 if the person has each of the educational levels, 0 otherwise.
Marital status	*Single* *Married* *Separated/Divorced* *Widowed*	1 if the person is in this civil status, 0 otherwise.
Employment status	*Employed*	1 if employed, 0 otherwise.
	Unemployed	1 if unemployed, 0 otherwise.
	Inactive	1 if student, housewife or retired, 0 otherwise.
Self-assessed health	*Very good* *Good* *Fair* *Bad or very bad*	1 if person reports health status, 0 otherwise.
Diseases	*Chronic*	1 if suffering from any chronic condition, 0 otherwise.
	Limit	1 if having limitation in daily activities, 0 otherwise.
Social class	*Social-class*	Social class based on occupation of the reference person: from 1 (directives) to 6 (unskilled workers)
Region	*Central*	1 if Aragon, Castile and Leon, Castile-La Mancha, Extremadura, Madrid, Navarre Community or La Rioja, 0 otherwise.
	North	1 if Asturias, Cantabria, Galicia or Basque Country, 0 otherwise.
	Mediterranean	1 if is Andalusia, Balearic Islands, Canary Islands, Catalonia, Valencian Community or Murcia, 0 otherwise.

TABLE 2 Main reason for unmet health needs (percentage)

Reason	Pre-crisis (2006)	Crisis (2011-2012)
Financial reasons	5.59	4.51
Waiting list	32.88	39.35
Lack of time	8.39	8.52
Distance, transportation difficulties	1.45	0.75
Fear	2.51	1.25
“Wait-and-see” attitude	-	16.54
Other reasons	49.18	29.07
TOTAL	100.00	100.00

TABLE 3 Unmet needs for medical care. Probit model estimation

	Variable	Pre-crisis (2006) (1)	Crisis (2011-2012) (2)	Pooled Surveys (3)
Gender	*Female*	0.191***	0.070	0.148***
Age	*26-35*	0.010	-0.087	-0.039
	36-45	-0.062	-0.118	-0.093*
	46-55	-0.100	-0.293***	-0.183***
	56-65	-0.113	-0.235**	-0.181***
Citizenship	*National*	-0.157***	-0.138*	-0.143***
Education level	*Primary*	-0.003	-0.232**	-0.070
	Secondary	0.133**	0.016	0.053
	Pre-university	0.111**	-0.031	0.044
	Labour training	0.217***	0.085	0.163***
Marital status	*Married*	-0.041	-0.072	-0.048
	Separated/Divorced	0.022	0.231***	0.105**
	Widowed	-0.054	-0.025	-0.041
Employment status	*Unemployed*	-0.047	-0.097	0.033
	Inactive	-0.133***	-0.071	-0.106***
Self-assessed health	*Good*	0.268***	0.158**	0.218***
	Fair	0.448***	0.342***	0.407***
	Bad or very bad	0.572***	0.483***	0.538***
Diseases	*Chronic*	0.288***	0.115**	0.203***
	Limit	0.281***	0.427***	0.344***
Social-class	*Social-class*	-0.002	0.011	0.003
Region	*North*	-0.168***	-0.525***	-0.222***
	Mediterranean	-0.060*	0.153***	0.019
	t			-0.324***
	constant	-1.987***	-2.056***	-1.881***
	Observations	19,288	14,553	33,841

Notes: ***, **, and * denote significant at 1%, 5%, and 10% respectively.