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# Immigration and self-reported health status by social class and gender: the importance of material deprivation, work organisation and household labour

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## ABSTRACT

**Objective:** Spain and Catalonia have experienced several immigration waves over the last century. The goal of this study was to examine the role of social class and its mediating pathways (ie, work organisation, material deprivation at home and household labour) in the association between migration status and health, as well as whether these associations were modified by social class or gender.

**Setting:** Barcelona city, Spain.

**Design and participants:** The study used the Barcelona Health Interview Survey, a cross-sectional survey of 10 000 residents of the city's non-institutionalised population in 2000. The present study was conducted on the working population, aged 16–64 years (2342 men and 1872 women). The dependent variable was self-reported health status. The main independent variable was migration status. Other variables were: social class (measured using Erik Olin Wright's indicators); age; psychosocial and physical working conditions; job insecurity; type of labour contract; number of hours worked per week; material deprivation at home and household labour. Two hierarchical logistic regression models were built by adding different independent variables.

**Results:** Among men, foreigners presented the poorest health status (fully adjusted odds ratios (OR) 2.16; 95% CI 1.14 to 4.10), whereas among women the poorest health status corresponded to those born in other regions of Spain. There was an interaction between migration and social class among women, with women owners, managers, supervisors or professionals born in other regions of Spain reporting a worse health status than the remaining groups (fully adjusted OR 3.60; 95% CI 1.83 to 7.07).

**Conclusion:** This study has shown that the pattern of perceived health status among immigrant populations varies according to gender and social class. These results have to be taken into account when developing policies addressed at the immigrant population.

Spain has experienced several immigration waves over the last century.<sup>1</sup> After World War II, various countries of western Europe (mainly Belgium, France, Germany and the United Kingdom) received large numbers of immigrants, mainly from southern Europe; Spain being one of the countries with the highest emigration rates. Moreover, Franco's dictatorship forced many Spaniards into exile. More than three million Spaniards left the country during those years. In the 1960s, a process of industrialisation altered this pattern and Spain became a destination for immigrants. Moreover,

there was an exodus from rural to urban areas in the most prosperous regions of the country<sup>1</sup> such as Barcelona or Madrid. In the 1980s, a new wave of foreign immigration into Spain began, the rate of which is still increasing at the beginning of the 21st century.<sup>2</sup>

Catalonia is one of Spain's 17 "autonomous communities", with its own history, economy, politics and culture, including its own Romanic language (Catalan). Contrary to other Spanish regions, Catalonia has received immigrants throughout the 20th century, with several distinct waves in the past 50 years. In the 1960s, families from other parts of Spain (mainly from the autonomous communities of Andalucia, Extremadura and Galicia) came to Catalonia in search of better job opportunities. These immigrants endured the social hazards of real estate speculation, poor housing and labour market discrimination.<sup>3</sup> In contrast, the current wave of foreign immigration<sup>3,4</sup> is not fuelled by the "pull" factors of an expanding economy needing workers in many economic sectors. These new immigrants are mainly from outside the European Union and work in the lowest paid sectors of the economy (retail sales, household services).<sup>5</sup> This situation is reproduced in Barcelona, the urban capital of Catalonia. The city received half a million immigrants during the 1950s and 1960s (the total population in 1970 reaching 1 745 142 inhabitants) mainly as a result of internal Spanish immigration. Foreign immigration has increased from representing 1.9% of the city's population in 1995 to 4.9% in 2001 and 15.9% in 2006.<sup>5</sup>

The effect of immigration on health is controversial because some studies have shown that immigrants enjoy better health compared with natives, whereas other studies have found worse health among immigrants.<sup>6</sup> Several factors may influence the health of the immigrant population, such as those related to the country of origin and cultural backgrounds (such as risk factors in earlier life, healthier lifestyles), factors in the country of destination (such as social class inequalities, with associated behavioural risk factors such as poor diet, smoking or alcohol consumption) and selection effects (such as the "healthy migrant effect").<sup>7,8</sup> The importance of social class health inequalities in immigrant populations is often overlooked, leaving results vulnerable to confounding.<sup>9</sup> For example, many surveys of immigrants are homogenous with regard to social class.<sup>10</sup>

Few studies have thus far focused on the health status of immigrants in Spain<sup>11,12</sup> or on the role of

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social class in explaining immigrant health.<sup>9</sup> We hypothesised that the immigrant population would have worse health than people born in Catalonia and that immigrants from disadvantaged social classes would have worse health than more socially advantaged immigrants. A second hypothesis was that the health differences between immigrants and native populations were partly explained by social class and its mediating pathways (ie, work organisation, material deprivation at home and household labour).

Therefore, our main objectives were twofold: (1) to study socioeconomic characteristics and self-perceived health status among Barcelona residents born in Catalonia, in the rest of Spain and in foreign countries; and (2) to examine the role of social class and its mediating pathways (ie, work organisation, material deprivation at home and household labour)<sup>13</sup> in the association between migration status and health. A further aim was to determine whether these associations were modified by social class or gender.

## METHODS

### Study population, sample and data collection

The population frame was the 2000 population of Barcelona city not living in any institution (hospital, nursing home, jail, etc). Data were collected as part of the 2000 Barcelona Health Interview Survey, a cross-sectional survey carried out approximately every 5 years since 1983. We generated a representative stratified sample of the non-institutionalised population of Barcelona residents. The sample strata were the 10 Barcelona city districts. In each stratum a random sample of residents was obtained, the sample unit being the individual. The sample size was of 10 000 individuals with an alpha error of 4.5% and a maximum global error of 1% (this global error is one half the width of the desired sample confidence interval). The proportion of immigrants found in the sample was that expected from the census of that year. The information was collected through a face-to-face interview carried out at home, between February 2000 and March 2001.<sup>14</sup> Interviews were carried out in Catalan or Spanish; if a person could not understand these languages, someone else had to help him or her to answer the survey. As the second objective of the study was to examine the role of social class and its mediating pathways (ie, work organisation, material deprivation at home and household labour) in the association between migration status and health, the population studied was the working population aged 16–64 years, for whom we had obtained a response to the migration status question (2342 men and 1872 women, whereas only five people had migration status missing).

### Indicators and variables

#### Self-reported health status

Reported health status was measured through a single question: "Would you say your overall health is very good, good, fair, poor or very poor?" A dichotomous outcome variable was created (1, fair, poor or very poor; 0, very good, good). This is a variable that has been related to morbidity and mortality.<sup>15</sup>

#### Migration status

Migration status was obtained through the country or region of birth of respondents. It was categorised as "native Catalanian", "born in other areas of Spain" and "foreigners".

Other variables included have been described in earlier reports.<sup>13</sup> They are explained briefly as follows.

### Social class

In the present study we used Wright's social class indicators for the assessment of relations of ownership of productive assets, control and authority relations in the workplace (control over organisational assets) and ownership of skills/credentials. Several studies have shown the usefulness of this measure in predicting and explaining social mechanisms of health inequalities.<sup>13 16–18</sup>

The 12 class positions of Wright<sup>19</sup> (table 1) were obtained from a set of survey questions. Class positions in the property dimension were obtained through two questions enquiring as to whether the respondent was self-employed and, if self-employed, the number of persons working for him or her. Self-employed individuals who hire at most one single worker occupy the petit-bourgeois class position; self-employed individuals having between two and 10 workers were classified as small employers and self-employed individuals with more than 10 workers occupied the capitalist class position. Class positions in the organisational dimension were determined with two questions about occupation and authority relations in the workplace (number of individuals working for the respondent) yielding three class categories: managers; non-managerial supervisors and non-managerial workers who did not have any authority as defined above. The skill dimension (ie, experts, semi-skilled workers and unskilled workers) was obtained through the occupation and the educational level of the respondent.

### Work organisation (work arrangement, physical and psychosocial work environment)

Work arrangement: (1) type or contract: having a temporary contract or not having a contract and other kinds of contracts; (2) number of hours worked per week; (3) job insecurity (ie, the perceived probability of losing their job in the next 2 years). These were assessed through questions answered with a four-point Likert scale.

Physical work environment was assessed through the following indicators: level of noise at work that does not enable one to speak with others; air pollution at work; moving loads of more than 15 kg at work and repetitive movements with hands or arms. Those indicators were also assessed through questions answered with a four-point Likert scale. We obtained an overall measure of physical hazards by adding the answers of the four questions. As a second step the scale was dichotomised: those above the median value were considered respondents exposed to a physically hazardous work environment.

Psychosocial work environment: two questions about control, doing varied work and having autonomy at work, one about psychological demands (having excessive work) and another about social isolation at work were included. Those indicators were also assessed through questions answered with a four-point Likert scale. We created an overall measure of psychosocial hazards at work by adding the responses to the four questions, then dichotomising: those above the median value were considered respondents exposed to a hazardous psychosocial work environment.

### Material deprivation at home

We considered material deprivation as not having access to the following purchased household material standards at home that were enquired about in the Barcelona Health Interview Survey: heating; dishwashing machine; microwave; availability of someone hired to help with household labour and elevator (in buildings with more than two storeys; in other buildings it was counted as if it existed). Again, we obtained a scale by adding

**Table 1** Description of the population studied (number and percentages or medians) by migration status

Variables	Men (n = 2342)			p Value*	Women (n = 1872)			p Value*
	Catalonia (n = 1696)	Rest of Spain (n = 565)	Foreigners (n = 81)		Catalonia (n = 1410)	Rest of Spain (n = 381)	Foreigners (n = 81)	
	Column %†	Column %†	Column %†		Column %†	Column %†	Column %†	
Poor perceived health	8.8	15.0	18.5	<0.001	10.6	27.0	16.0	<0.001
Age (median)	36	49	39	<0.001	35	47	39	<0.001
Marital status				<0.001				<0.001
Single	42.0	11.9	19.8		40.6	14.4	29.6	
Married	55.4	85.8	74.1		51.4	69.0	49.4	
Previously married	2.5	2.3	6.2		7.7	16.0	19.8	
Social class				<0.05				<0.001
Capitalist	2.1	1.9	–		1.0	0.5	1.2	
Small employers	7.5	8.7	12.3		5.2	5.8	7.4	
Petite bourgeoisie	7.3	10.6	14.8		5.2	8.4	7.4	
Managers experts	2.7	1.9	1.2		1.3	0.5	2.5	
Managers semi-skilled	1.4	0.9	3.7		0.4	–	–	
Managers unskilled	–	–	–		–	–	–	
Supervisors experts	5.0	4.8	1.2		3.6	2.4	1.2	
Supervisors semi-skilled	5.9	5.8	11.1		2.9	2.6	–	
Supervisors unskilled	5.2	5.3	1.2		4.3	3.4	3.7	
Workers experts	9.8	5.0	12.3		9.8	4.7	3.7	
Semi-skilled workers	21.9	21.6	14.8		21.8	12.6	24.7	
Unskilled workers	31.0	33.1	27.2		43.8	58.3	48.1	
Work organisation								
Employment arrangement								
Type of contract				<0.001				<0.05
Temporary or no contract	20.8	6.9	18.5		27.4	24.1	40.7	
Other	79.2	93.1	81.5		72.6	75.9	59.3	
Hours working each week (median)	40	40	40	NS	40	40	40	NS
Job insecurity				<0.001				NS
High	13.0	8.0	22.2		17.0	12.1	17.3	
Low	87.0	92.0	77.8		83.0	87.9	82.7	
Physical hazard				<0.001				<0.05
Yes	38.3	49.4	33.3		32.9	43.3	38.3	
No	59.8	48.8	65.4		65.3	55.4	60.5	
Psychosocial hazard				NS				<0.001
Yes	39.0	44.8	40.7		40.9	53.5	53.1	
No	59.1	53.6	59.3		57.4	45.4	44.4	
Material deprivation at home				<0.05				<0.001
Yes	44.0	51.2	54.3		40.8	57.7	54.3	
No	56.0	48.8	45.7		59.2	42.3	45.7	
Household labour								
Hours household labour each week (median)	6	6	7	NS	14	21	16.5	<0.001
Working alone				NS				<0.001
Yes	4.9	4.2	4.9		33.2	55.9	33.3	
No	95.1	95.8	95.1		66.7	44.1	66.7	
Children, elderly or disabled at home				<0.001				NS
Yes	32.8	39.6	51.9		33.0	33.1	40.7	
No	67.2	60.4	48.1		67.0	66.9	59.3	

NS, not statistically significant.

\*p Value of comparing categories of migration status.

†Percentages may not sum to 100 because of missing values.

Working men and women, aged 16–64 years old, Barcelona 2000.

the responses of the four questions, then dichotomising: those above the median value were considered respondents with high levels of material deprivation at home.

### Household labour

We included variables related to the housework done by the respondent: (1) doing household labour alone and (2) the number of hours per week of household labour (including cleaning up, ironing, cooking, etc); (3) if the person interviewed was the head of the household (49.6% of people included in this

study) or his/her partner (21.5%), we took into account the presence of children (less than 15 years old), elderly (more than 74 years old) or disabled in the home. For other people interviewed (27.9% were the son or daughter of the head of the household and 1% other cases) we considered that they did not have any responsibility.

### Data analysis

All analyses were conducted separately for men and women, including weights derived from the complex sample design. We

**Table 2** Multivariate associations between poor self-perceived health status and social class by migration status

Gender and social class	Migration status		
	Catalonia	Rest of Spain	Foreigners
	aOR (95% CI)	aOR (95% CI)	aOR (95% CI)
<b>Men</b>			
Social class			
Owners, managers, supervisors and professionals	1	1	1
Semi-skilled workers	1.01 (0.62 to 1.64)	1.80 (0.95 to 3.44)	1.40 (0.20 to 9.97)
Unskilled workers	1.73 (1.18 to 2.54)	2.19 (1.26 to 3.80)	3.98 (0.93 to 17.09)
<b>Women</b>			
Social class			
Owners, managers, supervisors and professionals	1	1	1
Semi-skilled workers	1.88 (1.10 to 3.19)	0.50 (0.18 to 1.36)	0.82 (0.11 to 6.16)
Unskilled workers	2.65 (1.71 to 4.10)	1.54 (0.89 to 2.65)	2.43 (0.47 to 12.47)

aOR, adjusted odds ratios (age and marital status were also included in the models).

Working men and women, aged 16–64 years, Barcelona 2000.

first described all the variables (number of cases and percentages) by migration status and tested the significance of these associations through a Pearson  $\chi^2$  square test and a one-way analysis of variance.

Multiple logistic regression models were fitted to determine the association between poor health status (dependent variable) and social class by each migration status adjusting for age (continuous) and marital status (married or living with a partner, single or previously married).<sup>20</sup> In these models social class had to be converted into three categories: (1) owners, managers, supervisors and professionals or skilled workers; (2) semi-skilled workers and (3) unskilled workers, as a result of the small number of cases of foreign immigrants in some social classes.

Multiple logistic regression models were also fitted to determine the association between poor health status and migration status. First, we obtained a regression model for migration status, age and marital status<sup>21</sup> (model 0). To study the impact of the different confounders and mediators on the relationship between migration status and poor health we fitted another multivariate model (model 1) including: migration status and social class; work organisation variables; material deprivation at home and household labour. These models were also adjusted for age and marital status. For model 1 we calculated the percentage of change in the odds ratios (OR) for migration status derived from adding new variables to the model. The change in OR was calculated as follows: (OR model age and marital status adjusted – OR extended model)  $\times$  100/ (OR model age and marital status adjusted – 1). Goodness of fit was obtained using the test of Hosmer and Lemeshow.<sup>22</sup> We next stratified by the three categories of social class adjusting model 0 (age and marital status adjusted) and model 1 (the fully adjusted model without social class) in order to ascertain whether social class was an effect modifier of these associations.

## RESULTS

### Socioeconomic conditions, health status and health status by social class

Distributions by place of birth were as follows: 72.4% of men and 75.3% of women were born in Catalonia; 24.1% of men and 20.4% of women were born in the rest of Spain and 3.5% of men and 4.3% of women were born abroad. People from abroad were mainly from central and south America (44.4% of men and

52.4% of women), western Europe, Japan, Australia or the United States (approximately 27.2% of men and 25.6% of women), Asia (16.0% of men and 13.4% of women) and Africa (11.1% of men and 2.4% of women).

Poor health status was declared by 11.7% of men and 14.2% of women. This distribution varied by migration status; 8.8% of men being born in Catalonia, 15.0% born in the rest of Spain and 18.5% born abroad. For women these proportions were 10.6%, 27.0% and 16.0%, respectively (table 1). Table 1 also describes the population by migration status for each variable. Migrants from the rest of Spain were the oldest migrant group. Temporary work was more common among women and particularly among foreign women (40.7%); the percentage of temporary workers was higher among women from the rest of Spain (24.1%) than among their male counterparts (6.9%). We found marked gender differences in household labour burden. Women from the rest of Spain declared that they did 21 hours per week.

Table 2 shows the association of poor health by social class in men and women. Unskilled workers always had poorer health, although the adjusted odds ratios (aOR) were not always statistically significant, as a result of the small numbers in some categories.

### The role of material and psychosocial factors in explaining the relation between migration status and health

Table 3 presents the results of the two logistic regression models for men and women studying the association between poor health and migration status. Model 0 presents results for the age and marital status adjusted logistic regression. Among men, those born in the rest of Spain or foreign countries had worse health status than men born in Catalonia, although only the aOR for foreigners reached statistical significance (aOR 2.24; 95% CI 1.23 to 4.08). In model 1, in which all variables were included, we found statistically significant aOR for foreigners (aOR 2.16; 95% CI 1.14 to 4.10). Other variables with statistical significance were: social class; job insecurity and physical (aOR 1.91; 95% CI 1.41 to 2.58) and psychosocial (aOR 1.45; 95% CI 1.08 to 1.95) hazard at work.

Among women, those born in the rest of Spain (aOR 1.94; 95% CI 1.43–2.64) had poorer health. In model 1, with all the variables included, the association between women born in the rest of Spain and poor health maintained its statistical significance, although the aOR was reduced by 42.5% (from

**Table 3** Multivariate associations between poor self perceived health status and migration status adjusted for other independent variables

Variables	Men			Women		
	Model 0	Model 1 (full model)		Model 0	Model 1 (full model)	
	aOR (95% CI)	aOR (95%CI)	%*	aOR (95% CI)	aOR (95%CI)	%*
Migration status						
Catalonia	1	1		1	1	
Rest of Spain	1.20 (0.88 to 1.64)	0.96 (0.68 to 1.34)	120.00	1.94 (1.43 to 2.64)	1.54 (1.10 to 2.15)	42.55
Foreigners	2.24 (1.23 to 4.08)	2.16 (1.14 to 4.10)	6.45	1.18 (0.62 to 2.25)	1.15 (0.59 to 2.23)	16.67
Age	1.05 (1.03 to 1.06)	1.06 (1.04 to 1.08)		1.05 (1.03 to 1.06)	1.05 (1.03 to 1.06)	
Marital status						
Single	1	1		1	1	
Married	0.89 (0.60 to 1.31)	1.07 (0.65 to 1.77)		1.06 (0.74 to 1.53)	0.94 (0.61 to 1.45)	
Previously married	1.11 (0.52 to 2.41)	1.20 (0.49 to 2.97)		1.47 (0.90 to 2.39)	1.18 (0.68 to 2.04)	
Social class						
Managers, supervisors experts		1			1	
Capitalist		2.25 (0.45 to 11.12)			1.15 (0.13 to 9.78)	
Small employers		4.49 (1.61 to 12.51)			1.79 (0.63 to 5.03)	
Petite bourgeoisie		2.72 (0.96 to 7.68)			0.91 (0.31 to 2.62)	
Supervisors semi-skilled		4.67 (1.60 to 13.62)			0.79 (0.19 to 3.27)	
Supervisors unskilled		4.27 (1.41 to 12.96)			2.04 (0.67 to 6.17)	
Workers experts		1.52 (0.47 to 4.94)			0.54 (0.16 to 1.80)	
Semi-skilled workers		3.19 (1.18 to 8.57)			1.45 (0.57 to 3.70)	
Unskilled workers		4.57 (1.74 to 11.99)			2.10 (0.86 to 5.11)	
Type of contract						
Other		1			1	
Temporary or no contract		1.35 (0.83 to 2.22)			0.85 (0.59 to 1.24)	
Hours working each week		1.00 (0.99 to 1.02)			0.99 (0.98 to 1.00)	
Job insecurity						
Low		1			1	
High		2.23 (1.44 to 3.46)			1.41 (0.93 to 2.14)	
Physical hazard						
No		1			1	
Yes		1.91 (1.41 to 2.58)			1.61 (1.20 to 2.15)	
Psychosocial hazard						
No		1			1	
Yes		1.45 (1.08 to 1.95)			1.13 (0.84 to 1.53)	
Material deprivation at home						
No		1			1	
Yes		0.92 (0.69 to 1.25)			1.61 (1.19 to 2.19)	
Hours household labour each week (median)		1.00 (0.99 to 1.02)			1.01 (1.00 to 1.03)	
Working alone						
No		1			1	
Yes		0.78 (0.35 to 1.73)			1.04 (0.76 to 1.44)	
Children, elderly or disabled at home						
No		1			1	
Yes		1.00 (0.71 to 1.42)			1.11 (0.79 to 1.55)	

aOR, adjusted odds ratio.

Model 0: Age and marital status were also included in the models.

Model 1 (full model): All independent variables were also included in the models.

\*Percentage of change: (aOR age and marital status adjusted model – aOR extended model) × 100/(aOR age and marital status adjusted model – 1).

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an aOR of 1.94 in model 0 to an aOR of 1.54 in model 1). Apart from physical hazard at work, material deprivation at home (aOR 1.61; 95% CI 1.19 to 2.19) had aOR with 95% CI that did not include 1.

When the analysis was stratified by social class (table 4), the results of migration status did not change for men, although aOR lost statistical significance, but among women those from the rest of Spain who were owners, managers, supervisors or professionals had a higher aOR (3.60; 95% CI 1.83 to 7.07) in the fully adjusted model. Unskilled workers from the rest of Spain also had worse health in the age and marital status adjusted model (aOR 1.53; 95% CI 1.02 to 2.29) but the statistical difference disappeared in the fully adjusted model.

## DISCUSSION

Our study provides a first grasp of the socioeconomic and health status characteristics of the Barcelona population by migration status. It has produced four main findings: (1) people born outside Catalonia have a more adverse social class profile, poorer working and living conditions and poorer health status and these differences are greater among women; (2) among men, foreigners have the poorest health status, whereas among women the poorest health status corresponds to those born in other regions of Spain; (3) although social class, working conditions, household labour and material deprivation at home partly explain the relation found between poor health status among women born in the rest of Spain, the poor health status

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**Table 4** Multivariate associations between poor self-perceived health status and migration status adjusted for other independent variables by different social classes

Gender and migration status	Age and marital status adjusted			Fully adjusted					
	Owners, managers, supervisors and professionals	Semi-skilled workers	Unskilled workers	Owners, managers, supervisors and professionals	Semi-skilled workers		Unskilled workers		
	aOR (95% CI)	aOR (95% CI)	aOR (95%CI)	aOR (95%CI)	%*	aOR (95%CI)	%*	aOR (95%CI)	%*
Men									
Migration status									
Catalonia	1	1	1	1		1		1	
Rest of Spain	0.95 (0.58 to 1.56)	1.19 (0.60 to 2.39)	1.34 (0.80 to 2.24)	0.81 (0.47 to 1.39)	-280.0	1.02 (0.48 to 2.17)	89.47	1.17 (0.68 to 2.03)	50.00
Foreigners	2.00 (0.86 to 4.64)	2.25 (0.39 to 12.96)	2.70 (0.98 to 7.44)	1.68 (0.66 to 4.26)	32.00	2.82 (0.42 to 19.0)	-45.60	2.56 (0.91 to 7.24)	8.24
Women									
Migration status									
Catalonia	1	1	1	1		1		1	
Rest of Spain	3.54 (1.91 to 6.56)	0.72 (0.26 to 1.99)	1.53 (1.02 to 2.29)	3.60 (1.83 to 7.07)	-2.36	0.62 (0.21 to 1.80)	35.71	1.36 (0.88 to 2.09)	32.08
Foreigners	1.43 (0.35 to 5.84)	0.48 (0.10 to 2.44)	1.43 (0.62 to 3.31)	1.39 (0.32 to 5.96)	9.30	0.46 (0.08 to 2.54)	-3.85	1.54 (0.65 to 3.67)	-25.58

aOR, adjusted odds ratio.

Fully adjusted model: adjusted by age, marital status, working conditions, material deprivation at home and household labour.

\*Percentage of change: (aOR age and marital status adjusted model - aOR fully adjusted model) × 100/(aOR age and marital status adjusted model - 1).

Working men and women, aged 16-64 years, Barcelona 2000.

found among foreign men is not explained by social class or working and living conditions; (4) there is an interaction between migration and social class among women, with women owners, managers, supervisors or professionals born in other regions of Spain reporting worse health status than the remaining groups.

### Socioeconomic conditions

We found different socioeconomic conditions for the Catalan and immigrant populations of Barcelona and the migration-related profiles differed by gender. First of all, it is important to note that people born in other regions of Spain were significantly older than the other groups analysed. This profile corresponds to the wave of migration from other Spanish regions to Catalonia during the 1960s and 1970s.<sup>3</sup> Therefore, our results reflect differences by gender and origin and also those associated with different social conditions and attitudes existing in Spain at the time when most Spanish migrants came to Catalonia, such as, for example, more conservative attitudes towards gender outside Catalonia regarding women's entrance into the labour market and their role at home.<sup>23</sup> After the fall of the dictatorship after Franco's death in 1975, Spain was heavily influenced by Catholic teachings that relied on women for the care of family members; female participation in the labour force being much lower than in other European countries.<sup>24</sup> This was

particularly strong outside Catalonia, traditionally a more liberal autonomous community.

The distribution of the Catalan population by social class is similar to that found in the international studies of Wright,<sup>19</sup> although there are fewer people in the capitalists class positions.<sup>25</sup> Social class position differs by migrant status and gender, although the small number of foreigners in some class positions does not permit strong inferences to be drawn. It is necessary to point out the high percentage of immigrant women in the unskilled worker class position, primarily among those born in other regions of Spain and also the low percentage of these women in managerial class positions, which reflects the great gender labour segregation in these positions.<sup>26</sup> Moreover, immigrant populations have more precarious working conditions and more material deprivation at home than people

### What this paper adds

- Few studies have focused on the health status of immigrants in Spain or on the role of social class and its mediating factors in explaining immigrant health
- This study has shown that among men, in spite of the low number of cases, foreigners have the poorest health status, whereas among women the poorest health status corresponds to those born in other regions of Spain
- Women owners, managers, supervisors or professionals born in other regions of Spain are those who report worse health status

### Policy implications

- Migration, social class and gender all need to be taken into account when health policies are addressed. Future health interview surveys will be useful to study health inequalities in the foreign immigrant population, a new reality in Spain in recent years. Our results point out the need to examine the role of discrimination in health differences among men depending on immigrant status. Moreover, they emphasise the importance of analysing the situation of women who come from other parts of Spain, an issue that has not been studied thus far.
- In light of the present findings one can suggest that policies to guarantee equal rights for foreign-born immigrants and rapid transition into full citizenship with its associated rights could reduce the inequalities between foreign born and Catalan men.
- With regard to women, general policies of increasing educational grants and the economic sectors in which professional and non-professional women find employment (elderly and child care, healthcare, education, social services) could go a long way to reduce the burden of patriarchy among women from the rest of Spain and those in Catalonia.

from Spain. The relation between precariousness, gender and immigration is common in other countries of the European Union<sup>27</sup> and also across the Atlantic.<sup>28</sup>

Our study shows that women performed most of the household labour, as previously reported<sup>29, 30</sup> but women from the rest of Spain and foreigners performed more work than Catalan natives. We have to take into account that women included in this study were exposed to the “double burden” of labour outside and inside the household.<sup>31</sup> Moreover, women from the rest of Spain were less likely to hire housework help (13% in comparison with 27% of Catalan women and 23% of foreign women) and all immigrant women were more likely to work as cleaning or domestic workers than Catalan natives (18% of those from the rest of Spain and 20% of foreigners compared with 5% of Catalan women). In the case of women from the rest of Spain, who belong to a generation with few in the labour market, compared with the current situation (28% of women were in the labour force in 1978 whereas in 2003 the figure was 44.5%),<sup>32</sup> gender discrimination at work is also very pronounced. As we have described previously, the excess household labour done by women is related to their perceived health, a fact that is not observed in men.<sup>13</sup>

### Perceived health and the role of material and psychosocial factors in explaining the relation between migration status and health

This study has shown that perceived health status was poorer among foreign men and among women from the rest of Spain than people from Catalonia and in particular among women in owner, managerial, supervisor or professional class positions.

The Spanish literature on immigrant health usually focuses on foreign-born immigrants,<sup>6</sup> although there are studies in other countries centred on internal migration.<sup>33</sup> From our point of view, immigration inside Spain is also important because, as stated earlier, Catalonia has its own history and language, which differentiates it from other regions of Spain. Generalisations are difficult across periods, cohorts, nations and ethnic groups. The effect of immigration on health thus differs between studies. For example, different studies show evidence of a “healthy immigrant effect”, whereby immigrants and especially recent immigrants are less likely than the country population to have poorer health,<sup>34</sup> although this effect can disappear over time.<sup>35</sup> Other studies have, however, found worse self-perceived health for immigrants.<sup>6, 36</sup>

Foreign men had poorer health in all the adjusted models, without an attenuation of associations when other variables were introduced into the models. It is worth mentioning the high percentage of temporary contracts, job insecurity and psychosocial hazards among these men. Other conditions not taken into account in our study could explain the differences in self-perceived health between foreigners and natives such as, for example, labour market discrimination, losing power and status or lack of social support.<sup>37, 38</sup>

Women born in the rest of Spain more often reported poor health status compared with other groups. These were mainly women in the most advantaged social classes but also unskilled workers. In the case of unskilled workers, the differences disappeared when other variables were included in the model. These data suggest that for unskilled women born in other regions of Spain, who belong to older generations than Catalanian women and foreigners, entrance into the labour market implied allocation to low paying occupations. In these occupations they were exposed to precariousness and poor working conditions, in addition to their high burden of

household labour. These social class-related factors could explain their low self-perceived health. It is interesting to emphasise the case of female owners, managers, supervisors and professionals born in the rest of Spain, with poorer health status and with these differences not explained by the variables used to describe working conditions. Poor health among these women could be a result of the difficulties of working in such positions for women of older cohorts, who entered the labour market at the end of the Franco dictatorship when sexism and discrimination were most present in that patriarchal society, mainly among immigrants. Attitudes and legal rights were severely limited for Spanish women, in particular for those wanting to break with the patriarchal model: no right to divorce, abortion and even financial activity was not allowed without their husband’s approval (again, more common outside Catalonia).<sup>23</sup>

### Limitations

The main limitations of this study are the small sample size of foreign immigrants. This is a result of the small percentage of immigrant population in the Health Interview Survey in 2000 and perhaps also because of the difficulty in interviewing this population. Although the percentage of foreign population was similar to the real percentage, we cannot rule out that some people may not have been able to answer the questionnaire as a result of difficulties in speaking Catalan or Spanish.

As a result of the small sample size, we could not separate the foreign population into poor and rich countries. Foreigners from poor countries probably have poorer health and working conditions, more household material deprivation and do more household labour than other populations. In recent years the immigrant population has grown considerably, therefore future Health Interview Surveys will permit us to analyse this population much more thoroughly.

### CONCLUSION

This study has shown the different pattern of perceived health status among immigrant populations, a pattern that varied with gender and social class. Among men, foreigners had the poorest health status, although future studies with increased sample sizes will have to analyse this aspect more thoroughly, whereas among women the poorest health status corresponded to those born in other regions of Spain and specially to owners, managerial and professional class positions.

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