

Social inequalities and realisation of opportunistic screening mammographies in Barcelona (Spain)

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Population screening, organised through programmes with defined target groups who are regularly called in, and opportunistic screening where the woman or the doctor, on their own initiative request the test, are the main methods for carrying out of periodic mammographies. In Spain, except for recent established and geographically limited population based breast cancer screening programmes, most mammographies, aimed at early detection of breast cancer, are performed on an opportunistic basis in public and private health centres. The

objective of this study was to evaluate social inequalities in the use of opportunistic screening of breast cancer through periodic mammography, in the general population of women over 29 years of age during 1992, after taking into account sociodemographic factors.

Methods

This study follows a cross sectional design, using information from the 1992 Barcelona Health Interview Survey. A representative stratified sample of the non-institutionalised

Table 1 Association between the non-realisation of periodic mammographies and sociodemographic and insurance variables

Sociodemographic and insurance variables	Total (n=1648) Number	Periodic mammographies not done %	Univariate analysis		Multivariate analysis	
			OR (95% CI)	p Value	ORa (95% CI)	p Value
Age						
30-39	542	72.9	1.66 (1.18, 2.34)	0.00	1.84 (1.28, 2.63)	0.00
40-49	331	61.8	1		1	
50-65	331	71.8	1.57 (1.16, 2.12)	0.00	1.31 (0.94, 1.83)	0.11
≥ 65	444	92.4	7.54 (4.84, 11.55)	0.00	4.76 (2.67, 8.57)	0.00
Marital status						
Married	1086	70.9	1		1	
Single	175	85.2	2.35 (1.49, 3.73)	0.00	2.37 (1.44, 3.89)	0.00
Widowed	313	87.1	2.80 (1.93, 4.07)	0.00	1.43 (0.82, 2.50)	0.21
Separated/divorced	71	71.5	1.05 (0.60, 1.85)	0.86	1.39 (0.75, 2.58)	0.29
Occupational social class*						
I - Managerial, senior, technical staff, free professionals	88	59.5	1		1	
II - Intermediate occupations and managers in commerce	232	72.7	1.82 (1.06, 3.14)	0.02	2.05 (1.15, 3.63)	0.01
III - Skilled no manual workers	353	67.1	1.39 (0.84, 2.30)	0.17	1.62 (0.95, 2.76)	0.07
IV - Skilled and partly skilled manual workers	644	78.7	2.51 (1.54, 4.10)	0.00	2.36 (1.40, 3.99)	0.00
V - Unskilled manual workers	163	87.9	4.89 (2.49, 9.66)	0.00	5.23 (2.55, 10.73)	0.00
Educational level†						
University	203	64.0	1			
Secondary (14 yr)	327	70.6	1.35 (0.91, 2.00)	0.11		
Elementary (10 yr)	467	74.3	1.62 (1.12, 2.35)	0.00		
Less than elementary/no studies/illiterate	650	82.6	2.67 (1.85, 3.85)	0.00		
Insurance						
Public and private	443	69.4	1		1	
Only public	1162	77.7	1.53 (1.19, 1.97)	0.00	1.39 (1.05, 1.84)	0.02
Job situation						
Employed	427	66.1	1		1	
Unemployed housewife	837	75.3	1.57 (1.21, 2.04)	0.00	1.59 (1.15, 2.21)	0.00
Unemployed	54	67.4	1.03 (0.54, 1.96)	0.92	0.95 (0.50, 1.83)	0.88
Retired	308	92.1	6.08 (3.75, 9.93)	0.00	2.19 (1.18, 4.09)	0.01

* Women who were in paid employment or who had worked previously were allocated their own occupational social class. For women who were housewives or had not had paid employment previously, the occupational social class of the head of the household was recorded.

† Educational level was not included in the logistic regression model because of its colinearity with occupational social class. OR, odds ratio; ORa, adjusted odds ratio; CI, confidence intervals.

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population resident in Barcelona city was obtained. The sample unit was the person, amounting to a total of 5004 people (2200 women). Questions regarding gynaecological practices were asked only to women over 29 years of age who had personally responded to the questionnaire, which represented a sub-sample of 1648 women. The realisation of periodic mammographies was assessed with the question: "Do you have a mammography performed periodically, for instance, every two years?" The information was collected by a home interview conducted over an entire year period.

Several sociodemographic variables and the type of medical insurance were analysed. Univariate and multivariate analysis using logistic regression modelling were used to determine the predictive risk factors of not performing periodic mamographies.

Results

Three of every four women aged between 50 and 65 years (71.8%) did not have a periodic mammography performed (table 1). The age group between 40-49 years showed the lowest frequency of not having undergone a periodic mammography (61.8%), therefore this was considered the reference group.

The adjusted odds ratio (ORa) for no periodic mammographies in the ages between 50-65 years was 1.31 (95%CI -0.94, 1.83). Women who were single had a higher risk of not having a periodic mammography (ORa=2.37; 95%CI 1.44, 3.89). Lower occupational social class and education were strongly associated with not undergoing periodic mammographies (ORa in Class V = 5.23; 95%CI 2.55, 10.73). Unemployed housewives (ORa=1.59, 95%CI=1.15, 2.21) and retired women (ORa=2.19; 95%CI 1.18, 4.09) had a higher risk of not having periodic mammographies than employed women. Women who were covered only by the National Health Service were at a higher risk of not having a periodic mammography (ORa = 1.39; 95%CI 1.05, 1.84).

Discussion

Although there is no clear consensus with respect to the age of initiation of periodic screening mammography,¹ clinical and epi-

demiological evidence does not support breast cancer screening mammography below 40 years of age, mainly because of an important fall in its sensitivity and overall effectiveness. Our study confirms, as other authors have also found, a greater screening utilisation by women younger than 50 years.²

On the other hand, several studies have confirmed the direct relation between social class and education in terms of realisation of screening tests.³ Our results also confirm that women in lower social classes and those with lower educational levels make less use of mammography screening.

When these data were collected, there was no population based programme for breast cancer screening in Barcelona. Screening mammographies were performed at the physician's own discretion. In general, opportunistic screening is more susceptible to social inequalities than systematic screening programmes.⁴ In our study, the most relevant variables predicting lack of periodic mammographies by women in the sample were: socioeconomic status (occupational social class and educational levels), and not having a private health insurance. It is important to highlight that these results pinpoint housewives as a subgroup especially at risk. Some authors have indicated that employed women report a better perceived health status and hence undertake more preventive and health promoting activities.⁵

Our findings suggest that health policies regarding public services should devote special efforts among women in the lower socioeconomic groups to emphasise the need to participate in systematic programmes for breast cancer screening through periodic mammography.

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