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Influence of social deprivation on illness in diabetic patients

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Inequalities in health are associated with social deprivation.¹⁻³ Our hospital serves a district of 286 000 people with considerable differences in environmental and social circumstances. We therefore investigated whether illness in diabetic patients is linked to deprivation by analysing data on diabetic patients from contrasting socioeconomic backgrounds.

Patients, methods, and results

A standardised form for the diabetic register has been completed for all patients visiting this centre since 1984, and the results have been computerised since 1987. For this study we analysed demographic details and details of diabetic complications and treatment. The electoral wards where patients lived were determined from postal codes. The prosperity of wards was ranked using data on unemployment, no car ownership, overcrowding, the proportion of rented accommodation, and the proportion of households of socioeconomic classes 4 and 5.² Parametric and non-parametric statistics were used to compare patients from the most and least deprived wards; significance was taken as $p < 0.05$.

Of 1528 patients seen in 1991, 241 lived in the eight most deprived wards, 247 in the 10 least deprived wards, and 1040 in the remaining intermediate wards. Overall, 886 were men, 371 smoked, and only 81 were from ethnic minority groups; 161 were treated by diet alone, 586 with oral drugs, and 748 with insulin, with 33 not recorded.

The table shows that patients from the deprived

inner city were significantly older with a shorter duration of diabetes than those from the prosperous wards. Insulin was used significantly less frequently in the inner city, where smoking was more common. Ischaemic heart disease and peripheral vascular disease were significantly more prevalent in the inner city. When smokers were analysed separately, ischaemic heart disease was no longer significantly associated with living in the inner city ($p = 0.57$, odds ratio 1.3); however, for non-smokers the association between ischaemic heart disease and living in the inner city remained significant ($p = 0.0003$, odds ratio 2.81 (95% confidence interval 1.51 to 5.25)). Proportionally more people from our district lived alone in the inner city than lived alone in the prosperous wards (31% v 25% respectively).

Comment

Diabetic patients from the socially and economically deprived inner city were less likely to use insulin, and more likely to smoke and to have cardiovascular disease than were patients from the prosperous wards. Smoking ranged from 32% in the deprived inner city, to 25% in the intermediate area, to 19% in the prosperous wards. This increased prevalence of smoking among inner city residents has been noted previously⁴ and partly explains their high prevalence of ischaemic heart disease. Smoking is recorded at each visit to our clinic and advice is repeated to reduce and eventually stop smoking. The overall prevalence of smoking in our clinic has fallen from 26% in 1987 to 22% in 1992.

Inner city residents are more likely to be older and living alone. They may therefore be reluctant to use insulin.

Previous reports have commented on the associations between poor housing, unemployment and poverty, and general health problems, including an increased risk of respiratory and cardiac disease and a decreased

Data on diabetic patients according to prosperity of electoral ward where they lived

	Prosperity of ward			Odds ratio (95% confidence interval)*	p Value*
	Deprived (n=241)	Intermediate (n=1040)	Prosperous (n=247)		
Median age (range) (years)	58 (14-83)	57 (9-89)	54 (9-84)		0.018†
Median duration of diabetes (range) (years)	6 (1-51)	8 (1-59)	9 (1-43)		0.005†
Proportion (%) of patients:					
Taking insulin	101/234 (43)	506/1020 (50)	141/241 (59)	0.54 (0.37 to 0.79)	0.0008‡
Who smoked	75/236 (32)	251/1005 (25)	45/238 (19)	2.00 (1.27 to 3.14)	0.0013‡
With ischaemic heart disease	57/231 (25)	175/989 (18)	29/237 (12)	2.35 (1.39 to 3.97)	0.0005‡
With peripheral vascular disease	47/224 (21)	136/941 (14)	30/225 (13)	1.73 (1.01 to 2.95)	0.043‡

*Comparing patients from deprived wards with those from prosperous wards.

†Kruskal-Wallis test.

‡ χ^2 test.

life expectancy.^{1,3} Some reports have included data from north east England.³ To our knowledge, however, no previous reports have assessed illness in diabetic patients in relation to social deprivation.

In conclusion, we advocate three courses of action: firstly, to support the alleviation of social and economic disadvantage; secondly, to offer an excellent service to our patients with diabetes, aiming at optimal glycaemic control in order to minimise the risk of complications; and, thirdly, to continue to persuade patients not to smoke.

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Childless women revisited

Gina Johnson for the South Bedfordshire Practitioners' Group

In 1985 we examined the general practice records of a group of women born in 1935 and 1950 to determine the prevalence of childlessness—both voluntary and due to infertility.¹ We reassessed the same variables seven years later in women born in 1950.

Subjects, methods, and results

In 1992 we identified all women born in 1950 from our nine practices with a combined list of 76100 patients. In each record we noted (a) consultations about infertility or subfertility; (b) whether at least one living child had been born; (c) evidence of voluntary childlessness—that is, current contraceptive usage, sterilisation of the woman or her partner, termination of pregnancy, or a written comment in the notes—and (d) whether she had been included in our previous study.

The childless women were divided into three groups: infertile, voluntarily childless, or unclassified. Using the χ^2 test, we compared the results with those for the women born in 1950 in our previous study.

We identified 474 women born in 1950, of whom 459 had complete records. Of these, 24 (5.2%) had consulted a doctor about infertility; five of them remained childless and were classified as infertile (1.1%). In total, 55 women (12%) had not had a live birth; 34 of them (7.4%) were classified as voluntarily childless.

There remained 16 unclassified women (3.5%). This group might contain, in any proportions, celibate women, women using non-prescribed contraception, and women who had been unsuccessful in conceiving but had not sought medical help. Assuming that the ratio of infertility to voluntary childlessness was the same in the unclassified and classified groups, the prevalences of 7.4% and 1.1% were multiplied by 55/39, giving estimates of 10.5% (48) for voluntary childlessness and 1.6% (seven) for infertility. With the same assumption, voluntary childlessness was estimated as 11.0% (68/617) and infertility 3.2% (20/617) in 1985 (95% confidence interval for comparison between studies 7.0% to 15.7% and 1.1% to 6.1% respectively; not significant).

There was no significant difference in any other variable between the two studies (proportion who saw a specialist about infertility 6.8% (42) in 1985 v 5.2% (24) in 1985 (3.7% to 10.7%); proportion who were childless 14.3% (88) v 12.0% (55) (9.8% to 19.4%); proportion who were voluntarily childless 9.2% (57) v 7.4% (34) (5.7% to 13.5%); proportion who were infertile 2.8% (17) v 1.1% (five) (0.9% to 5.4%); and

proportion who were unclassified 2.3% (14) v 3.5% (16) (0.7% to 4.8%).

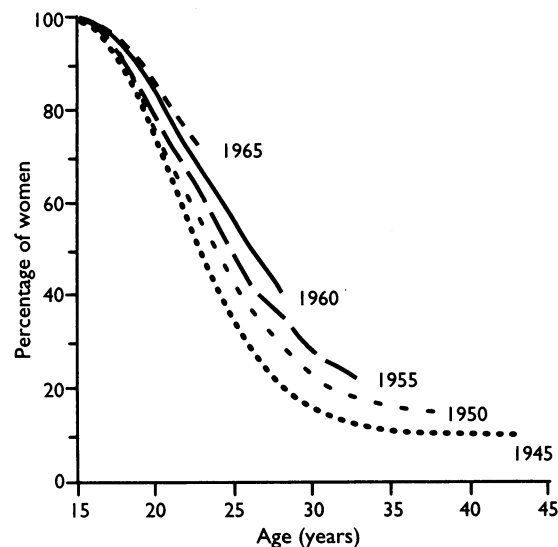
Twenty seven women were identified as childless in 1985; three of them had since had a child. None of those whom we had classified as voluntarily childless in 1985 had subsequently borne a living child; there was no evidence that they were merely delaying child-bearing, except for one woman with a family history of Huntington's chorea who subsequently discovered that she was infertile.

Comment

Our second study confirms that many women born in 1950 are choosing to remain childless; unresolved primary infertility is uncommon.

A group in Oxford recently estimated that 3.4% of 683 women aged 25 to 44 had primary unresolved infertility.² This figure is probably too high as their subjects included many young women who might subsequently conceive. A study of 83 childless menopausal women in Aberdeen concluded that 3.5% had primary unresolved infertility and 7% were voluntarily childless.³ Our previous results suggest that women from this older generation are less likely to be childless by choice; also they did not have access to modern treatments for infertility.

Childlessness is increasing. Using statistics from the Office of Population Censuses and Surveys Jones estimated that of all women in England and Wales who were born in 1950, 42% were childless at 25 and 15% at 40 (figure).⁴ Of those born in 1965, 60% were childless at 25. How many of these women will remain so? The answer has important implications for British society.



Percentages of women born in 1945, 1950, 1955, 1960, and 1965 who were childless at successive ages (England and Wales).⁴ Reproduced with permission

Members of the South Bedfordshire Practitioners' Group are listed at the end of the article.

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