Ethnic influence on health and dependency of elderly inner city residents

ABSTRACT—The objectives of the study were to assess and compare the social characteristics, prevalence of disease, health needs, dependency and use of health services by elderly people in the different ethnic groups living in an inner city. A prevalence study was conducted using a questionnaire administered to people aged 65 years and over living at home, selected from the registers of inner city general practices in West Birmingham. Contact was made with 736 individuals from the original sample of 1,450 names, and completed questionnaires were obtained from 669 individuals (297 men, 372 women). Respondents were divided by place of birth into four groups: UK, Asia, West Indies, and 'Other'. Outcome measures were demographic data, language, household composition, prevalence of disease and health problems, help with activities of daily living, and contact with and knowledge of community health services. We found that those born in the UK were likely to be older, female, unmarried and living alone. In the Asian group, only 15% spoke English and 59% lived in a household with more than three other people compared with 4% in both the UK and West Indian groups. Hypertension was more common in West Indians, arthritis in Asians and diabetes mellitus more common in both groups than in the UK group. Asians were more likely to complain of poor vision. The level of dependency was similar in all groups despite age differences. Contact with community health services was low among Asians who also had a low awareness of the availability of these services.

The conclusions from the study were that the average age of elderly individuals in ethnic minority groups is less than that of the indigenous population, making direct comparison difficult. Nevertheless, they have a higher prevalence of age-related disease and a similar level of dependency. They are less well served by, and have little knowledge of the existence of, community health services. For older Asians, difficulty in communicating with English-speaking health personnel is a major barrier to effective health care. Access to health care by older people from ethnic minorities needs to be improved, and services developed in a more culturally sensitive manner.

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Many inner city areas in the UK are characterised by social deprivation, poverty and poor housing which adversely affect the health of those living within them [1,2]. Deprived populations make greater demands on primary care services [3], and inner city residents also make more use of hospital resources; for instance, they stay longer in hospital compared with those living in suburbs [4].

Another feature of inner cities is the high proportion of ethnic minority groups living there, including many who emigrated to the UK in search of work and are now growing old in their adopted homeland. In the Soho ward in Birmingham they comprise 71% of the population [5]. There are marked differences in the use of health services among ethnic minority groups, especially by Asians who have high general practitioner (GP) consultation rates [6,7] but rarely make use of social services [8,9]. A Birmingham study has identified a higher proportion of health problems among the elderly minority ethnic population [8,9]. Cultural differences in disease patterns have also been inferred from more frequent contact with hospital [10,11]. Younger immigrants suffer higher mortality [12] and morbidity [13] from diseases associated with a western lifestyle, but the evidence for such a link in old age remains circumstantial [14].

The aims of this study were to compare the social and health characteristics of elderly people in the main ethnic groups living in an inner city. We expected to find important differences for language, household composition, patterns of disease and use of services.

Subjects and methods

Subjects aged 65 years or more living within the Birmingham inner city wards of Handsworth, Aston, Ladywood and Soho were selected from 12 general practice lists with a high proportion of patients from ethnic minority groups. All relevant patients were chosen from small practices, while a random sample was taken from the larger group practices. A letter of introduction was sent to each person requesting

participation in the project followed, if necessary, by a maximum of two personal calls. Research nurses from different cultural backgrounds were recruited and trained as interviewers. Because of difficulties in finding nurses with appropriate linguistic skills, much of the interviewing was carried out by one multilingual member (SG) of the research team who speaks Punjabi, Gujerati, Hindi, Urdu and English. This provided a high degree of consistency in data collection.

Each interview followed a structured format with specific responses being completed except for two open-ended questions on illness (present condition or disease suffered?) and medication (present drug use?). The research nurses entered replies as stated, but could ask clinical questions for clarification. Replies were scrutinised by a consultant physician (AESR), and coded into broad categories according to the international classification of diseases. The questions on health problems were listed by severity: for instance, vision was divided into:

- satisfactory with or without spectacles,
- poor,
- the use of other visual aids.

Other information covered language, household structure, mobility, ability to carry out activities of daily living (ADL) and contact with health services. The ADL questions [15] recorded whether respondents were able to carry out each task independently. The level of dependency was determined by the extent of assistance from another person. The need for help with washing, dressing and feeding was classified as high dependence, while help with household activities was designated medium dependence. Ethnic group was determined by place of birth; this is at present a good discriminator in this respect for older people in the UK [14].

Data analysis was carried out using a statistical package for the social sciences (SPSS). A chi-squared test was used to determine whether differences between the UK and ethnic groups in the patients selected were unlikely to be due to chance. The sample should not, however, be regarded as representative of the population of either the wards concerned or of the city as a whole.

Results

Of the 1,450 subjects originally chosen, 39 had been inaccurately identified. The visits revealed that 53 had died, 18 were in institutions, 223 had moved away and 16 were temporarily not at home. No contact was made with 365. Only 67 refused an interview. There were 669 completed questionnaires.

Age, gender, marital status and household size of the respondents are shown in Table 1 and Figures 1 and 2. Of the total group of responders, 365 (55%) were born in the UK (UK group), 148 (22%) in the Indian subcontinent (Asian group) and 91 (14%) in the West Indies (West Indian group). The rest, including 39 subjects born in the Irish Republic, were grouped together as 'Other'. The UK group contained a larger proportion of older unmarried women living alone, Asians were more likely to live in larger households, and over half the West Indians were aged between 65 and 69 years. English was spoken as mother tongue by all in the UK and West Indian groups and 74% of the Other group but by only 1% of the Asian group, 85% of whom were unable to understand English. The main mother tongues of the Asian subjects were Punjabi (70%), Urdu (18%) and Gujerati (7%), and of the Other group, Vietnamese (10%) and Polish (7%).

Self-reported illness varied among the groups, with hypertension commonest in West Indians, arthritis in

Table 1. Age of all subjects in ethnic groups: number (percentage within each group)

Age range (years)	All subjects (%)		UK group (%)		Asian group (%)		West Indian group (%)		Other (%)		p value (%)
No.	669		365		148		91		65		
65–69	232	(35)	88	(24)	69	(47)	50	(55)	25	(39)	<0.0001
70–74	182	(27)	95	(26)	38	(26)	29	(32)	20	(31)	NS
75–79	130	(19)	95	(26)	19	(13)	7	(8)	9	(14)	0.0002
80–84	82	(12)	54	(15)	15	(10)	5	(5)	8	(13)	NS
85+	41	(6)	32	(9)	7	(5)	0		2	(3)	0.0007

Data on age not collected for two subjects

p value = level of significance for the differences between ethnic groups when compared with the hypothesis that the proportions in each age range would be similar for each ethnic group

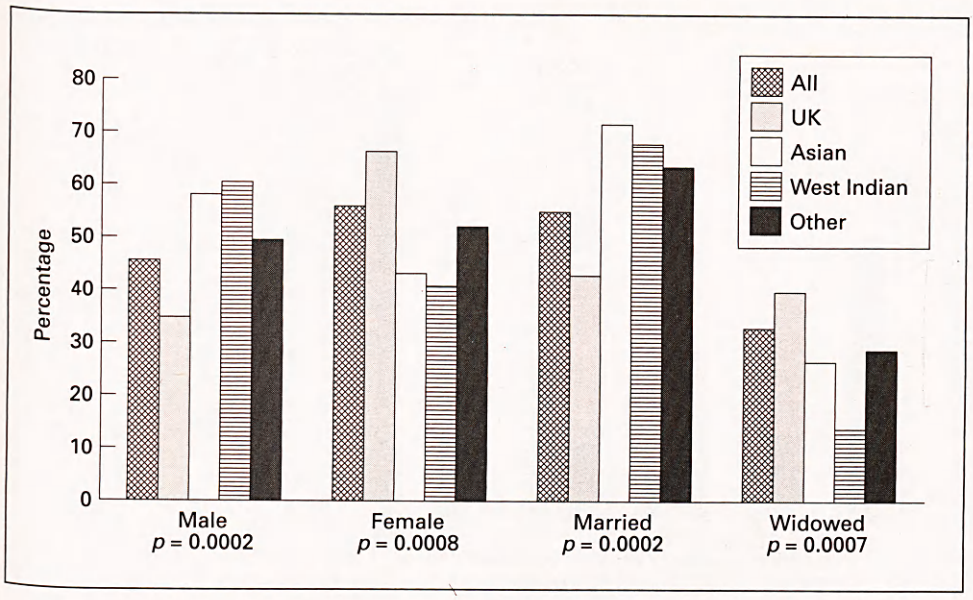

Fig 1. Gender and marital status: percentages in total sample and ethnic groups

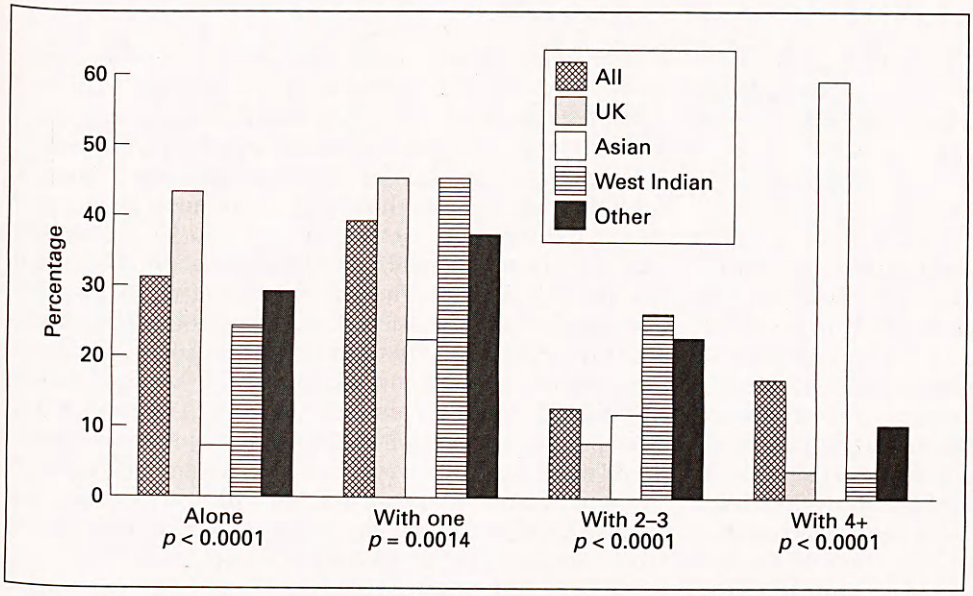

Fig 2. Number of persons in household: percentages in total sample and ethnic groups

Asians and diabetes mellitus in both these groups (Fig 3). Poor vision was reported more frequently in Asians and West Indians: UK 9%, Asian 18%, West Indian 14%, other 2% (p=0.03). Difficulty with hearing (18% of total sample) and use of regular medication (68% of total) showed no significant differences between groups. Assistance with walking using an aid was required by 17% of respondents, while greater help with mobility was needed by only a further 2%. There was little difference between ethnic groups, though more West Indians (89%) could walk unaided. Dependency on others for ADL was present in 42%, with 10% being highly dependent. There were no statistically significant differences between the groups for medium dependency: UK 36%, Asian 32%, West Indian 18%, other 28%; or for high dependency: UK 10%, Asian 10%, West Indian 7%, other 8%. Dependency increases with age, so the older UK group would have been expected to show a higher prevalence of dependence.

Asians were less likely to have made contacts with primary care services in the preceding year, with the exception of the GP service for which consultation rates for all groups were high (Fig 4). Awareness of the existence of all community services was very low among Asians but was similar for the other three groups. The proportions of those who knew of the services in the groups UK, Asian, West Indian and other were: 47%, 13%, 54%, 55% for health visitor; 91%, 30%, 84%, 83% for district nurse; 44%, 5%,

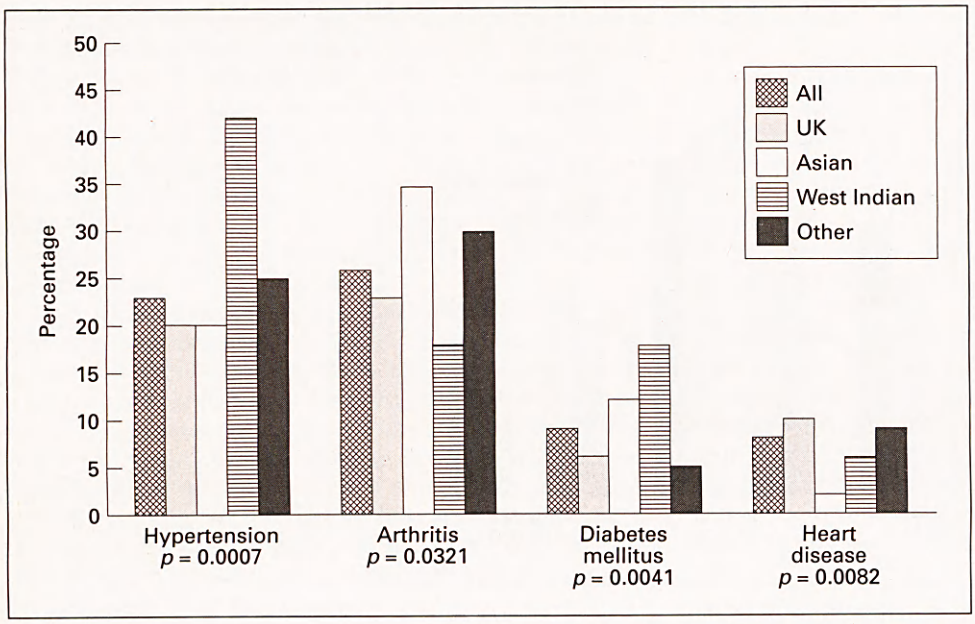

Fig 3. Self-reported illness: percentages in total sample and ethnic groups

66%, 58% for auxiliary nurse; 94%, 10%, 87%, 82% for chiropodist; 80%, 14%, 67%, 70% for physiotherapist; 78%, 13%, 84%, 73% for dietician ($p<0.0001$ in each case).

Discussion

Although pensioners belonging to minority ethnic groups at present constitute only about 4% of the total population in Great Britain there is likely to be a dramatic rise over the next 20 years [16,17]. Comparison of older individuals within minority ethnic groups and the indigenous population is constrained by age differences [8,9]. Although the age structure of all subjects and the UK group in this study corresponded to that of England and Wales [18], Asians and West Indians were mainly in the 65–74 age range, with a preponderance of men.

Household arrangements confirmed higher proportions of Asians and West Indians living in overcrowded households. However, in the same area twice as many were now living with only one other person as five years ago [8], with a corresponding fall in those living in larger households. This may reflect a tendency for older members of the household to move to separate accommodation. Many of those who live alone are isolated from family and friends and rarely have relatives living in Britain [8]. Those born in the UK differed significantly from the elderly population in the UK as a whole only in household structure, with fewer living alone and more in multiple households, reflecting overcrowding in the inner city.

It is possible that the respondents were not representative of the study population since no information could be obtained on 25% of the original sample. The use of general practice registers as a sampling frame has been shown to result in a degree of non-contact due to delays in updating records [19]. Higher non-contact rates have been found in inner city areas because of greater mobility of the population, especially among the Asian community [9,20]. Thus, it is likely that many of those who could not be contacted were not living in the area at the time of the survey. Once contact was made, the level of cooperation from respondents was high. The other source of possible inaccuracy was the use of country of birth for allocation to ethnic groups but, while ethnicity does not correlate well with place of birth for younger individuals [21], the vast majority of current ethnic older people were born outside the UK [11]. Errors due to this were probably small because cross-checking with language and religion revealed only two Asians who spoke English as their mother tongue and one person born in the UK whose faith was Islam.

Ethnic differences were found in the prevalence of self-reported disease, certain health problems and the use and knowledge of community health services, but not in the level of dependence. Self-assessed health may have limitations because of a tendency for under-reporting but is considered sufficiently robust to be used in national surveys such as the General Household Survey. In our study, the vast majority of respondents in all groups had seen their GP within the previous year. Those in the ethnic minority groups were more likely to have experienced difficulties in communication during consultation, and therefore to be less aware of health information.

Any bias would be towards greater under-reporting in these groups in which a higher prevalence of disease was recorded. One-quarter of the respondents accepted the offer of a medical history and examination carried out by two registrars in geriatric medicine

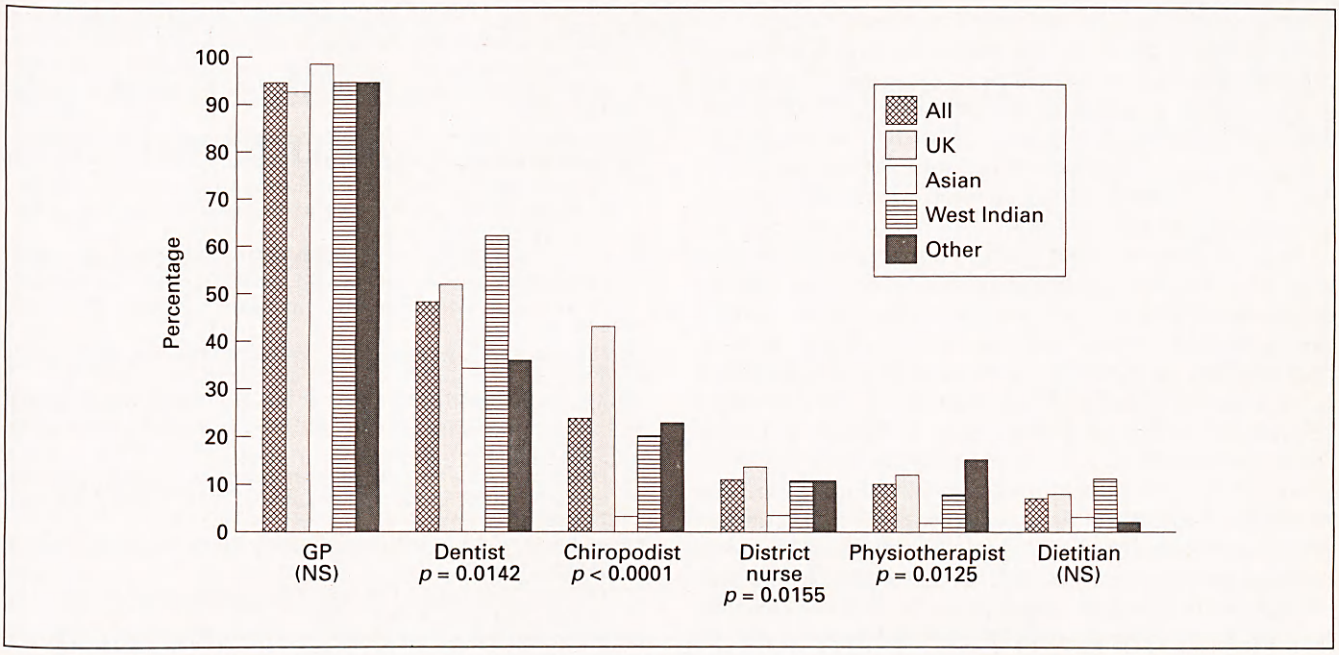

Fig 4. Use of health services: percentages in total sample and ethnic groups (GP = general practitioner, NS = not significant)

with no knowledge of the findings in the questionnaire. The prevalence of disease in this group at examination was almost identical to that obtained for the same individuals from the questionnaire (eg hypertension, 26% compared to 28% in the main study; diabetes mellitus, 10% and 8%; arthritis, 26% and 30%). This suggests that the information received by self reporting was an accurate reflection of disease prevalence within the sample.

Almost half the West Indians suffered from hypertension, reflecting both the high prevalence of this disease in the Caribbean [22] and the rise in blood pressure with age found in western society [23]. Surprisingly, heart disease was less frequently reported in the Asian group, despite the higher mortality [12] and morbidity [13] from ischaemic heart disease among younger Asians in the UK and the fact that older Asians are more likely to be discharged from hospital with this diagnosis [11].

The prevalence of diabetes mellitus (6%) in the UK group is similar to that in the older indigenous population [24,25], while the twofold increase among Asians and West Indians reflects the situation in these groups for all ages in the UK [14]. In a similar survey of self-reported illness in Southall [26], 3–4% of Europeans aged over 65 years were diabetic compared with 8–17% of Asians (depending upon whether or not a correction was made to the age distributions to allow for the time lapse between the census and survey dates).

The higher percentage of Asians and West Indians reporting poor vision confirms the finding of an earlier study in the same area [8]. Ebrahim *et al* [11] found a higher than expected frequency of immigrants among older people discharged from hospital following cataract surgery, and Donaldson and Taylor [21] reported that older Asians had a higher odds ratio for discharge with diagnoses of cataract and glaucoma.

An unexpected finding was the higher prevalence of arthritis reported by Asians at a younger age than those born in the UK. Arthritis is a common cause of disability [27] and may have contributed to the levels of dependency in the Asian group. Similar levels of dependency were found in older Asians in Leicester, with 8% requiring help with bathing [9] (the main activity determining placement in the high dependency group). Although the groups were dissimilar in age, elderly Asians appear to be as disabled as the indigenous population who are a decade older. The only age- and sex-matched study [20] comparing Gujerati Asians and indigenous elders revealed equal levels of disability despite a greater prevalence of disease in Asians, but subjects in this study were younger (over 55 years).

Previous research findings that Asian elders make most use of GP services [9,10,23] were not borne out in our study in which contact was very high for all groups. By contrast, Asians made little use of community health services although they did not enjoy better health. Those born in the UK and West Indies made as much use of these services as their counterparts elsewhere [28]. The low rate of use by Asians may be due to a number of factors, such as lack of awareness of the existence of community services and the language barrier. Although the ability to speak

English is accepted as important in determining access to health care services, the extent to which language restricts such access has not been determined and may not be as great as has been assumed [29]. Furthermore, language proficiency is only one aspect of communication, and all ethnic minority groups have experienced difficulties in communication when accessing medical care [30].

The low rate of use of health care services by Asians may also be due to greater availability of family members. However, this low rate applied to contact with qualified nurses, not just to the bathing service, and relatives are unlikely to possess the skills required for all nursing tasks. A reluctance by GPs to refer because of stereotyped views that the family will cope has been suggested to explain the lack of contact [31]. Badger *et al* [31] have demonstrated that Asian old people were willing to use the community nursing service when its role was explained. Hopkins [30] has emphasised the need to improve access to health care for people from ethnic minorities. To achieve this, the providers of community health services need to develop them in a more culturally sensitive manner. Following the presentation of our results locally, the hospital has improved the service to patients from ethnic minority groups by appointing a cultural liaison nurse.

Acknowledgements

We are grateful to the Inner City Partnership Programme for funding the study, and to the GPs in West Birmingham for access to their practice registers.

References

1 Davey Smith G, Bartley M, Blane D. The Black report on socioeconomic inequalities in health 10 years on. *Br Med J* 1991; **301**:429–32.
2 Tonks A. Fifteen years of deprivation: Britain's inner cities. *Br Med J* 1992;**305**:138.
3 Balarajan R, Yuen P, Machin D. Deprivation and general practitioners' workload. *Br Med J* 1992;**304**:529–34.
4 West Birmingham Health Authority. *Towards better health?* Public Health Report, 1989. Birmingham: West Birmingham Health Authority, 1990.
5 Office of Population Censuses and Surveys. *Population trends: profile of our cities.* London: HMSO, 1982;**30**:21.
6 Gilliam SJ, Jarman B, White P, Law R. Ethnic differences in consultation rates in urban general practice. *Br Med J* 1989; **299**:953–7.
7 Balarajan R, Yuen P, Soni Raleigh V. Ethnic differences in general practitioner consultations. *Br Med J* 1989;**299**:958–60.
8 Bhalla A, Blakemore K. *Elders of the minority ethnic groups.* Nottingham: All Faiths for One Race (AFFOR), 1981.
9 Donaldson LJ. Health and social status of elderly Asians: a community survey. *Br Med J* 1986;**293**:1079–82.
10 Blakemore K. Health and illness among the elderly of minority ethnic groups living in Birmingham. *Health Trends* 1982; **14**:16–72.
11 Ebrahim S, Smith C, Giggs J. Elderly immigrants—a disadvantaged group? *Age Ageing* 1987;**16**:249–55.
12 Balarajan R. Ethnic differences in mortality from ischaemic heart disease and cerebrovascular disease in England and Wales. *Br Med J* 1991;**302**:560–4.
13 Cruickshank JK, Beevers DG, Osbourne VL, Haynes RA, *et al.* Heart attack, stroke, diabetes and hypertension in West Indians, Asians and whites in Birmingham, England. *Br Med J* 1980;**281**:1108.
14 Calman KC. *On the state of the public health 1991.* London: HMSO, 1992.
15 Akhtar AJ, Broe GA, Crombie A, McLean WMR, *et al.* Disability and dependence in the elderly at home. *Age Ageing* 1973;**2**:102–11.
16 Halsey J. The ethnic minority populations of Great Britain: estimates by ethnic group and country of birth. *Population Trends* 1990;**60**:35–8.
17 Ebrahim S, Hillier S. Ethnic minority needs. *Rev Clinic Gerontol* 1991;**1**:195–9.
18 Office of Population Censuses and Surveys. *Annual Abstract of Statistics.* London: HMSO, 1990.
19 Fraser RC. Patient movements and the accuracy of the age–sex register. *J Roy Coll Gen Pract* 1982;**32**:615–22.
20 Ebrahim S, Patel N, Coats M, Greig C, *et al.* Prevalence and severity of morbidity among Gujerati Asian elders: a controlled comparison. *Family Pract* 1991;**8**:57–62.
21 Donaldson LJ, Taylor JB. Patterns of Asian and non-Asian morbidity in hospital. *Br Med J* 1983;**286**:949–51.
22 Grell GAC. Hypertension in the West Indies. *Postgrad Med J* 1983;**59**:616–21.
23 Anon. Hypertension—in black and white. *Lancet* 1992;**339**:28–9.
24 Gatling WG, Houston AC, Hill RD. The prevalence of diabetes mellitus in a typical English community. *J Roy Coll Physicians Lond* 1985;**19**:248–50.
25 Croxson SC, Burden AC, Bodington M, Botha JL. The prevalence of diabetes in elderly people. *Diabetic Med* 1991;**8**:28–31.
26 Mather HM, Keen H. The Southall diabetes survey: prevalence of known diabetes in Asians and Europeans. *Br Med J* 1985;**291**:1081–4.
27 Martin J, Maltzer H, Elliot D. The prevalence of disability among adults. *Surveys of disability in Great Britain. Report 1.* Office of Population Censuses and Surveys. London: HMSO, 1988.
28 Clarke M, Clarke S, Odell A, Jagger S. The elderly at home: health and social status. *Health Trends* 1984;**16**:3–7.
29 Pharoah C. *Primary health care for elderly people from black and minority ethnic communities.* Age Concern Institute of Gerontology. London: HMSO, 1995.
30 Hopkins A. Envoi. In: Hopkins A, Bahl V (eds). *Access to health care for people from black and ethnic minorities.* London: HMSO, 1995.
31 Badger F, Cameron E, Evers H, Atkin K, *et al.* Why don't general practitioners refer their disabled Asian patients to district nurses? *Health Trends* 1989;**21**:31–2.

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