

**Review of needs different ethnic groups (Raj Khanchandani 2001)**

Several comprehensive reviews relating to the health of minority ethnic groups are available (Balarajan R and L. 1990; Health Education Authority 1994; Cruickshank and Beevers, 1989; Smaje, 1995; Kelleher and Hillier 1996). This critique draws heavily on these, with other original research used to highlight pertinent points. An overview is described, including some details of the three largest minority ethnic communities (the S.Asians, the Caribbeans, and the Irish). The reasons for differences between the various groups are discussed.

Literature reveals many differences in health experience among various ethnic groups, but also similarities. The amount of research relating to the individual ethnic groups varies. Most of the research has focused on the S. Asian Community, lesser amounts on the Black Caribbean and Black African Community, and very little on the Chinese Community (Health Education Authority 1994; Smaje 1995; Kelleher and Hillier 1996). Considering the size of the community, there is comparatively little research on the Irish.

Tables 5-6 give the SMRs and number of deaths for the more significant causes of death and morbidity. The age-adjusted prevalence of diabetes is 2 - 4 times higher in Asians compared to non-Asians (Smaje 1995). Perinatal and infant mortality rates are higher than the UK population, particularly among Pakistanis and the Caribbean groups (table 7). This set of data shows the importance of differentiating amongst the various ethnic groups from the Indian sub-continent, because there are significant differences between the Pakistanis, Indians and the Bangladeshis.

The data also indicate the importance of identifying diseases that cause the highest number of deaths, and not just those that have a high relative mortality in ethnic groups. Table 8 shows ranking by SMR and by number of deaths for diseases. Many diseases (such as TB and suicide) have much higher SMRs than cardiovascular disease or cancers, which are responsible for many more deaths. Cardiovascular disease and cancers account for 55% of all deaths in males and 63.8% of all female deaths of the total UK population (Ballard and V. 1993) showing that these diseases

should receive priority for all groups in the UK. However, for some minority ethnic groups other causes of mortality (in terms of numbers of deaths) are important: diabetes among S.Asians, Obstructive Airway disease in the Irish, and suicide among several groups. TB, which ranks number 1 among all the ethnic groups when ranked by SMR, accounted for a total of only 331 deaths, a fraction of the deaths caused by cardiovascular disease and cancers.

When formulating policy, PCGs may wish to direct their major resources toward reducing mortality for the whole population, and formulating specific policies for specific minority ethnic groups who have their particular needs.

### **The particular needs of the S.Asian community**

Peoples of the Indian subcontinent have higher incidences of ischaemic heart disease (IHD), diabetes, thalassemia, vitamin D deficiency and tuberculosis (Cruickshank 1989; Hawthorne 1994). Their mortality from IHD is 36-46% higher, the first myocardial infarcts occur at an earlier age, and myocardial damage after infarcts is greater, when compared to whites (Cruickshank 1989).

A study in Leicester showed that elderly Asian Gujaratis were more likely to have poor vision than whites (40.9% and 20.5%), more diabetes (20.1% and 6.1%), and significantly more psychosomatic symptoms (Lindsay, Jagger et al. 1997). The Asians in this study were significantly more likely to be dependant in 6 out of the 14 Activities of Daily Living, which included requiring help with toileting, getting in and out of bed, feeding, and mobility around the house (Lindsay, Jagger et al. 1997).

The uptake of antenatal care is lower amongst S.Asian women (Hawthorne 1994). In Leicester only 64% of Asian mothers had five months of antenatal care compared to 80% of non-Asians. The HEA survey revealed much lower rates of breast screening in the S.Asian communities (table 9) (Health Education Authority 1994). Breast feeding rates are lower in the S.Asian community, and duration of breast-feeding is shorter (Webb 1996). However, it must be noted that when data is collected appropriately, significant differences are uncovered between the Indian, Pakistani and Bangladeshi communities (Health Education Authority 1994)

*Table 5 Mortality (number of deaths) for important diseases by ethnic origin (Balarajan R and L. 1990; Balarajan and Bulusu 1990; Smaje 1995)*

<b>Number of death</b>	<b>CHD</b>	<b>Vasc. Disease</b>	<b>Diab. Age 20-69</b>	<b>All Cancers</b>	<b>Ca. Breast</b>	<b>Ca Cervix</b>	<b>Obst Air Disease- Age 20-69</b>	<b>TB - Age 20-69</b>	<b>Suicide</b>
All Ireland									
M	6225	1175	93	5323	-	-	783	123	331
F	2023	922	47	4071	934	201	332	30	197
Indian Subcont.									
M	3410	645	148	1183	-	-	161	75	149
F	798	347	93	939	267	52	70	74	84
Carribb C.wealth									
M	669	417	82	744			58	19	84
F	214	316	71	590	191	55	44	5	30
African C.wealth									
M	400	103	20	219			22	17	94
F	62	58	8	195	52	7	12	8	32

*Table 6 Standardised mortality ratios for important diseases by ethnic origin (Balarajan R and L. 1990; Balarajan and Bulusu 1990; Smaje 1995)*

<b>SMRs</b>	<b>All Cause</b>	<b>CHD</b>	<b>CVS Disease</b>	<b>Diab.Age 20-69</b>	<b>All Cancer</b>	<b>Ca. Breast</b>	<b>Ca. Cervix</b>	<b>Obstruc Airway Disease</b>	<b>TB</b>	<b>Suicide</b>
All Ireland										
M	128	114	123	92	123	-		150	330	126
F	120	120	117	55	113	100	115	149	164	130
Indian Subcnt										
M	106	136	153	297	59	-		74	400	71
F	105	146	125	103	68	71	66	88	1009	103
Caribb Cwlth										
M	79	45	176	82	65	-		48	175	80
F	105	76	210	71	71	78	112	99	112	59
African Cwlth										
M	109	113	163	20	71	-		73	516	122
F	105	97	139	8	83	77	38	94	557	126

*Table 7 Infant and Perinatal Mortality rates and numbers by ethnic group (Balarajan R and L. 1990; Balarajan and Bulusu 1990; Smaje 1995)*

Ethnic Group (by place of Birth)	Infant Mortality		Perinatal Mortality	
	Rate per 1,000 live births	Number	Rates per 1,000 births	Number
UK	9.7	21,515	10.1	22503
Eire	10.1	269	10.4	279
India	10.1	459	12.5	576
Bangladesh	9.3	145	14.3	225
Pakistan	16.6	892	18.8	1022
Caribbean	12.9	274	13.4	288
East Africa	9.3	255	12.8	351
West Africa	11.0	128	12.7	149

*Table 8 Ranking of causes of mortality by SMR and Number of deaths.*

	Ranking by SMR	Ranking by No.of deaths
All Ireland	TB Obst.Airway Suicide CVS Cancers Diabetes	CVS Cancers Obst.Airways Suicide TB Diabetes
Indian Subcontinent	TB Diabetes CVS Suicide Obst.Airway Cancers	CVS Cancers Diabetes Suicide TB Obst.Airways
Caribbean Commonwealth	TB Cvs Diabetes Obst.Airway Suicide Cancers	CVS Cancers Diabetes Suicide Obst.Airway TB
African Commonwealth	TB Suicide CVS Obst.Airway Cancers Diabetes	CVS Cancers Suicide Obst.Airways Diabetes TB

*Table 9 Breast screening rates by ethnic origin (%)*  
(Health Education Authority 1994)

	All	16-29	30-49	50-74
<b>UK population</b>	21	3	16	41
<b>African-Caribb</b>	14	5	12	31
<b>Indian</b>	7	6	5	14
<b>Pakistani</b>	7	3	8	18
<b>Bangladeshi</b>	4	1	5	14

The health experience of S.Asians is often worse. Asian food in hospitals is often disliked, and translated material is unsuitable (Hawthorne 1994). From the onset of symptoms of IHD, Asians wait longer for referral to cardiology clinics in Leicester (Shaukat, de Bono et al. 1993), pointing to problems in primary care or in the community. In Leicester 49% Asians received thrombolysis after myocardial infarctions compared to 80% of Whites. This was mainly due to later presentation at the hospital (Lear, Lawrence et al. 1994), again pointing to problems in primary care. In this survey 49% of Asians with myocardial infarcts were found to be diabetic.

Of patients attending a diabetic clinic in Nottingham, 44% of Asians thought they waited more than two hours compared to 26 % of British patients (Hawthorne 1990). In a study in Birmingham, Asian patients had to wait significantly longer to be taken from the A&E department to the coronary care unit (117minute for Asians and 84 minutes for whites,  $p < 0.001$ ), the delay being unconnected to the severity of the MI (Lear, Lawrence et al. 1994).

Suicide rates amongst Indian and Pakistani women are higher compared to Whites, but admissions for depression are not higher (Ananthanarayanan 1994). Asians show lower levels of psychological symptoms (Cochrane and Stopes-Roe 1997). However, there is evidence that standard assessments (such as the General Health Questionnaire) may underestimate the incidence of depression in S.Asians (Williams, Eley et al. 1997), and methods that elicit more psychosomatic symptoms may reveal higher incidences of depression (Williams, Eley et al. 1997). General practitioners, even those originating from the Indian subcontinent, under diagnose depression (Jacob, Bhugra et al. 1998) and general practitioners prescribe lower doses of amitriptyline to S.Asian patients as well as shorter duration of antidepressants (Cornwell 1997).

Although S.Asian patients have higher GP consultation rates, they do not have higher outpatient attendances (Lindsay, Jagger et al. 1997; Smaje and Le Grand 1997). Indeed, the

overall OPD attendance is much lower in Indians, Pakistanis and Bangladeshis compared to Whites (standardized ratios 0.62, 0.67, and 0.54 respectively) (Smaje and Le Grand 1997). This may be due to lower referral rates. Elderly Gujaratis in Leicester are less knowledgeable than Whites with regards to social services, chiropody, district nurses and CPNs, and more of them are unsuccessful in their applications for these services (Lindsay, Jagger et al. 1997). A study of knowledge of, and attitudes about asthma in Luton shows significant differences between Asians and whites (Lomax, Berry et al. 1999).

In the HEA survey almost all the S.Asians surveyed were registered with a GP, and over 80% are registered with S.Asian GPs. Apart from young Indian men, the majority of all groups use an Asian language to communicate with their GP. Although the GP remains the predominant person of contact at the practice for all patients, the S.Asians are less likely to see a nurse. Members of the S.Asian community find access to their practice more difficult and wait significantly longer to see their GP than other groups (partly explained by many more of them attending 'open' surgeries as opposed appointment surgeries). The per cent of men who discussed health education with a practice staff member in the previous 12 months was the same in all groups, but the figure was far lower for women from the S.Asian communities than for the Caribbeans and the total UK population.

Needs of the S.Asian community range across many specialties, including cardiology, psychiatry, diabetes, medicine for the elderly and preventative medicine. There is a shortfall in the availability of services, the appropriateness of the service, the delivery of quality services, and a shortfall in the community's ability to access services. It is noteworthy that many significant deficiencies have been highlighted in primary care, and in community care.

### **The Irish community**

The Irish comprise 2% of the UK population and are the largest ethnic group in the UK (Office of Population Censuses Surveys 1993). The Irish have the highest SMR of any community in the UK, 128 for males, and 120 for females (Wild and P. 1997; Balarajan R and L. 1990). They have high SMRs for cardio-vascular disease, cancers and obstructive airways disease (tables 5-6). Generally the Irish consult GPs less frequently than the average, but for more serious illnesses they are likely to consult more often. The Irish have the highest admission rates to hospital. After people from the Caribbean, the Irish have the highest incidence of schizophrenia (table 10). The incidence of other mental illnesses, such as

depression, is also high amongst the Irish community. Overall, the Irish are more likely to be admitted to hospital for a mental illness than any other ethnic group (table 10) (Kelleher and Hillier 1996; Smaje 1995)

*Table 10 Age-standardised rates of admission to mental hospitals by selected place of birth, age 16+, 1981 (Smaje 1995)*

Standardised admission Rate for all diagnosis Per 100,000 population				Standardised admission rate for schizophrenia & paranoia per 100,000	
<i>Place of birth</i>	Male	Female	All	Male	Female
England	418	583	504	81	74
Northern Ireland	793	880	838	-	-
Eire	1,054	1,102	1,080	-	-
All Ireland	-	-	-	191	162
Caribbean	565	532	548	278	181
India	317	326	321	77	82
Pakistan/Bangladesh*	259	233	245	105	31

\* All diagnoses figures refer to Pakistanis only

The high mortality and morbidity rates persist even after inclusion of second generation Irish (Harding and Balarajan 1996). Indeed, in this study of over 6000 people SMRs were highest in the youngest age groups – in the 15 – 44 year old group male SMR was 145, and female 164, and for the 65 – 74 year old group the respective figures are 119 and 112.

As part of the “West of Scotland Twenty-07 Study; Health in the Community”, a Glasgow study of over 15 year olds of Irish descent examined numerous aspects of physical health (e.g. self-assessed health, accidents), psychological distress (e.g. depression and anxiety), physical impairments (e.g. hearing and sight), and physical measurements (e.g. lung function, BMI, blood pressure). After adjusting for sex and social class, for the majority of many variables, people of Irish descent had worse health than controls. This ranged across physical, psychological health and physical impairments (Abbotts, Williams et al. 1997). Of some debate is the method by which the Irish population was identified. In this study being Catholic or having one parent who was Catholic was equated with Irish descent. The authors maintain that in Glasgow this has a sensitivity of 68-79% and specificity of 91%, and that many people of Irish descent, when asked to self-assign ethnicity, choose Scots or English.

Many areas of health promotion and health service utilisation remain un-researched among the Irish. For instance the HEA survey does not include the Irish (Health Education Authority 1994). Bush and William note, “almost nothing in the literature addresses the diet and nutrition of the Irish in Britain” (Bush, Williams et al. 1999).

## **The Black Caribbean Community**

The Caribbean Community has a high SMR for cerebro-vascular disease (CVD) and increased perinatal and infant mortalities. For other major cause of death, such as coronary heart disease, and cancer, they have low SMRs (Tables 5-6). The overall SMR in men is low at 90, whereas in females it is higher at 114. The high mortality from CVD is shared by the African population (Table 6).

The importance of sickle disorders in this community is discussed separately above in chapter three.

The Caribbean Community does have a higher rate of admission for mental illness than for the population of England as a whole, but it is only 9% greater (Table 10). However, the admissions for schizophrenia and paranoia are three times higher in Caribbean men and two times higher in Caribbean women. Caribbean patients are more likely to be detained compulsorily under the Mental Health Act, more likely to be detained in secure units, and are more likely to receive major tranquillisers and electro-convulsive therapy (Smaje 1995).

The prevalence of hypertension in Blacks in the USA is up to four times higher than Whites (Davidson and Saunders 1989). However, studies in the UK have not confirmed this (Cruickshank 1989). Furthermore, even amongst American Blacks, mortality and event rates for any given BP values are no different in Blacks compared to Whites. Thus the high incidence of CVD in Blacks cannot be accounted for by hypertension (Cruickshank 1989). There is evidence that beta-blockers and ACE inhibitors are less effective in lowering blood pressure in Blacks (Cruickshank 1989).

## **Overview of Luton PCG**

The population of Luton at the 1991 census was 171,670, but has certainly grown since then (HAZ baseline report). Luton is ethnically mixed, with concentration of ethnic minorities in the five central wards, which are areas of the highest deprivation and the highest mortality (Table 11 and 12).

Audits have revealed a high prevalence of diabetes in central Luton. For instance, in the author's practice (based in central Luton) the prevalence of diabetes is 4.3%. However, lack

of ethnicity data is hindering policy development - the Health Improvement Programme (HIImP) proposes the employment of a community linkworker to help improve diabetes care among South Asian patients, but since it is not known how many diabetics in Luton are from the Indian sub-continent, it is difficult to know whether one linkworker will be sufficient to meet the needs of this community. Similar difficulties are arising in planning mental health services, and the employment of linkworkers more generally.

There is evidence of low uptake of services by some minority ethnic groups, for instance in the case of S.Asians and cardiac rehabilitation. The high admission rates for schizophrenia among Caribbeans follows the national trend. Anecdotal evidence suggests there is a large unidentified Irish community in Luton, but I am not aware of any moves to encourage its members to seek more health promotion. This is an urgent priority for a community with the highest SMR in the UK.

*Table 11. Ethnicity data from 1991 census for whole of Luton, and 5 central wards.*

	<b>White</b>	<b>Black Caribbean</b>	<b>Black African</b>	<b>Black Other</b>	<b>Indian</b>	<b>Pakistani</b>	<b>Bangladeshi</b>	<b>Chinese</b>	<b>Asian-Other</b>	<b>Remain.</b>	<b>Total</b>
<b>Whole of Luton (n)</b>	137,696	6,249	582	1,464	7,223	10,660	4,695	645	928	1,610	171670
<b>Whole of Luton (%)</b>	80.20	3.64	0.34	0.85	4.20	6.21	2.73	0.37	0.54	0.94	100
<b>5 central wards (n)</b>	33,803	1,892	223	399	1,935	6,743	3,830	152	374	550	49901
<b>5 central wards (%)</b>	67.74	3.79	0.47	0.80	3.88	13.51	7.67	0.30	0.75	1.1	100

*Table 12 Deprivation and some morbidity and mortality rates for Luton (HAZ report)*

	<b>Luton</b>	<b>5 central Luton Wards</b>
<b>Crude CHD mortality RATE/ 10,000 POP</b>	16.03	18.04
<b>Cerebrovascular Disease mortality RATE /10,000 POP</b>	7.08	9.74
<b>Respiratory Disease (incl asthma) mortality RATE/10,000 POP</b>	14.44	17.5
<b>Diabetes mortality RATE/10,000 POP</b>	0.99	1.26
<b>Birth weight &lt;2500g RATE/100 live births</b>	8.7 (Bedfordshire 7.3)	Not available
<b>Jarman Scores</b>	19.25	Range from 21-46
<b>Income support claimants per 1000 of population</b>	23.98	37.72

## **Reasons for differences between ethnic groups**

In this section I will present general reasons for the observed differences between ethnic groups, including discussions relating to individual ethnic groups where appropriate.

Explanations for ethnic mortality and morbidity patterns can be usefully categorised into the following (Senior M 1997; Smaje 1995):

- Genetic and biological factors
- Individual behaviour and cultural factors
- Socio-economic/structural factors
- Social selection
- Migration
- Racism
- Unequal treatment by the health services
- Artefact

There is a detailed discussion of the importance of socio-economic factors and its relationship to possible cultural factors and racism in chapter five.

Some of these above factors may of course be inter-related – racism may lead to unemployment and thus poor socio-economic status. Cultural factors may influence individual choice of diet. The above categories could be broadly grouped under the banner ‘genetic’ and ‘environmental’. The relative importance of these has been examined by many authors (Smaje 1995; Modood and Berthoud, 1998, Cruickshank, 1989, 1996, Hawthorne, 1994, Health Education Authority, 1994, Henderson, 1993, Dyson, 1998; Kelleher and Hillier 1996; Harding and Balarajan 1996; Wild and P. 1997) It is acknowledged that some diseases, such as the haemoglobinopathies, have a genetic basis (Dyson 1998), but on the major causes of death (such as CHD), the evidence for the relative importance of genetic versus environmental factors is not yet clear. Many notable authors are emphatic in their assertion that environmental factors (particularly socio-economic status) all but account for the variations between various ethnic groups (Bhopal 1997; Modood 1998), but other authors point out that socio-economic status

does not totally account for differences seen between groups (Williams 1996). I will discuss these matters as they apply in general to all ethnic groups, but also to devote some time to matters relating to individual ethnic groups (much of which will focus on the S.Asian community who have been the most researched in this country). The role of acculturation (and of course, therefore, of culture) in the changing pattern of diseases among ethnic groups will be discussed. It is noteworthy how little research there is on the effects of racism, and the delivery and utilisation of health.

Comparing two cultures can be difficult because of the existence many variables, including differences in genetic make-up. The study of acculturation of one ethnic group effectively allows us to use the same peoples as controls, thus controlling for genetic variations. One of the first pieces of research in this area was a series of studies by Syme and his colleagues (Syme S L 1975). They studied the epidemiology of CHD and strokes among Japanese men living in Japan, Hawaii and California. They found that there was a gradient of mortality for CHD from Japan-Hawaii-California, with the lowest rates in Japan; there was a reverse gradient for strokes, with the highest rates being in Japan. They found higher mean serum lipid levels, higher post-load glucose levels, and higher blood pressures among the Japanese-Americans. These results are often quoted as showing that immigrants' patterns of mortality eventually mirror that of the host community (Smaje 1995), thus refuting any genetic or ethnic factors in the aetiology of disease. In fact these studies emphasised the importance of changes in lifestyles, such as diet, among the Japanese-Americans, showing that ethnic factors to be relevant. In another study Syme and Marmot found that although the different prevalence rates of IHD could not be explained by variations in common risk factors, there did appear to be a link between the degree of acculturation (from Japanese culture) and prevalence of IHD in the three groups of Japanese (Marmot M G and L. 1976). However, when this study was repeated, it was found that the degree of acculturation was directly linked to the *prevalence* of coronary heart disease but not to the *incidence* of coronary heart disease (Reed D 1982). This is crucial, because case finding was more complete when measuring incidence rather than prevalence, and the former is therefore more likely to be accurate. However, acculturation was linked to the occurrence of risk factors. These studies of

Japanese populations do not conclusively establish the link between acculturation and patterns of disease incidence.

Hazuda et al noted the greater importance of acculturation rather than socio-economic status in determining the incidence of diabetes and obesity among Mexican-Americans (Hazuda, Stern et al. 1988). This study is discussed in more detail in chapter five (section titled 'Relative importance of Socio-economic and ethnicity in health'). However, this pattern of change in mortality among succeeding generation of migrants has not been shown in all ethnic groups. In fact among the Irish in the UK, SMRs are higher in the 2<sup>nd</sup> generation Irish than the 1<sup>st</sup> generation (see above) (Harding and Balarajan 1996).

Some diseases, such as sickle cell disorders and thalassaemia are genetically inherited. Insulin resistance, is also genetically based, although there is disagreement on the degree to which it accounts for some of the high mortality from IHD in S.Asians (McKeigue, Ferrie et al. 1993; McKeigue, Ferrie et al. 1993; Smaje 1995). The higher incidence of congenital abnormalities in Pakistanis may be due to high rates of consanguinity in that community (Smaje 1995; Webb 1996; Webb 1996), and this can have significant implications for health authorities – in 1996 there were 130 congenitally handicapped children in Glamorgan, a county with average number of ethnic minorities (Webb 1996). The high incidence of diabetes in S.Asians and Caribbeans also probably has a genetic basis (Smaje 1995). There is considerable debate as to the role of genetics versus environment, which may be partly resolved after mapping of human genes. However, a genetic predisposition to a disease may still require interaction with the environment for the appearance of the disease (Senior M 1997; Smaje 1995; Senior and Viveash 1997).

Theories of migration and social selection are linked, although they are sometimes contradictory, and do not allow us to reach easy conclusions. On the one hand positive selection is postulated to explain the better mortality of some migrants compared to their compatriots in the host country (Marmot M G, M. et al. 1984), and on the other negative selection is postulated to explain the higher mortality in the Irish (Harding and Balarajan 1996). Williams' study, comparing Punjabis in Glasgow with their counterparts in north

India, refuted the positive selection hypothesis, after using several measures of health (including measurement of blood pressure, lung function and body structure) and the administration of standardised questionnaires (Williams, Eley et al. 1997). The study also showed that stress did not promote ill health in recent migrants, but on the contrary, long established residents had the worst health (Connolly, Salmon et al. 1993). Smaje summarises other literature supporting the notion of 'migration stress', leading to stress and increased mental illness, particularly for migrants from the Third World to the West (Smaje 1995).

Individual behaviour and cultural factors may play an important role. Standardised data from one study, in which ethnicity was assigned by place of birth, showed that smoking and drinking rates vary enormously between different communities (table 13) (Balarajan R 1986). The use of one category 'Indian subcontinent' hides the differences between Indians, Pakistanis and Bangladeshis (table 14) (Health Education Authority 1994). The HEA survey shows that smoking rates for all S.Asian women are very low, but among men, the Bangladeshis have much higher smoking rates than the UK population, the Pakistanis have equivalent rates, and the Indians have much lower rates. The figures shown are standardised for age, but not for social class. Standardisation against the latter would bring the Bangladeshi men closer to the total UK group. Smoking rates amongst the Caribbeans are shown to be lower in both of these studies, and in Balarajan's study, their drinking rates are also low. Some caution needs to be exercised in interpreting these figures because these are self-reported and may thus be underestimates – a survey in 1978 by the Office of Population Censuses reported drinking rates in the UK which were 40% lower than the amount of alcohol sold, as reported by Customs and Excise (Harrison L, M. et al. 1997).

The finding of higher drinking and smoking rates among those born in Ireland has been described by other authors (Harrison L, M. et al. 1997). Mullen et al reviewed drinking and smoking habits among the Irish and conclude "there is little evidence of high average levels of drinking and smoking among the Irish in the Irish Republic." In their study of Irish descendents in the West of Scotland they found, taking into account social class, no

statistically significant differences in smoking and alcohol consumption between Scots of Irish descent and other Scots (Mullen K 1996). Abbots et al, on the other hand, in a much larger study of men, found significantly higher rates of smoking and drinking in the Irish (Abbots J 1999). In both of these studies 'Irish' were identified by name, and this would have excluded children of from mixed Protestant-Catholic marriages with a Catholic mother and Protestant father (the children thus acquiring a Protestant non-Irish name). There is also evidence of much higher rates of drinking amongst second-generation Irish migrants in England and Wales as well as the USA (Harrison L, M. et al. 1997; Mullen K 1996).

*Table 13 Standardised drinking and smoking rates for males by country of birth (Balaraman R 1986)*

Country of birth	Standardised Drinking Rates ^	Standardised Smoking Rates *
England	103	100
Scotland	103	121
Wales	113	102
Ireland (all)	131	123
Indian subcontinent	45	38
West Indies	52	46
Rest of the world	74	99

^ Standardised for age and socio-economic group with Great Britain as standard for heavy drinking ( $\geq 36$  units of alcohol per week).

\* Standardised for age and socio-economic group with Great Britain as standard for heavy smoking ( $\geq 20$  per day).

*Table 14 Percent of current smokers, standardised for age, but not social class (Health Education Authority 1994)*

	African-Caribbean	Indian	Pakistani	Bangladeshi	UK Population
All	22	10	16	22	28
Men	29	20	30	42	29
Women	17	1	2	5	27

The data on smoking and drinking thus reveals differences amongst peoples from S.Asia, low levels of smoking and drinking amongst the Caribbeans, and a complex picture amongst the Irish. Compared to British-born men the Irish born men do show high levels of hospital admission related to alcohol consumption (Harrison L, M. et al. 1997). A

higher admission rate amongst S.Asian men is perhaps more surprising in view of their low consumption of alcohol, but this may be an indication of the unreliability of self-reported drinking habits (Harrison L, M. et al. 1997), or large amounts of drinking in certain section of the S.Asian population - for instance the few Muslim who do drink consume more than all other S.Asian men (Cochrane and Bal 1990).

Members of the S.Asian community are much less likely than the general population to take part in health enhancing activity. The Caribbean community is more likely to do so than the S.Asian community, although less likely than the general population (table 15) Differences within the S.Asian community are again apparent, with the Pakistanis faring better than the Bangladeshis and the Indians faring better than both (Health Education Authority 1994).

*Table 15 Health enhancing activity by ethnic origin (Health Education Authority 1994)*

	Any activity %	General physical activity %	Diet %
UK population	62	22	18
Caribbeans	55	10	8
Indian	46	12	11
Pakistani	41	8	8
Bangladeshi	37	5	7

Health perception as reported in the HEA survey shows that members of minority ethnic groups are less likely to report life-style factors, such as smoking and exercise, as risk factors to health, and more likely to report psych-social and environmental factors (table 16) (Health Education Authority 1994). There appears to be no comparable research on the Irish community in the UK. Studies in Ireland on attitude to diets show that women are more likely to view dietary fat as a threat, and high fibre intake as being good for health, than men. Men who thought fat was bad for health ate fewer sausages and chips, but more dairy products and beef (i.e. misunderstood the message). In the Kilkenny Health Project, study of attitudes revealed that people did not believe CHD was a major health problem, and there was a lack of belief that CHD could be preventable (Bush, Williams et al. 1999). It is not known if the Irish in Britain have the same beliefs. This gender differences is seen in other groups: per cent of females and males taking part in

health enhancing activities are 35 and 52 for Indians, 30 and 46 for Pakistanis, 31 and 43 for Bangladeshis, 51 and 56 for Afro-Caribbeans, and 61 and 63 for the whole UK population (Health Education Authority 1994). The gender differences are largest in the S.Asian communities.

*Table 16 Per cent reporting knowledge of risk factors (Health Education Authority 1994)*

	African-Caribbean	Indian	Pakistani	Bangladeshi	UK population
Smoking	18	16	13	7	24
Diet	12	3	6	6	18
Exercise	10	11	12	11	15
Alcohol	9	5	5	2	NA
Stress at home	14	12	16	17	9
Unemployment	15	9	11	13	6
Violent crime in neighbourhood	15	14	13	17	6
Quality of housing	8	5	11	26	2
Racism	5	6	7	7	1

Investigation of conventional risk factors for cardiovascular disease in Asians in northwest London (identified by name), and adults of Indian descent in Trinidad (identified by grandparental origins) have failed to explain their higher mortality from CHD (McKeigue, Adelstein et al. 1985; McKeigue, Adelstein et al. 1985; Beckles, Kirkwood et al. 1986). Asians were found to consume less saturated fat and more polyunsaturated fats and fibre, had similar cholesterol and HDL levels as non-Asians, and smoked less (McKeigue P M, M. et al. 1985; McKeigue, Adelstein et al. 1985). There were similar findings in the Trinidad study where, in addition, controlling for systolic blood pressure and fasting blood sugar did not explain the excess mortality in the Indians (Beckles G L A 1986). Even controlling for diabetes made little difference to the general pattern of mortality. The prevalence of diabetes is similar in Asians surviving MIs and controls, but levels of insulin and C-peptide are high in patients compared to controls, both among Asians and Whites surviving MIs (and higher among all Asians than in

whites). The latter thus appear to be more closely related to the prevalence of IHD than glucose tolerance status (Hughes L, J. et al. 1989). Controlling for glucose intolerance and hyperinsulinemia reduced the odds ratio for IHD in S.Asians in Southall, London, from 2.4 to 1.5, supporting the hypothesis that insulin resistance plays an important role in the aetiology of CHD (McKeigue, Ferrie et al. 1993). These insulin related findings are the only physiological differences to have emerged that may help explain the excess mortality in Asians from IHD.

There has been criticism of research purporting to study 'Indians', 'Asians' or 'S.Asians', because each of these terms describes a heterogeneous population (Senior P A and R. 1994); S.Asians and Asians could include Indians, Pakistanis and Bangladeshis, and the Indian population itself includes, for instance, Punjabis and Gujaratis who have very different diets. Generalisability to all S.Asian communities from studies using such terms is difficult because the exact ethnic composition of the population is unknown. At the time of these studies, before the 1991 census, there was no general consensus on how the S.Asian population should be described, perhaps explaining the variety of terms used. However, the studies described above are located in discrete localities whose major S.Asian composition is known – Punjabis predominate in Southall, location of one of McKeigue's study (McKeigue, Ferrie et al. 1993), and Gujaratis predominate in northwest London, the location of other studies (McKeigue, Adelstein et al. 1985; Hughes L, J. et al. 1989).

A study into possible causes of excess mortality among men of Irish descent (identified by name) in the West of Scotland investigated the effect of various socio-economic indicators (e.g. occupation, education level), health related behaviour (smoking, and alcohol consumption), and physiological variables (e.g. blood pressure, serum cholesterol, BMI). Differences in socio-economic indicators accounted for about one third of the excess mortality, and smoking was able to explain only a small excess in mortality; but a substantial excess mortality remained unaccounted for by established risk factors (Abbotts, Williams et al. 1999).

Language problems in S.Asian community are often emphasised, but the situation may be changing. Although only 32% of Indians, 24% of Pakistanis and 10% of Bangladeshis report that English is their main spoken language, among the 16-29 year olds the corresponding figures are much larger, being 51%, 37% and 14%. Per cent who can speak English, even if it is not the main spoken language, are even larger: 85% for Indians, 72% for Pakistanis, and 59% for Bangladeshis, and among the 16-29 year olds the figures are slightly greater (similar numbers report that they can read English) (Health Education Authority 1994). However, other studies and surveys of the S.Asian community report communication problems. A survey in Blackburn revealed that 52% of Asians had communication difficulties with hospital services, but only 12.5% had difficulties with general practitioners, the majority of whom were Asians themselves (Hawthorne 1994). 45% of the predominantly Pakistani Muslims in Nottingham could not read the letters sent to them by post. In the same study the Muslims' knowledge of diabetes and management skills was significantly poorer (Hawthorne 1990). Translated information may lose some of its meaning (Hawthorne 1994; Saini and Rowling 1997), may be culturally inappropriate (Saini and Rowling 1997), and it may be in a language which is in too high a "register" for the target population (Saini and Rowling 1997). The Health Education Authority has been criticised for not providing the information needed by ethnic minorities (Hawthorne 1994), and the Secretary of Health has announced that it does not adequately meet the equalities agenda (news report, Radio 4). In any case illiteracy is a barrier to the effectiveness of written information: in the Blackburn survey 26% of Punjabis were illiterate (Hawthorne 1994), and 27% of elderly Gujaratis were illiterate in Leicester (Lindsay, Jagger et al. 1997). The HEA survey reveals a gender difference particularly in the 50-74 year old group: among women 25% of Indians, 68% of Pakistanis, and 52% of Bangladeshi were unable to read any language, whereas the corresponding figures for men are much lower at 6%, 16% and 19% (Health Education Authority 1994).

Cultural taboos have some effect on the uptake of some health services by the S.Asian community, for instance with the uptake of mammography services (table 9) (Hawthorne 1994; Health Education Authority 1994). This has also been shown true of Luton

(Henderson 1993). However, it has been persuasively argued that cultural differences have been exaggerated as determiners of health utilization services (Pearson 1989; Henderson 1993; Hawthorne 1994). Cultural norms, and conceptualisation of disease may well affect health (Pearson 1989; Jacob, Bhugra et al. 1998), but these need not be bars to providing good health care. Administrative matters, racism and other practical matters may be more significant.

Staff do not always explain adequately the need for screening or follow-up (Hawthorne 1994), and Asian's knowledge of services is often poor (Lindsay, Jagger et al. 1997). Pearson cogently describes the nature of direct and indirect (or institutionalised) racism in the NHS. She cites many examples: discrimination in recruitment to medical schools, the inferior positions held by ethnic minority staff in the NHS, lack of good variety of meals, and dietary advice only available in terms of English foods. Some changes are occurring in these areas, but, as Pearson points out, it can take years of pressure and effort to induce change. She aptly summarizes (Pearson 1989):

A closer look behind the veneer of the NHS reveals a web of policies, procedures, and individual attitudes which result in "less favourable treatment" for ethnic minorities.

Thomas points out that nurses and midwives are failing to meet the needs of ethnic minority groups. Their training may be imparting racial stereotyping (Thomas and Dines 1994), much against the strictures of UKCC's Code of Professional Conduct. One way of overcoming such problems would be to increase recruitment of NHS staff from the ethnic minorities (Pearson 1989). Although national figures show that recruitment of ethnic minority staff is in line with the ethnic minority population of Britain (Steele 1998), the distribution of staff does not match the distribution of ethnic minority populations; for instance, in some parts of Birmingham 58% of the population are from ethnic minority communities, but only 11% of the NHS staff are from such populations (Stephen 1998).

It can be seen that the shortfall in services, and differences in health between ethnic groups have been demonstrated in many studies. The reasons are complex and include language, cultural matters, administration, attitudes of patients towards NHS services, and attitudes of NHS staff towards patients. The barriers to access are more prominent with secondary care.

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