

# Transcultural Oral Health Care: 5. Diet and Minority Ethnic Groups in the United Kingdom

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**Abstract:** Dietary behaviours of minority ethnic groups vary considerably, not only between groups but also within communities and families. The aim of this article is to consider the information on diet and eating habits of members of minority ethnic groups, especially with regard to sugar consumption.

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**Clinical Relevance:** General dental practitioners giving dietary advice to individuals from minority ethnic groups should be aware of the differing eating patterns, diet and nutritional habits of these groups.

The major health problems, such as diabetes, stroke, coronary heart disease (CHD) and obesity, that are faced by the minority ethnic communities in the United Kingdom are essentially the same as those in the majority of the population.<sup>1</sup> However, the risk associated with these problems tend to be greater in minority ethnic groups than the White community,<sup>1-3</sup> and varies between groups, e.g. diabetes and CHD are major problems in South Asians, stroke and end-stage renal failure in Black Caribbeans. Many of the diseases that are common to all sections of society are linked to diet and eating patterns.

The picture is by no means simple. Amongst South Asians for example, studies of diet indicate that 'classic' dietary risk factors for CHD do not

explain these differences. A greater tendency towards central obesity, lower levels of leisure-time exercise and a genetic predisposition have been linked to higher levels of diabetes, which precipitates the lipid disorders leading to coronary heart disease.<sup>4</sup> But it is also dangerous to ignore the heterogeneity within the South Asian community. As a recent study<sup>5</sup> demonstrated, Indians, Pakistanis and Bangladeshis differ in a wide range of coronary risk factors, with Indians the least disadvantaged and Bangladeshis the most disadvantaged.

Dietary behaviours in minority ethnic groups vary considerably, not only between but also within groups. The aim of this article is to consider the information available on diet and minority ethnic groups. However, at the outset it must be recognized that information on patterns of eating, choice of foods and snacking habits for these communities has not been systematically collected.

## NATIONAL DIETARY SURVEYS

Information on the nation's diet and

eating patterns has been available since the Second World War from the National Food Survey produced by the Ministry of Agriculture, Fisheries and Food.<sup>6</sup> This is the most comprehensive source of information about changes in the British diet since 1940, and its strength lies in its historical nature (now spanning over 50 years). This annual report gives valuable insights into patterns of food consumption according to income, region and household size in different social groups within the UK.

From the most recent report<sup>7</sup> a picture emerges that 'healthy eating' has taken hold most strongly among more affluent groups, with consumption of fruit, vegetables, wholemeal bread and lean meat increasing and consumption of cakes, biscuits and confectionery decreasing. Regional trends show that less fruit and vegetables and more white bread, cakes and confectionery are eaten in the north of England and Scotland than in the south of England.

It must be recognized that this survey is based on data collected from households about foods purchased and consumed *at home*. Changing lifestyles – with more frequent eating out, higher consumption of fast foods and take-aways, together with a decline in family meals – have made it difficult to capture the full picture from household records.

One response to the limitations of the National Food Survey has been surveys examining the diets and nutritional intake of particular population groups. However, both the National Food Survey and various other diet and nutrition surveys are based on a sample of households or subjects selected to be

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representative of the population as a whole. They are not a useful source of information about food consumption in different minority ethnic groups, because people from ethnic minorities form only about 5% of the total population and any particular group is not present in sufficiently large numbers in the samples to draw reliable conclusions.

The dietary and nutritional survey of British adults<sup>8</sup> examined the diets, made measurements of blood pressure, anthropometric and haematological indicators in a nationally representative sample of over 2000 people. However, this and similar reports do not indicate the number of participants of different ethnic origin and does not present any findings according to ethnic group. This limitation was specifically remarked upon in the report of the diets of British schoolchildren<sup>9</sup> and is a drawback of several other investigations of the population undertaken by the Department of Health, who have a rolling programme of surveys designed systematically to explore diet and nutrition among people of all ages in the UK. For example, the national diet and nutrition survey of children aged 1.5 to 4.5 years<sup>10</sup> included the census question defining ethnic origin, but did not undertake any analysis on this basis because numbers were too small and surveys that have been undertaken of elderly people<sup>11</sup> and children of 4–18 years<sup>12</sup> shed no light on the diets of people from ethnic minorities.

### Studies Specific to Ethnic Minorities

An alternative strategy is to focus specifically on members of ethnic minorities. One result of this approach was the Department of Health's report on infant feeding in Asian families.<sup>13</sup> This study provides valuable information about feeding practices up to the age of 15 months, comparing infants of Bangladeshi ( $n = 610$ ), Pakistani ( $n = 731$ ) and Indian ( $n = 934$ ) origin with 619 White infants. All differences referred to were statistically

significant at the 95% confidence level.

Levels of breast feeding were initially higher among mothers of Bangladeshi origin (90%), than Indian (82%), Pakistani (76%) or White mothers (63%), but Pakistani and Bangladeshi mothers stopped breast feeding sooner than Indian or White mothers. Contrary to recommendations, over 90% of babies from all groups had started eating solid food by the age of 4 months, and at 9 months the White babies were more likely to be given biscuits, cakes, sweets and chocolates. However, the gap had narrowed to some extent by 15 months, with 39–44% of Asian mothers giving their infants biscuits or cakes on the previous day compared with 59% of White mothers. But the number of mothers in each of the Asian groups giving sweets and chocolates to their infants was only half that of the White mothers (15% compared with 31%).

Other studies provide an insight into the feeding of slightly older children and indicate that it is important to recognize the changes that are happening within communities. For instance, in a study of migrant ( $n = 117$ ) and second-generation ( $n = 109$ ) mothers of Pakistani origin and their 3-year-old children in Bradford,<sup>14</sup> significant differences were found in the children's total caries experience. Mean dmft values and dmfs scores were significantly higher in the children of UK-born mothers (dmft 2.3 vs 1.38,  $P < 0.05$ ; dmfs 5.18 vs 3.13,  $P < 0.05$ ). The UK-born mothers were more likely to give their children sugary drinks at meal times and two dietary factors that were consistently associated with these caries indicators were 'taking the bottle to bed' and 'drinks other than milk added to the bottle'.<sup>14</sup> Despite differences in fluency in English, both groups of mothers shared many culturally related health beliefs and values, and many of the UK-born mothers believed that sugar is good for children.

### CONTINUITY AND CHANGE

These days, no child grows up in the

same world into which its parents were born. So many aspects of life, not least food, are different. A higher proportion of people from earlier migrant groups (e.g. from the Caribbean) are now reaching retirement age, and many have grandchildren, as well as children, who have been brought up in the UK. Among groups who arrived more recently (e.g. from Bangladesh), young people may represent the first generation raised in Britain. All experience being raised in a country where the eating habits of the majority are different, to a greater or lesser extent, from those of their parents.

Few individuals reject traditional foods altogether, although a recent study of trends in the African–Caribbean community<sup>15</sup> showed that the extent to which traditional eating habits were retained varied. Those consuming a more traditional diet were older and had a lower household income than those reporting a more Westernized eating pattern. A comparison of Caribbean-born and UK-born participants showed that the migrant generation were older and had lower incomes. There were also gender differences – half the men reported eating a traditional diet compared with one-third of women. Certain foods, such as green banana, yam, cassava, saltfish and ackee, and rice and peas, were eaten more by those with a traditional diet; semi-skimmed milk, biscuits, chips, mince dishes and pasta were eaten more by the non-traditional group. Significantly more fruit (an additional 84 g per day, 95% CI 36–132 g per day) and green vegetables (an additional 26 g per day, 95% CI 3–49 g per day) was consumed by the Caribbean-born group than those born in the UK.

The great diversity of diets and eating patterns within groups originating from the same geographical region has become increasingly apparent. Different islands in the Caribbean, different regions of China and different parts of the Indian subcontinent provide a variety of eating traditions, each of which has been modified in the UK in response to a

complex interplay of personal, social and economic factors. A patchwork of small studies undertaken by different research groups indicates a picture of ‘continuity and change’, with common themes consistently recurring:

- exposure to the host culture is a major factor in the extent of acculturation and adoption of majority eating habits;
- the type of changes which occur follow common patterns, with the most rapid changes being made where innovation brings greater convenience and does not threaten strongly held religious views.

### Generational Differences

These effects are not only apparent over time amongst migrants but are often magnified through the generations. In a study of members of three groups in London,<sup>16</sup> families of Pakistani ( $n = 105$ ), Bangladeshi ( $n = 80$ ) and Ismaili ( $n = 77$ ) origin, there were significant differences in eating habits across the generations. As exposure to the host culture increased, so did the frequency of consumption of ‘Western’ foods, while intake of ‘traditional’ foods declined. In all groups, members of the second generation had higher levels of exposure and ate Western foods significantly ( $P < 0.01$ ) more often. Opportunities to interact with the host culture are clearly affected to some extent by fluency in English and in all groups the second generation were more likely to speak, read and write English fluently – and, not surprisingly, to listen to English-language radio or watch English TV programmes. None of the first-generation Bangladeshi or Pakistani subjects reported ever eating in an English home and over 80% said they had only Asian friends. In contrast one-third to one-half of the second generation had both White and Asian friends.

In all groups, traditional foods were more frequently eaten at the evening meal by both generations. Among Bangladeshi participants 92–100% of items eaten at dinner were traditional, among Pakistani participants 54–88% of

items were traditional and among Ismailis 21–66% were traditional. But at lunch-time, in all groups, consumption of traditional foods was less common and members of the second generation were more likely to eat Western foods than their parents. The contrast was most marked among respondents of Bangladeshi origin, in that 90% of items consumed by parents at lunch were traditional compared with only 50% of items consumed by the second generation.

The lunches of younger people were also likely to be simpler meals, containing fewer items. In fact, when involved in food preparation in the home, these young people were more likely to cook ‘Western’ foods – possibly because these are seen to be more convenient and to place fewer demands on cooking skills. This view was certainly expressed in a study of South Asian girls in which respondents disliked the amount of time required for the preparation of traditional dishes and expressed a preference for cooking ‘English’ foods, which were seen to be simple and quick.<sup>17</sup>

### Adherence to Religious Rules

There is still a very strong adherence to religious rules about food: 100% of both generations from the Bangladeshi community and the first generation of Pakistani subjects reported eating only Halal meat (the level in the second-generation members of Pakistani families fell to only 87%).<sup>16</sup> A study of schoolchildren aged 10–12 years in Slough found that consumption by children of Pakistani origin of meat and meat dishes at school was low, owing to concern as to whether it was Halal.<sup>18</sup> However, among students of 12–16 years in Harrow, although the majority of South Asian youngsters avoided some foods for religious reasons, the extent of their observation of religious rules varied:

- Some Hindus followed a traditional vegetarian pattern; others ate chicken but avoided beef, as the cow is regarded as particularly sacred.

- Abstentions by Muslim children ranged from eating Halal meat only to avoiding pork and pork products but consuming other non-Halal meat.

### Sweets and Snacks

Looking at many aspects of the eating habits amongst schoolchildren in Slough, especially in relation to sweets and confectionery, children of Pakistani and Indian origin had eating habits very similar to those of their White classmates. Over 80% of children in all groups reported eating sweets or chocolate at least once a week, and around 75% reported eating cakes and biscuits at least once a week. Their food diaries also supported similar levels of consumption in each group, with around 50% recording consumption of chocolate, sweets, cakes and biscuits at least once in the 3-day study period. Similar findings emerge from data collected by the Schools’ Health Education Unit in Exeter, which undertakes the analysis of health behaviour data generated by children at schools throughout England covering a wide range of health topics, including diet. Of the boys and girls who described themselves as ‘Asian’, 80% reported having spent their own money on sweets and crisps ‘in the last seven days’.<sup>19</sup>

It is interesting that data from a recent national diet and nutrition survey<sup>12</sup> showed that the considerable variation according to socioeconomic group and geography in the type of foods that would be eaten at meals mirrored the patterns found among adults. It is hardly surprising, however, that consumption of snacks, crisps and soft drinks was quite uniform because these items do not present any potential religious conflicts.

In any group of people, it can be observed that food habits persist as long as they represent practical, effective and meaningful behaviours. Once this is no longer true, then eating habits change. If people no longer have the time required to make particular dishes, they are likely to drop them from the culinary repertoire or reserve

them for special occasions.

### Attitudes to Diet and Health Care

Within every culture there are strong traditions about the links between diet and health. Certain foods may be considered as beneficial in preventing or treating particular conditions but, more generally, people from many groups share the idea that certain foods have 'heating' or 'cooling' effects on the body and that the key to wise eating is choosing foods that will keep the body 'balanced'. Factors such as age, gender and disposition are generally believed to influence the body balance and produce tendencies, which must be counterbalanced by foods.

A number of studies have shown the persistence of such traditional ideas among people with a variety of ethnic backgrounds in the UK – particularly in relation to eating habits during pregnancy, following childbirth and in the management of diabetes. But these beliefs seem less firmly held by younger people.<sup>18</sup>

There seems little doubt that the eating habits of younger people from ethnic minority groups are different both from their parents and their White peers. Traditional dishes are consumed less frequently, but set them apart from the majority – while the parental generation are less likely to eat the pizzas, etc. which young people from ethnic minorities eat in common with their White peers. What particularly concerns many health professionals is that the eating habits that are often adopted from the host community are just the ones they would most like to discourage because they add too much fat and sugar to the diet.

The extent and nature of acculturation in lifestyle and diet has implications both for health and the delivery of health care services. Yet the data available is limited, with some groups and some topics receiving more attention than others. A recent study, undertaken in the South Thames Region, of the oral health needs, attitudes, barriers to care and provision

of services to people of ethnic minority origin included an examination of dietary practices.<sup>20</sup> This has provided a valuable source of information concerning members of a wide variety of different groups within the region, including Black Caribbean, Indian, Pakistani, Bangladeshi, Chinese and Vietnamese. Many common themes and contrasts emerge from the data, not least in aspects of eating. For example:

- sugary snacks and drinks were frequently consumed by the Black Caribbean group, in contrast to the Chinese participants who had a low sugar intake and rarely consumed snacks;
- the widespread availability of confectionery and sweet snack foods in the UK was seen as a problem, particularly for children, by Indian, Pakistani and Black Caribbean adults;
- eating habits in all groups included a combination of traditional and non-traditional foods, with older participants tending to include more traditional items.

Attempts to provide an information base for health promotion activities has also stimulated research into various aspects of the lifestyle of members of ethnic minorities. For example, a study undertaken by the Health Education Authority<sup>21</sup> looked at behaviour, attitudes and information needs of members of ethnic minorities, on a range of topics, comparing the results with the population as a whole.

A variety of health-promotion programmes and activities designed to make health services more accessible to members of ethnic minorities have been developed in recent years and the *HEA Directory of Ethnic Minority Initiatives*<sup>22</sup> provides some useful information about what has been undertaken in different parts of the country and how to contact people and organizations involved.

### DISCUSSION

Information on diet and lifestyle for

minority ethnic groups is limited and fragmented, although some groups have been studied more extensively than others.

An understanding of traditional diet in countries from which migration has taken place may provide some insight into present eating habits. However, the diversity between groups makes generalization of dietary customs difficult. For instance, the diets of Gujarati women living in Harrow have a higher fat and lower carbohydrate and fibre content than women living in Gujarat.<sup>24</sup> The sample of women included also had a higher intake of sucrose and refined cereals than their contemporaries in Gujarat. Investigations of breast feeding patterns and weaning habits have shown that levels of breast feeding by South Asian mothers living in the UK are lower than in counterparts living in their country of origin.<sup>25</sup>

In addition to the differences between ethnic minority groups, many studies have emphasized the heterogeneity of groups originating from the same geographical area. Not only practices but attitudes vary. In a national survey of infant feeding in Asian families,<sup>13</sup> Bangladeshi mothers were most concerned about having sufficient milk and one in five gave this as a reason for planning to give a bottle as well as breast feed. The Bangladeshi mothers were also the most likely to add sugar to the milk in their baby's bottle. For example, by 15 months both the Bangladeshi and Pakistani mothers were more likely to add rusks and sugar to their baby's bottle than other ethnic groups. The effects of this behaviour are reflected in epidemiological evidence of higher levels of dental caries among young children from these two ethnic groups than in non-Muslim Asian groups and White children.<sup>26</sup>

Initially, the concerns of health professionals about the diets of members of ethnic minorities centred primarily on nutritional deficiencies (e.g iron and of vitamins B<sub>12</sub> and D in certain South Asian populations).

While there is still concern in relation

to vitamin D,<sup>27</sup> increasingly studies are focusing on the role of diet in relation to problems such as obesity<sup>28</sup> and degenerative diseases. Traditional customs, such as betel quid and tobacco chewing and the use of lead-based cosmetics such as surma,<sup>29</sup> have also been explored. Another development has been concern about the changes in eating habits of second-generation minority ethnic groups. A study investigating changes in diet and oral health-related behaviours between inner city first- and second-generation Pakistani mothers resident in the UK showed that negative health attitudes were resistant to change.<sup>14</sup> Infant feeding practices had not altered in the succeeding generation, but the frequency of intake of cariogenic foodstuffs had changed, with second-generation mothers giving their children higher levels of sucrose-containing foods.<sup>13</sup>

A number of factors appear to be important determinants of the type and extent of change in dietary habits. Religious affiliation may play a major role in determining dietary practices. Traditional beliefs about diet and health, religious restrictions and patterns of abstaining from food can affect food choice as well as times of consumption. This is also true for tobacco and alcohol use. The major areas of investigation of diet and religious affiliations have been in relation to the South Asian, and particularly the Islamic, community. Although levels of carbohydrate intake are similar in Pakistani Muslims, Sikhs and Hindus, it is noticeable that they are higher in Bangladeshi Muslims.<sup>30</sup> In addition, there are noticeable differences in food-related behaviours. In Islamic households, Muslim men often carry out most of the food shopping.<sup>21</sup> This is less true in Hindu and Sikh households.

Several definitions have been used to describe culture; Leininger<sup>31</sup> defined culture as the 'learned, shared and transmitted values, beliefs, norms and life practices of a particular group' in society. Therefore, culture is dynamic, flexible, variable and adaptable.

*Acculturation* refers to a complex process whereby a minority group – as a result of its continuous exposure to a cultural system that is significantly different from its own – modifies its social norms, attitudes, values and behaviours, relinquishing or retaining some characteristics of the culture of origin.<sup>32</sup> The acculturation process is significantly influenced by the ethnic and historical background, religious affiliation and socioeconomic status. For the Islamic populations in particular, their religious restrictions act as major barriers to the acculturation process. However, age is also significantly linked with acculturation. Among individuals who were born in the UK, the process of acculturation is likely to be more advanced than amongst the elderly members of ethnic minority groups. In the UK there are marked differences in the age structure of different ethnic minority communities. For example, over half the population of Bangladeshi origin are less than 16 years of age, while the African-Caribbean group have the largest proportion reaching retirement age.<sup>33,34</sup>

Food choice in the minority ethnic groups is determined not only by tradition, religion, knowledge, age and experience, but also by social and economic factors affecting availability and affordability of foods. Although low income is a problem for many members of ethnic minorities, paradoxically a number of studies have observed that relatively large amounts of money may be spent to obtain traditional foods. In a study of African-Caribbeans,<sup>15</sup> those on low incomes were more likely to follow a traditional diet and to spend more of their income on expensive Caribbean foods. At the time of the study, yams cost nearly five times as much as Irish (ordinary) potatoes but, despite having less disposable income, people were prepared to spend more to maintain their cultural food preferences.

## CONCLUSION

Ethnic and cultural differences, confounded by socioeconomic factors,

age and exposure to the majority culture, play an important role in shaping the diets, lifestyle and health behaviour of members of minority ethnic groups. These variables, together with the disadvantage and discrimination experienced by some minority ethnic groups, probably account for much of the observed variations in health.

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ABSTRACTS

**THE BLEEDING MYTH**

Myths of Dental Surgery in Patients Receiving Anticoagulant Therapy. M.J. Wahl. *Journal of the American Dental Association* 2000; **131**: 77-81.

Management of Anticoagulation in Patients with Prosthetic Heart Valves. K. Webster and J. Wilde. *British Journal of Oral and Maxillofacial Surgery* 2000; **38**: 124-126.

In these times of evidence-based medicine, it is pleasing to see that the traditional dogma of the management of patients receiving anticoagulants is being challenged. I feel that often we do not appreciate the seriousness of such patients' underlying conditions and the potentially fatal consequences of thrombosis.

The first of these papers presents a review of the literature including some 950 patients and 2,400 surgical procedures. The most striking and shocking statistic from this paper was that five patients out of 526 who had their anticoagulant therapy discontinued prior to dental procedures suffered serious thrombo-embolic complications; four of these patients died. The author concludes that teeth can be safely extracted in patients with

an INR of up to 4.0 with local haemostatic measures sufficient to control bleeding. This level of anticoagulation is generally the upper therapeutic limit for patients with prosthetic heart valves.

In the second of these papers, two authors from Birmingham propose guidelines for the extraction and surgical removal of teeth in patients on anticoagulants. Like the American paper, these authors propose an upper limit of 4.0 for the INR and local haemostatic measures. Such measures include sutures, haemostats (e.g. Surgicel®) and tranexamic acid. The latter is an antifibrinolytic agent often used in the form of a mouthwash; not currently available in the DPF but in the light of these proposals perhaps it should be added in the future.

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**HOW BROAD ARE YOUR SHOULDERS?**

Assessing the Quality of Shoulder Preparations for Metal Ceramic Crowns. K.G. Seymour, D.Y.D. Samarawickrama, L. Zou and E. Lynch. *European Journal of Prosthodontics and Restorative Dentistry* 2000; **7**: 125-129.

Ask almost any clinician the ideal width and angulation for the shoulder in a metal ceramic crown preparation, and the answer will be a flat shoulder, of at least 1 mm. A group of academics and general dental practitioners attending a postgraduate course were therefore assessed to measure their own performance against their accepted criteria.

Ninety-six preparations, half carried out in the laboratory and half on patients, were assessed. A mean shoulder width was found of 0.892 mm, (S.D. 0.274). However, the narrowest was 0.306 mm and the widest 1.712 mm. The shoulder angle, ideally in the range 90-110°, varied between 70° and 149°, with a mean of 116° (S.D. 18). The only significant difference between the laboratory and the clinical preparations was a slight tendency to cut wider shoulders in the clinical situation.

Although dentists are conservative by nature, and another author found that dentists assessing a millimetre gap in callipers consistently underestimated, these results are disturbing when translated into laboratory construction of the crowns and resultant clinical errors. A similar exercise may be valuable in the privacy of your own office!

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