

Transcultural Oral Health Care: 6. The Oral Health of Minority Ethnic Groups in the United Kingdom – A Review

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Abstract: The 1991 census of England and Wales estimated that the minority ethnic population was almost 2.95 million, or 6% of the total population of the UK. The aim of this paper is broadly to describe the oral health status and trends among minority ethnic groups to enable a clearer formulation of strategies to improve their oral health.

Dent Update 2001; 28: 30-34

Clinical Relevance: As the proportion of minority ethnic groups in the UK increases and new groups enter (e.g. Eastern Europeans), an understanding of the differences in oral health patterns and related behaviour will be important for the general dental practitioner

In 1991, the census of England and Wales estimated that the minority ethnic population was almost 2.95 million, or 6% of the total population.^{1,2} A majority of these groups originate from the New Commonwealth and Pakistan (NCWP),³ with approximately 56% identified as being of Indian origin. About 30% are Black.¹ However, the distribution is not equal: nearly two-thirds of all children born in the inner wards of Birmingham and one-third of those in Inner London have parents who were born in NCWP.⁴

Racial differences relate to the group a person belongs to as a result of a mix of physical features (e.g. skin colour, hair texture), ancestry and geographical origin. *Race* has been traditionally considered as being defined by others: *ethnicity* is self-defined. Thus the concept of ethnicity is one in which an

individual defines the group to which he/she belongs as a result of cultural habits or beliefs and other factors such as language, religion and diet. However, these differentiations between ethnicity and race are being eroded and increasingly it is being recognized that race and ethnicity are so intertwined that consideration of one necessarily requires consideration of the other. Therefore, in this paper race and ethnicity will be used as synonyms except where there are clear differences that need to be explained.

Traditionally, in the dental literature ethnic groups in the UK have been classified as White, Asian, Black, or Others; however, significant differences are recognized within these groups in terms of socioeconomic status, lifestyle, genetic predisposition, disease pattern and mortality level.⁵⁻⁷ The 1991 census addressed this need to some extent and categorized the different ethnic groups thus:

- 1 White
- 2 Black Caribbean
- 3 Black African
- 4 Black Other (to be specified)
- 5 Indian
- 6 Pakistani

- 7 Bangladeshi
- 8 Chinese
- 9 Other (to be specified)

However, this classification is of limited use as a measure of sociocultural differences.

Dramatic improvements in the overall dental health of children and young adults have taken place in the past 30 years in the UK, although the evidence points towards widening inequalities in oral health among certain minority ethnic groups, regions of England and between high and low social class groups.⁸ As the number of patients belonging to minority ethnic groups increases, and new ethnic groups enter the UK, an understanding of the differences in oral health patterns and related behaviour will be important for general dental practitioners in today's multicultural society.⁹

The aim of this paper is broadly to describe the oral health status and trends among minority ethnic groups to enable clearer formulation of strategies to improve their oral health.

DENTAL CARIES

Although there have been significant reductions in levels of dental caries in most industrialized countries, there remain wide variations within a country. In the UK, ethnic group differences are primarily observed in levels of caries among pre-school children.⁸ Caries experience in the primary dentition is significantly higher among minority ethnic groups than in White groups; dmft scores among Asian children in the UK being at least 1.5–2 times higher than in White children.¹⁰⁻¹⁶ Religious background and maternal education

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(mother's ability to speak English) have been shown to be indicators of caries risk in the primary dentition of these groups of children.¹⁰⁻¹⁷

It has been argued that differences in caries levels between different ethnic groups are independent of deprivation scores, with Asian children from the most deprived districts having a higher mean dmft than their White and Black-Caribbean counterparts.¹⁸ However, these findings are not consistent and some show higher prevalence among children associated with material deprivation.¹⁹

The high level of caries among some minority ethnic groups are considered to be associated with habits such as prolonged bottle feeding (often with sweetened milk or sweet drinks), use of commercial weaning foods (also sweetened) and ready availability of sweets and drinks.²⁰ Young children are often weaned onto sweet foods, fed on demand and given juice preparations via a feeding bottle, many times a day. This behaviour is potentially hazardous to oral health. In addition, some minority ethnic communities appear to use fluoride-containing toothpastes less frequently on their children's teeth than the indigenous population, a factor that might contribute to increased caries susceptibility in the primary dentition of this group.²¹

Maternal education and religious background are also identified as important risk factors for caries in the permanent dentition.¹⁰⁻¹⁷ The pattern of caries in the permanent dentition contrasts with that of primary teeth, with many minority ethnic groups having lower levels than the White population.^{22,23} Caries levels in 15-year-old Bangladeshi children are significantly lower than their White counterparts.²⁴ Low levels of caries and tooth loss were also found among Asian adults in Southampton and among Bangladeshi women in West Yorkshire, as represented in the national surveys.^{25,26} It has recently been shown that adults from minority ethnic communities living in the South Thames region had better dental health (in terms of dental caries, proportions of edentulous or with 18 or more sound teeth) than adults in Southern England as

a whole.²⁷ The presence of caries or amount of treatment for dental problems is related to duration of stay in the UK among the entire sample: the longer a person has lived in the country the more teeth are affected by caries. This relationship between deterioration in dental health and length of residence could reflect changes in dietary practices as a consequence of migration.²⁷

There are no significant differences in prevalence of caries in the primary dentition of Black and White children,^{10,12,28} although Vietnamese and Chinese children have higher levels than their White contemporaries. This is also significantly associated with the length of time the children have lived in the UK.^{29,30}

PERIODONTAL DISEASE AND ORAL HYGIENE

Periodontal disease appears to be endemic in all adult South Asian populations. The World Health Organization's global databank reports that Bangladesh is among the countries whose population is most severely affected, and there is a clinical impression that the level of periodontal disease among Asians is much higher than in the indigenous population of the UK.³¹

Studies of oral cleanliness have revealed significant differences in the primary dentition of the whole Asian and White populations; significantly fewer Asian children having standards of oral hygiene that can be considered 'fair'.¹² British Asian teenagers have more periodontal pockets greater than 3 mm and more sub-gingival calculus than the European groups studied,^{26,32} although their levels are lower than in Black-Caribbean children.²⁶ Use of the 'Mishwak' chewing stick and lack of use of toothbrush and toothpaste has been implicated by some as the cause of poorer periodontal health among these communities.^{33,34}

There is no significant difference in standards of oral hygiene in the primary dentition between Black and White children,^{10,11} but significant differences have been found in levels of plaque, calculus, gingivitis and loss of attachment

among older children. In these studies, the Black group had a higher prevalence and mean number of pockets greater than 3 mm but lower levels of plaque than the White group.²⁸ No statistically significant difference has been observed in the oral hygiene habits of Chinese and White ethnic groups.¹²

ORAL CANCER

Oral cancer remains one of the most debilitating and disfiguring of all malignancies. It is among the ten most common cancers in the world, and there is marked geographical variation in the levels of occurrence. In the UK and Western Europe, oral cancer is the eighth most common malignancy, with an incidence of 4.5 per 100 000,^{35,36} in some parts of India the incidence rate is 15-25 per 100 000.³⁷ In the UK, 2800 cases of oral cancer are diagnosed every year and about 1600 deaths result from oral lesions with a death to registration ratio of 0.46, which is higher than that for skin, cervical and breast cancers.³⁸

Differences in both incidence of and mortality from oral cancer between ethnic groups within the UK have been observed, and an understanding of these differences, in terms of the standard risk factors for oral cancer, may help in devising management and preventive strategies. For example, the mortality rates from oral cancer in males from the Indian sub-continent is higher than in White men.^{39,40} The risk of mortality from oral cancer appears to be higher in immigrants than in people who were born in England and Wales, irrespective of gender.⁴¹ It would thus appear that the incidence of oral cancer is higher in the UK's South Asian communities than in the indigenous population.⁴²

Oral Cancer and Tobacco Consumption

There is a plethora of evidence linking oral cancer with the use of smokeless tobacco products among these high-risk population groups (tobacco use is a habit highly prevalent among the South Asian populations within the UK^{43,44}). Chewing the areca (betel) nut – with or without



Figure 1. Transcultural tobacco product.

tobacco use (some chew the nut only; others prefer ‘pan’, which includes tobacco, and sometimes lime and catechu) – can cause cytogenetic changes in the oral epithelium and is important in the development of oral submucous fibrosis and mouth cancer.⁴⁵ Studies from India have confirmed the association between ‘pan’ chewing and oral cancer, particularly cancer of the buccal and labial mucosa.^{8,46} The betel quid contains a complex mixture of tumour initiators, promoters, complete carcinogens and co-carcinogens.

Among the South Asian communities of the UK, most adults (82%) use tobacco and many (42%) in the 50–80-year age group chew betel, compared with only 5% in people aged 16–29.^{44,47} Bangladeshi communities in the UK are particularly likely to retain the habit of betel use (pan is chewed by 78% of Bangladeshi adults, with significantly more females than males chewing and adding tobacco to the quid⁴⁴).

The Indian tobacco industry has recently introduced ‘Gutkha’ (sweetened areca nut and chewing tobacco) (Figure 1) and flavoured bidis (a form of handmade rolled cigarettes) (Figures 2 and 3), which are also marketed in countries with a significant South Asian population – such as the UK. Gutkha is sold in brightly coloured packets as a mouth freshener and is promoted as a positive product for health. It is easily and cheaply available at Asian corner shops and aimed cynically at young children. Habitual chewing of Pan masala/Gutkha is associated with earlier presentation of submucous fibrosis than betel-quid chewing.⁴⁸ The importation, labelling and sale of ‘pan’ and associated products should be regulated in the same way as the sale and promotion of tobacco.⁸

There is extensive misinformation and lack of awareness about the risk factors

and signs of oral cancer, irrespective of age, gender, Asian subgroup or social class.⁴⁹ Immigrants from East Africa studied over the period 1970–1985 showed raised mortality from oropharyngeal cancer in both sexes.⁵⁰

MALOCCLUSION

Comparison between ethnic groups of tooth malalignment in the dental arch is hampered by lack of objective criteria. Although some studies show ethnic differences in craniofacial growth in response to treatment of malocclusion, these differences point at the need to emphasize both the use of particular treatment mechanics and the importance of patient co-operation.⁵¹

The effect of ethnicity, social deprivation and gender on the perceived aesthetic impact and self-perception of malocclusion has been studied: Asians and females had a higher Index of Orthodontic Treatment Need (IOTN) dental health component (DHC) but better aesthetic appearance than comparable White groups and males.⁵² Normative and perceived need for orthodontic treatment (IOTN > 3) is shown to be higher among children from socially deprived backgrounds than their affluent counterparts.^{52,53} Occlusal variations have also been observed among Chinese living in the UK and changes have been noted in second-generation children, possibly as a result of changes in oral function, diet and respiration.⁵⁴

KNOWLEDGE OF DENTAL HEALTH, ATTITUDES TO AND USE OF SERVICES

The knowledge about dental health in some Asian groups living in the UK appears to be limited, especially with regard to risk factors for dental caries and oral cancer.^{48,55} Many mothers decline to take their children to the dentist unless the child is in pain;⁵⁶ the poor attendance pattern and high treatment need of Asian children probably relates to this parental attitude.¹³ The main reasons given by minority ethnic groups for maintaining oral health relate to social acceptability, religious customs and aesthetics. It is also

clear that betel chewing in all its forms is a deep-rooted practice in the daily lives of some South Asian people and is an element of their social life and cultural identity.

Despite the fact that mortality rates from oral cancer are similar to those of cervical cancer in the UK, public awareness of oral cancer remains limited, especially among the minority ethnic communities.⁴⁸ The lack of education with regards to risk factors for oral cancer brings a corresponding lack of knowledge of its signs and symptoms. There is a need to raise the level of awareness of oral mucosal lesions among the minority ethnic groups, who are reported to have low attendance patterns and are least likely to recognize the clinical signs of oral cancer and thus see their dentist for help.⁴⁸

A recent survey of the health of minority ethnic groups in England highlights the fact that adults (aged 16 or over) from these groups are almost twice



Figure 2. Transcultural tobacco products: (a) imported bidis; (b) a popular chewing tobacco.



Figure 3. Transcultural tobacco products currently available in the UK: (a) traditional sweet format; (b) tobacco in a toothpaste format; (c) product commonly added to a betel-quad.

as likely to visit a dentist only when having trouble with their teeth than the rest of the population,⁵⁷ and are half as likely to attend for regular check-ups. Bangladeshi men are three times more likely never to go to a dentist than Chinese, Black-Caribbean or Irish men. However, gender differences exist and these are most marked among the Bangladeshi population, whose women are ten times more likely never to visit a dentist than the rest of the population.⁵⁷ These findings are similar to those reported earlier.²⁵ The health beliefs and attitudes of minority ethnic groups are not a barrier to dental health – it is their lack of knowledge that may be detrimental to their dental health.

BARRIERS TO DENTAL CARE

The 1991 OPCS survey showed that, although a greater proportion of Black and Asian people have higher educational qualifications than White people, they are twice as likely to be unemployed.² Therefore, it is difficult to know whether relative poverty or cultural

barriers account for the relatively poor use of services. However, dental services for children are free and equally available to all groups, but their uptake varies. This is exemplified by the fact that there appears to be a greater tendency for children from minority ethnic groups to use the community dental service than the general dental service.⁵⁸ Poor use of dental services is mirrored in other aspects of health care; for example, the uptake of antenatal care by Pakistani mothers is poorer than that of White mothers, and they have higher rates of perinatal mortality and lower birth weights.⁵⁹

The major barriers perceived by dentists to provision of dental care to British Asians appear to be problems with language, patient understanding of the treatment proposed, difficulty in obtaining medical history and consent. They also experience difficulties in managing preventive, periodontal and orthodontic care.⁶⁰

Injudicious use of dental services has also been reported among the Chinese community in the UK. Cost,

communication problems, dentists' lack of sensitivity in patient management, anxiety and cultural beliefs have all been identified as major barriers to dental care among this group.⁶¹ The Vietnamese population in the UK also faces problems in seeking dental care owing to communication difficulties, lack of knowledge of services and appropriateness of service.⁶²

The dental profession must endeavour to be more culturally sensitive and help minority ethnic groups to develop a positive attitude towards dentists and dental care.

CONCLUSION

The minority ethnic communities within the UK are not a homogeneous group and are therefore difficult to define on pre-set criteria: each group contains sub-groups and sub-cultures, with separate languages, characteristics and habits. There also appear to be generational differences in perceived barriers to oral health care. Some cultural habits, such as betel chewing, were expected to fade out with time but seem to be passed on to the next generation in newer refined forms, posing health hazards. To be effective, health promotion strategies must be targeted in a culturally sensitive manner. Clearly, there are gaps in knowledge regarding ethnic minorities, and it is essential that general dental practitioners are aware of the oral health needs and fully understand the oral health status of this very important group of the UK's population.

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