

# A preliminary investigation into aspects of oral health of Bangladeshi young adults with a learning disability in Tower Hamlets

Mili Doshi BDS, MFDS.RCS (Eng), Msc (SPc)<sup>1</sup>, Mary Burke BDS, FDS RCS (Eng)<sup>2</sup> and Janice Fiske MBE, BDS, MPhil, FDS RCS(Eng)<sup>3</sup>

<sup>1</sup>Senior Dental Officer, Tower Hamlets Community Dental Service; <sup>2</sup>Associate Specialist in Special Care Dentistry, Guy's and St Thomas' NHS Foundation Trust; <sup>3</sup>Senior Lecturer/ Consultant in Special Care Dentistry, King's College London, UK

## Abstract

**Aim and objectives:** To investigate aspects of the oral health, oral health awareness and oral health behaviours of Bangladeshi young adults with a learning disability.

**Design:** A convenience sample of Bangladeshi young adults with a learning disability was obtained from adult day centres in the London Borough of Tower Hamlets. Structured interviews with 52 individuals (to establish oral health awareness, dental behaviour, perceived needs and dental anxiety) were followed by a standardised oral examination to establish normative dental and treatment needs.

**Results:** Participants were very aware of different oral health conditions and their social implications. Aesthetics was especially important. The mean caries experience, expressed as DMFT, was 4.49; periodontal treatment was required by 88% of the study population; high levels of tooth wear and dental trauma were found, 48% and 42% respectively; and severe malocclusion was found in 53%. Oral health behaviours were unfavourable with generally poor oral hygiene, high use of betel nut and a trend of symptom-based rather than routine dental attendance. Women were significantly more likely to express dental anxiety than were men, 55% and 25% respectively, and had an overwhelming preference to see a female dentist from their own background (73%).

**Conclusion:** Bangladeshi young adults with learning disabilities have complex and unmet oral health needs.

*Key words:* Learning disability, Bangladesh young adults, oral health awareness, oral health, dental behaviour

## Introduction

The oral health of people with learning disabilities (PWLD) is recognised as being poor compared with the general population (Ouellette-Kuntz *et al.*, 2005). Research has identified that caries levels are sometimes higher in this group than in people without a disability (Gray, 2005). However, the dental experience of PWLD tends to be poor, with high levels of untreated decay, and the provision of extractions rather than preventive and restorative care (O'Leary *et al.*, 2006). Additionally, PWLD have consistently been found to have poorer oral hygiene and greater periodontal needs than the general

population (Crowley *et al.*, 2003).

The oral health of people from minority ethnic groups in Great Britain has generally been found to differ from that of the general population, with inequalities demonstrated in the level of dental disease, dental attendance patterns and oral health related-behaviour in the British Bangladeshi community (Pearson *et al.*, 2001a). Whilst high levels of socio-economic deprivation in this community have been identified as a major reason for these inequalities, there are also many cultural issues that impact on oral health (Williams *et al.*, 1996; Pearson *et al.*, 1999; Pearson *et al.*, 2001b; Croucher *et al.*, 2003a).

The prevalence of learning disabilities in the South

Asian population has been estimated to be up to three times higher than in other UK communities (Emerson *et al.*, 1997). Current epidemiological trends suggest a 70% increase in the number of PWLD from minority ethnic groups in the next 20 years, and it is estimated that 7% of all British PWLD will be of South Asian origin (Emerson *et al.*, 1999). The Bangladeshi community in Britain is concentrated in the London Borough of Tower Hamlets and makes up 33% of the population (ONS 2001).

People with a learning disability from South Asian communities in the UK are a growing population who face multi-layered disadvantage in terms of health, education and employment (Hatton *et al.*, 2004). Although it has been suggested that the oral health of PWLD may be exacerbated by factors relating to their ethnicity, and vice versa, little research has focussed on the oral health of PWLD from minority ethnic groups.

As there is currently no research into the oral health of Bangladeshi young adults with a learning disability, the aim of this study was to investigate aspects of oral health including oral health status, needs, awareness and behaviour of a group of Bangladeshi young adults with a learning disability.

## Materials and method

This is a descriptive opportunistic preliminary study that aims to provide baseline information in an area where there is currently no evidence. As such it does not seek to compare the oral health of Bangladeshi young adults with a learning disability with that of Bangladeshi young adults without a learning disability at this stage and so there is no control group. The study was carried out at day centres for young adults in the London Borough of Tower Hamlets. Prior to the study ethical approval was granted from Kings College Research and Ethics Committee.

All Bangladeshi service users present at the centre on the day(s) of the visit were invited to take part in the study, provided valid informed consent could be obtained. Informed consent was obtained from all individuals who participated in an interview and clinical examination. Information sheets and consent forms were prepared in English and Bengali, using guidance from the DoH document 'Seeking Consent: Working with People with Learning Disabilities' (2001). A small pilot study was used to assess the appropriateness of the formats for the interview and examinations. Subsequently, minor modifications were made to the interview questions. For participants lacking literacy, the information was read to them in their preferred language of English, Bengali or Sylheti, the latter being the main Bangladeshi dialect in Tower Hamlets.

### *The interview*

Following training on developing culturally appropriate

health questionnaires, a questionnaire that would be used as a structured interview was developed based on previous studies involving people with learning disabilities (Baxter, 2005; Cameron *et al.*, 2007) and people of Bangladeshi origin (Pearson *et al.*, 1999; Croucher *et al.*, 2002). As well, there were discussions with the learning disability team, carers, day centre staff and the service users themselves.

The interview schedule was translated into Sylheti and Bengali via a process of translation and back translation to ensure there were no discrepancies in the delivery of questions. Each participant was initially asked whether they would prefer to conduct the interview in English, Sylheti or Bengali. All interviews in English were carried out by the researcher (MD), and those in Sylheti or Bengali were carried out with the assistance of the translator. The use of photographs, modified smiley face scales and props were used wherever possible to help with clarity and understanding. Any additional comments made by the service users during the interview were recorded.

Participants were asked to look at and score six photographs, each of which represented a different dental condition, using the smiley face scale (SFS). The photographs utilised the same face with the teeth and gums digitally modified to show a healthy mouth, anterior caries, inflamed gingivae, a fractured tooth, a missing tooth and betel nut staining (Figures 1.1-1.6). They were then asked to score their own dental condition using the SFS, as before. Participants were also asked to select a preferred dentist from a series of photographs of male and female Caucasian and Asian dentists (Figures 2.1-2.4). This was followed by questions on subjective symptoms of problems with teeth and gums, on past dental attendance, dental anxiety (again using the SFS), and oral health related behaviours, including the use of betel nut, tobacco and oral hygiene procedures. Empty packets of popular betel nut preparations, tobacco products and oral hygiene aids (toothbrush, toothpaste, interdental aids, mouthwash, miswak stick [wooden stick commonly used in South Asia]) were used as props to aid understanding of these questions.

### *The clinical examination*

The oral examination was conducted, after the interview, to determine the oral health status and treatment need. All examinations were conducted by the researcher (MD), who was calibrated for clinical data collection by, and against, a dentist who was calibrated for the British Association for the Study of Community Dentistry (BASCD) and World Health Organisation dental epidemiology data collection.

The examination procedure was standardised in that the subject was seated and the examiner carried out the examination standing in front of the subject, using a pen torch as the light source. A plane mouth mirror was used and gauze was available to remove food debris from the

**Figures 1a -1f**      **Photographs of digitally modified oral health conditions used to facilitate opinion on aspects of oral health**



**Figure 1.1 Healthy mouth**



**Figure 1.2 Anterior Caries**



**Figure 1.3 Inflamed gingivae**



**Figure 1.4 Fractured tooth**



**Figure 1.5 Missing tooth**



**Figure 1.6 Betel nut staining**

**Figures 2.1 – 2.4.**      **Photographs of dentists of different gender and ethnicity used to facilitate opinion on preferred provider**



**2.1 Caucasian female**



**2.2 Caucasian male**

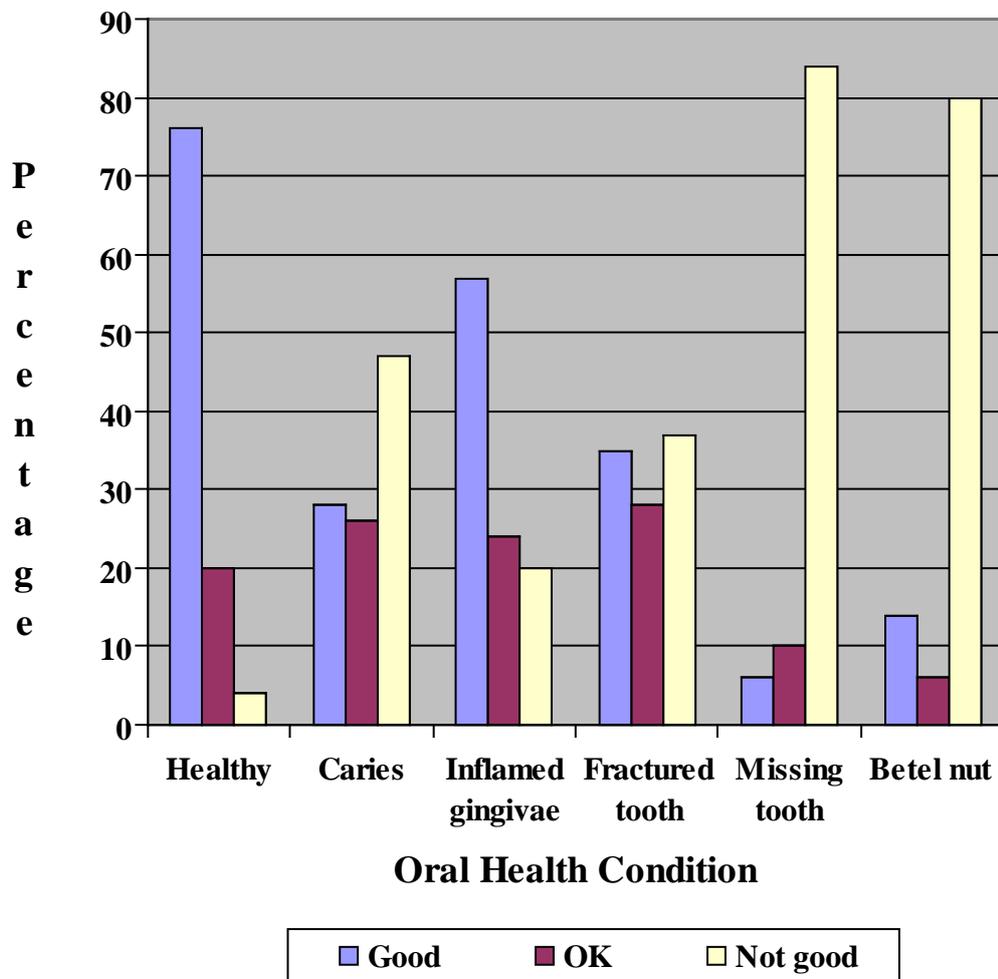


2.3 Asian male

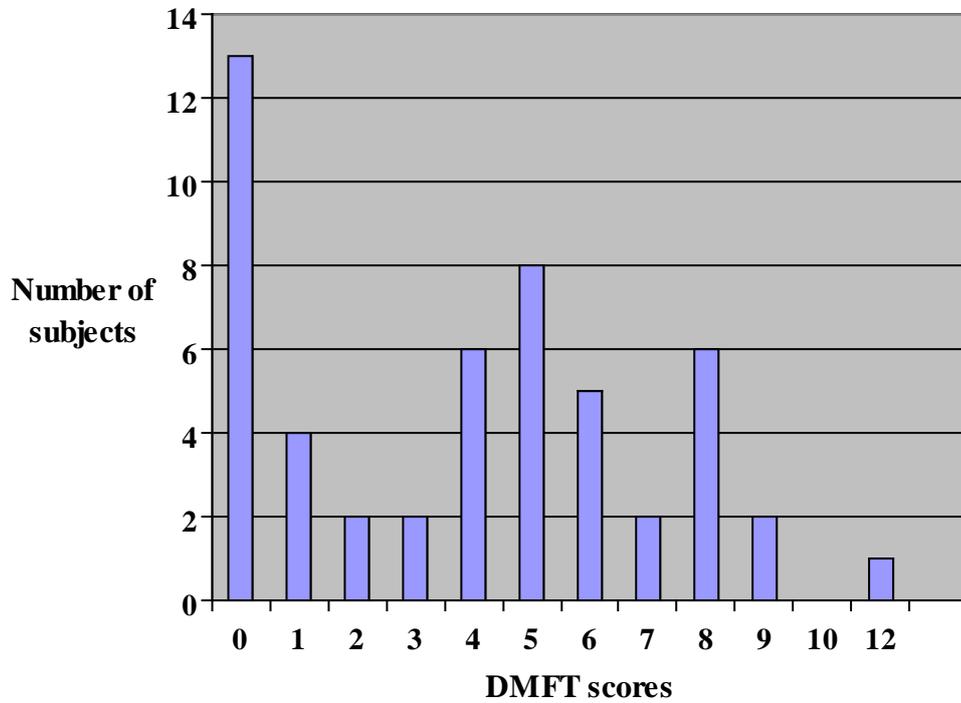


2.4 Asian female

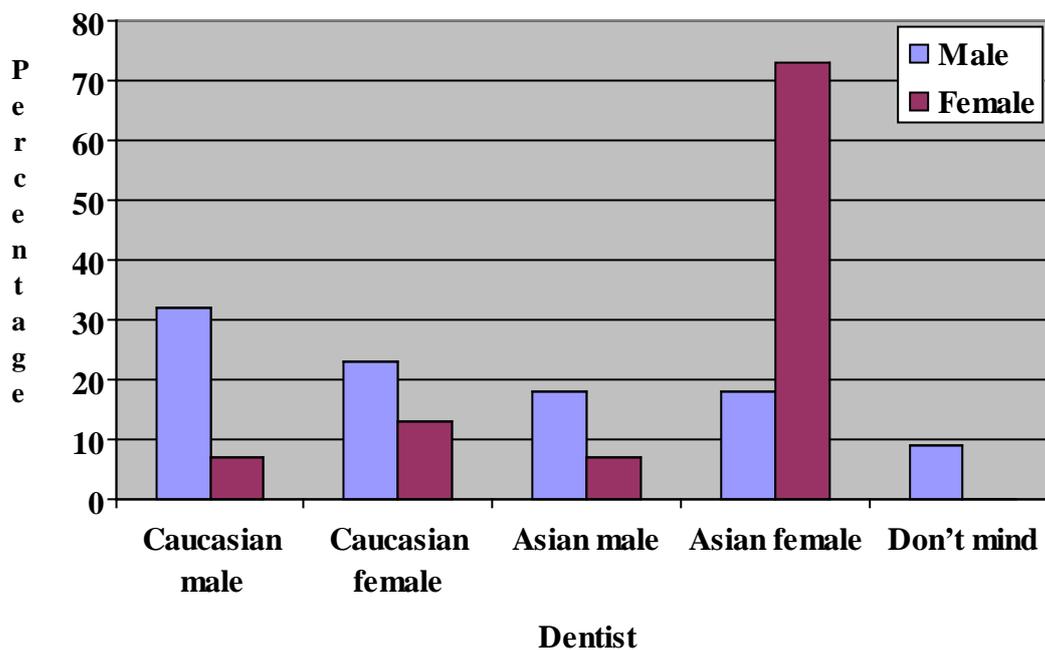
*Figure 3 Opinions of sample population on different oral health conditions*



**Figure 4** Distribution of DMFT scores in a population of young Bangladeshi adults with learning disability



**Figure 5** Preferred dentist of a population of Bangladeshi young adults



mouth. A probe was not used for either diagnosing caries or measuring gingival pockets in order to minimise levels of anxiety, (Pearson *et al.*, 2001a). The following parameters were used to assess oral health: DMFT (Kelly *et al.*, 2000); evidence of dental trauma to upper and lower incisors (Crowley *et al.*, 2005); presence of plaque and supragingival calculus (Løe and Silness, 1967) and gingival inflammation (Horwitz *et al.*, 2000); presence of mucosal lesions (Pearson *et al.*, 2000b), incisor staining and tooth wear (Kelly *et al.*, 2000).

### **Data analysis**

The data from the interview and clinical examination were coded and entered onto a data base using the statistical package (STATA 8, Stata Co;TX;USA). All statistical analyses were performed using non-parametric tests. Differences were regarded as statistically significant when the p value was <0.05. To assess intra-examiner reliability, 10% of the study population were re-examined at least one week after, and within one month of the original examination. In light of the small sample size, the statistician advised that comparison of the examination results and degree of discrepancy were more appropriate than a Kappa score to indicate the degree of intra-examiner reliability.

### **Results**

All of the 52 subjects approached (22 [42%] male and 30 [58%] female) agreed to take part in the study. Ages ranged between 20 and 39 years with a mean age of 28. Twenty-eight people (53%) were literate in English, 12 (23%) in Bengali, and nine (17%) in both languages. Twenty-one subjects (40%) were non-literate in both languages. The main carer for 40 subjects (76%) was a parent or sibling, and for 12 (7 [23%] females and 5[22%] males) it was their spouse. Forty-four subjects (84%) were graded by social services as having a moderate learning disability, and the remaining eight (15%) as having a mild learning disability. Twenty-eight (53%) of the study population had at least one additional disability. One person became reluctant to participate during the study, and has been excluded from the results.

### **Oral health awareness**

The majority of participants (39[76%]) viewed the photograph representing healthy teeth as good and the photographs representing the missing tooth and betel nut staining as not good (43[84%] and 41[80%], respectively). Figure 3 details the responses to the photographs of different oral health conditions.

The photographs stimulated many comments, and recurring themes emerged. The healthy teeth (*Figure 1.1*) were considered to be synonymous with cleanliness, and comments such as “Good clean teeth like on [the] films”, “Very clean, so good” were made. The missing front tooth

photograph was generally described as not good and comments related to appearance and associated consequences, for example: “She will be very sad not to have a front tooth as people will laugh at her”, “[The] tooth has come out and looks bad. My husband would leave me if I looked like that”, and “It looks bad, so why is she smiling?”. Betel nut staining was widely deemed as not favourable with adverse comments made about its effects on the teeth.

The majority of people (29 [59%]) perceived their own oral health to be good or OK, whilst 20 individuals (40%) felt their oral health was not good, and 2 individuals (4%) were uncertain. Again, additional comments were made. People who considered themselves to have good teeth repeatedly mentioned the ability to eat and the cleanliness of their teeth. Whereas, subjects that deemed their oral health as not good, mentioned problems with eating, appearance, pain and smell. For example: “I hate people seeing my teeth as they look horrid, no one will marry me”, “[My] teeth don't look nice, its shameful to have teeth like mine”, “[My] teeth are bad and smelly, I am embarrassed to talk to you”.

### **Perceived dental need**

Twenty-eight subjects (57%) reported current problems with their gums or natural teeth. The predominant reasons were general pain (34%), pain specifically related to eating and/or drinking (22%), bleeding gums (24%) and difficulty in chewing foods (18%).

### **Self-reported oral hygiene behaviour**

Forty-three subjects (82%) claimed they used a toothbrush and 38 (73%) said they used toothpaste. Eight people (15%) reported using the wooden miswak stick, and four subjects (8%) used a mouthwash. None of the subjects reported using any inter-dental cleaning aids such as floss or inter-dental brushes. Whatever the method of oral hygiene used, only 11 people (21%) reported carrying out this behaviour on a daily basis.

### **Normative dental need**

#### **Mucosal condition**

Nineteen people (37%) had at least one oral mucosal lesion. Of these 19, seven subjects (36%) had non-specific oral ulceration. Other mucosal conditions were candidal infection (four people, 21%), angular cheilitis (four people, 21%), buccal sinus (four people, 21%), frictional keratosis (one person, 2%), fibrosis (one person, 5%), and a lichen planus appearance (one person, 5%).

#### **Plaque, calculus and gingival health**

Using visual criteria, five people (9%) were assessed as having no plaque; 17 (32%) as having a moderate accumulation of plaque along the gingival margin; and 30 (57%) as having a heavy accumulation at the gingival margin. Forty-one participants (78%) had visible, supra-gingival

calculus. Seven subjects (13%) were considered to have a healthy gingival condition. Of the remainder, 18 (34%) had moderate gingival inflammation, 22 (42%) had severe gingival inflammation and five subjects (9%) had gingival hyperplasia, although no significant relationship with epilepsy medication was demonstrated with the latter.

#### *Decayed, missing and filled teeth (DMFT)*

One hundred per cent of the study population were dentate. The number of teeth present ranged from 21 to 28 with a mean of 24 and a median of 27. Third permanent molars were excluded from this analysis.

Thirty nine subjects (75%) had one or more teeth that were decayed, missing or filled, leaving 13 people (25%) with a sound dentition. Twenty-nine individuals (55%) had at least one missing tooth and 31 (59%) had at least one filled tooth. Twenty-seven subjects (51%) had untreated caries. *Figure 4* shows the distribution of DMFT and its components amongst the study population. Excluding sound teeth, it demonstrates a normal distribution curve. Within the study population, there was no significant difference in the D, M or F between subjects with mild and moderate learning disabilities (Mann-Whitney U test,  $p = 0.80$ ). Neither was there a significant difference between males and females (Mann-Whitney U test  $p = 0.58$ ). Comparing the study population with a similar aged group from the Adult Dental Health Survey (Kelly *et al.*, 2000) the D, M, F and DMFT are consistently lower indicating an overall lower experience of dental caries in the study population.

#### *Trauma, malocclusion and tooth wear*

Twenty-two subjects (42%) had signs of trauma to incisor teeth. Twenty-eight people (53%) were classified as having a severe malocclusion. A further 14 subjects (26%) had slight anomalies or a mild malocclusion, and ten subjects (19%) were considered to have a normal occlusion. Fifty subjects (96%) showed signs of tooth wear. In 27 subjects (51%) this was minimal tooth surface loss; in 22 (42%) moderate loss and in three (5%) severe loss involving near exposure of the pulp.

#### *Incisor staining and betel nut use*

Twenty subjects (38%) displayed incisor staining. Of these approximately 12% were considered to have betel nut staining; 18% fluorosis or hypoplasia; and 8% had un-attributable, miscellaneous staining.

Although 79% of subjects graded the betel nut photograph as not good, 22 subjects (47%) reported current use of betel nut products. Eight people (17%) said they added tobacco to betel nut, and seven subjects (13%) were unable to answer this question. When it came to frequency of use, 16 (76%) of the betel nut consumers used it at least once a day, five (24%) used it irregularly, and one person was unable to answer this question.

#### ***Dental treatment needs***

Periodontal treatment, from scaling to root surface debridement, was required by 45 subjects. Nineteen people (36%) had at least one tooth with grade I or II mobility; and three subjects (5%) were considered to require extraction of periodontally involved teeth. Non-complex restorative treatment was required by 18 people (66%) and a further nine (33%) were considered to require either dental extractions or endodontic treatment. No participants required removable prosthodontic treatment.

#### ***Dental attendance***

Of the 46 people able to answer this question, 40 (87%), with equal proportions of men and women, could recall visiting a dentist. Thirty-five of them (76%) recollected attendance when they had pain or problems with their teeth; 14 (39%) reported visiting the dentist for a check-up; and six (13%) subjects could not recall ever visiting a dentist before. The total response exceeds 100% and is due to mixed visiting patterns.

#### ***Dental anxiety***

Asked about visiting a dentist, 28 people (57%) said they would feel happy or OK, and 21 (42%) that they would be unhappy. Women were significantly more anxious than men about visiting the dentist (55% and 25%, respectively). Additional comments made by the participants who were happy to go to the dentist repeatedly mentioned "nice dentists", and made comments such as: "They make your smile nice", "I like my dentist as he takes a lot of time and does not hurt me", "[I am] happy to go to [the] dentist as [my] tooth will stop hurting" Subjects who were unhappy about visiting repeatedly mentioned fear and difficulty in understanding. For example, "[I] don't like it as I see a different dentist every time and it scares me", "The dentist told me my teeth are bad and there is nothing that can be done", "They lie. [I] went to sleep and lots of teeth were gone when I woke up", "[I am] scared as I don't understand what they tell me", "[I am] scared of injections, which they hide from me".

Additional comments made by people who did not visit the dentist highlighted the issue of dependency on a third party for initiating care. For example, "[I have] never been to a dentist, I [would] like to go but need some one to come with me because of my epilepsy"; and "I would [go if] some-one [would] make me appointments, as my parents don't speak English. So I can't go".

#### ***Selecting a dentist***

Provided with a choice of four dentists (male Asian, male Caucasian, female Asian and female Caucasian) as shown in Figures 2.1 to 2.4, the majority of female subjects demonstrated a preference to see a female dentist (86%). This was statistically significant (Pearson chi squared  $p = 0.004$ ); 84% opted for an Asian rather than Caucasian

female dentist. Male subjects showed almost equal choice for a male or female dentist and a slight preference for a Caucasian dentist. The differences were not statistically significant (Pearson chi squared test  $p = 0.73$ ). *Figure 5* provides further detail of the response to this question.

Whilst the main reasons given for choosing a particular dentist were that they looked “kind” and/or “nice”, some female subjects made commentes such as “[I ] prefer a lady as they come close to me”, and “she looks like she would be kind, [I am] shy to see the man”.

#### *Intra-examiner reproducibility*

The clinical examination was repeated for eight subjects (15%) and the overall rate of discrepancy of 2% demonstrated good intra – examiner reproducibility.

## **Discussion**

The sampling method used in the current study may have introduced bias as the study population was recruited from adult day centres and excludes the large proportion of PWLD who do not use day centre services (Naidu *et al.*, 2001; Tiller *et al.*, 2001). It could be argued that the current study population are those most likely to use, or receive support, from other services, and as such may present more positively. Day centres were used to minimise some methodological difficulties that have been identified with research related to minority ethnic groups (Kalsbeek, 2003). Recruiting Bangladeshi individuals using written information (such as sending letters to carers) can be unproductive due to high levels of illiteracy in both English and Bengali amongst this population, particularly in the first generation population (Ali and Begum, 1991). As this study sets out to provide baseline oral health data for the study population, their oral health was not compared with a control group of Bangladeshi young adults without a learning disability.

Despite equality legislation, poor literacy and fluency in English can have a major impact on access to health care. As the majority of the study sample was in their twenties and second generation (British-born) Bangladeshi, they are more likely to be affected by cross cultural influences, through schooling and living in the UK (Aitkens, 2002). Consequently, their attitudes and beliefs may differ from first generation Bangladeshis. However, the main carer for the majority of the subjects was a parent, an older sibling, or their spouse. Marriages are likely to have been arranged by their families, mainly to partners from overseas, who are liable to have poor English skills and be unaware of how to access services, such as dental care, for their husband/wife (Hussain, 2005).

In the current study, 88.5% of subjects spoke English and 59% were literate (mainly in English). This is significantly higher than findings of other studies involving the Bangladeshi community as a whole (Summers *et al.*,

1994; Williams *et al.*, 1996). The younger age group and the fact that English language is taught in day centres helps explain this and may result in the person with the learning disability being more fluent in English than their carers. Nevertheless, dependence on carers to initiate dental care can have a negative effect on access to services. This was underlined poignantly during the study when an English-speaking individual commented that he would like to visit the dentist but his parents couldn't speak English and were unable to make him the appointments.

The clinical examination showed this group had complex unmet oral health needs. Whilst there were relatively low levels of caries, there were high levels of periodontal disease and treatment need. Periodontal disease has consistently been found to be poor in both adults with learning disabilities and in the UK Bangladeshi population (Cumella *et al.*, 2000; Pearson *et al.*, 2001a; Tiller *et al.*, 2001; Croucher *et al.*, 2003b; Gray, 2005; Pezzementi, 2005; Owens *et al.*, 2006). Findings in the current study were in line with this, with 90% of the sample having visible plaque on their teeth and just over three quarters with supra-gingival calculus. Within the learning disability population generally, poor plaque control has been attributed to reduced manual dexterity, poor knowledge of dental health, and a lack of professional care and advice (Owens *et al.*, 2006). Within the Bangladeshi community this outcome has been explained by inadequate oral hygiene methods and infrequent professional cleaning (Pearson *et al.*, 2001; Trivedy *et al.*, 2002; Croucher *et al.*, 2003). The combination of the two sets of factors is likely to be responsible for the very poor oral hygiene in the Bangladeshi sub-population of young adults with a learning disability. This finding highlights the importance of targeting both this group and their carers in a co-ordinated manner, as one without the other is likely to have little impact on oral health.

Caries experience within the study group was significantly lower than that of both the general population (Kelly *et al.*, 2000) and a number of earlier studies of PWLD (Hinchliffe *et al.*, 1988; Shaw *et al.*, 1990; Kendall, 1991; Shapiro *et al.*, 1991; Naidu *et al.*, 2001; Tiller *et al.*, 2001; Crowley *et al.*, 2003; Owens *et al.*, 2006). Most previous studies have found that PWLD have relatively high levels of untreated or missing teeth (Gray, 2005), indicating that when treatment does take place it tends to be extractions rather than restorations (Naidu *et al.*, 2001; Tiller *et al.*, 2001; Gray, 2005). In contrast, the current study found more filled teeth than missing teeth, indicating a greater provision of restorative care. Despite this, just over half the sample had at least one untreated carious tooth. This situation may have arisen as a consequence of symptom-orientated dental attendance and / or high levels of dental anxiety, both of which were predominant in this group. However, the findings indicate that those individuals who do attend the dentist generally receive restorative care.

Caries levels in the UK Bangladeshi adult population tend to be low. This has been attributed to maintaining the low sugar dietary practices of their country of origin (Newton *et al.*, 2000). DMFT values have ranged from 1.5 to 3.19 (Laher, 1991; Williams *et al.*, 1996; Robinson *et al.*, 2000) with a high missing component in later life as a consequence of periodontal disease. Even though, the current study does not establish whether this is a particular disadvantage in this study population, or a generic disadvantage common to all members of the Bangladeshi community in Tower Hamlets, the mean DMFT in the current study was 4.49, indicating that whilst the caries experience is lower than the general UK population, it is higher than in the Bangladeshi community (Laher, 1991; Williams *et al.*, 1996; Robinson *et al.*, 2000).

Levels of tooth wear and malocclusion reported in this study are high. Moderate or severe tooth wear in just under 50% is much higher than the 11% found in the 1998 ADHS for a similar age group (Kelly *et al.*, 2000). The very limited data on tooth wear in adults with learning disability does suggest a higher prevalence (Rees, 2004), and the UK Bangladeshi community have been found generally to have higher levels of abrasion and attrition (Pearson *et al.*, 2001a). As tooth wear can cause dentine sensitivity, functional disabilities and affect aesthetics, the high levels found indicate that this is an area that requires further investigation and subsequent management.

Just over half the study subjects had severe malocclusion, which is higher than has been found in previous studies of PWLD (Scott 1998; Mitsea *et al.*, 2001; Utomi *et al.*, 2007). Malocclusion can affect appearance, dental health and increase the susceptibility to dental trauma and periodontal disease, both of which were high in the current study. Consideration needs to be given to the role of orthodontic treatment in this group of patients (Machuca *et al.*, 2007).

The findings of the current study are powerful in demonstrating the extent of oral health awareness and perceptions of the social consequences of different oral health conditions. Whilst it is known that teeth are regarded as important for aesthetic appeal and function by the Bangladeshi community (Newton *et al.*, 2000), the oral health perceptions of PWLD have often been overlooked. Recent studies have begun to describe the dental aspirations of this population (Cumella *et al.*, 2000; Gray, 2005). In the current study, recurring themes emerged from both the responses to the structured interview, and from individual comments, highlighting the importance and value of good oral health to PWLD.

Appearance was important to the group and was related to self-esteem and self-confidence, with comments about a healthy mouth being associated with the importance of clean teeth, smiling, and general happiness. The images of both the missing front tooth and betel nut staining generated a strong negative reaction. The missing tooth

was linked to poor aesthetics, which was associated with unhappiness and social unacceptability. The emotional effects of tooth loss have been increasingly recognised (Fiske *et al.*, 1998; Davis *et al.*, 2000) and tooth loss or potential tooth loss requires a sensitive approach in all individuals including PWLD. These findings corroborate those of Cumella (2001) and Gray (2005) and are in contrast to the stereotype belief that PWLD are not interested in oral health. Treatment planning should take account of the views of PWLD and focus on preventing and restoring disease thus limiting tooth loss and any associated need for denture wear (Hincliffe *et al.*, 1988; Gray, 2005).

Betel nut staining was perceived as unacceptable by four fifths of the sample with comments not only related to appearance but also to its negative impact on both dental and general health. From this response it may have been expected that betel nut use would be low. However, this was not the case and, despite this view, almost half the subjects used betel nut regularly. Betel nut use is addictive, with or without tobacco, and is widespread in all generations of the Bangladeshi community (Núñez-de la Mora *et al.*, 2007). Many of the community are unaware of, or do not believe, the associated health risks (Newton *et al.*, 2000). Consequently, the study population may receive conflicting information from home and from the day centre as some individuals mentioned using betel nut at home with family but not at the day centre. This is an oral health issue that requires addressing.

Self-assessment of oral health was varied, however, responses showed a great depth of self-awareness. Of the nearly 60% of the group who perceived themselves to have good oral health they did so, largely, because they had no pain and believed they had clean teeth. Once again, cleanliness was associated with good oral health, with those who deemed themselves to have poor oral health describing their teeth as dirty, and/or reported dental pain, functional problems, or poor appearance. There was a general sense of embarrassment and sadness from individuals who perceived themselves to have poor oral health. Depression is more common in Bangladeshi women with learning disabilities (McGrother *et al.*, 2001) than in other sectors of the Bangladeshi community. It is possible that poor oral health and associated low self-esteem may contribute to this, although further research would be required to substantiate this hypothesis.

The repeated emergence of the concept of clean teeth and their relationship to good oral health throughout the interview, might lead one to expect good oral hygiene habits amongst the study population. However, only 21% of the group reported cleaning their teeth on a daily basis. The fact that, in general, the group desire clean teeth but do not achieve this indicates an apparent lack of knowledge and/or a need for help. Many PWLD may need help with oral hygiene practices, from a simple reminder to clean their teeth through to physical assistance (Gray, 2005).

For the study population, this is something that, initially, could be addressed through the day centres.

A theme of symptom-orientated dental attendance emerged, with three quarters of the group attending the dentist only when they were in pain or had a problem. The same pattern has been found in other learning disability studies (Tiller *et al.*, 2001). Reasons for irregular dental attendance are complex and have included issues such as an inability to express needs and desires; lack of perceived need, inadequate knowledge of carers (Stanfield *et al.*, 2003); and dentists' unwillingness to treat PWLD due to behavioural problems, fear, anxiety and lack of training (British Society for Disability and Oral Health, 2001)

Dental attendance in the Bangladeshi community as a whole has also been found to be irregular and symptom-orientated (Pearson *et al.*, 1999). The survey for the health of minority ethnic groups in England (Erens *et al.*, 2001) found that Bangladeshi people were twice as likely as the general population to visit a dentist only when they are having a problem, rather than on a regular basis. Research suggests that the perception of the value of dental services and preventive care is low amongst the Bangladeshi population (Pearson *et al.*, 2001a). Bangladeshi young adults with a learning disability face "double jeopardy" as they are affected by both the general factors contributing to use of dental services by PWLD and the low cultural value related to dental care. This is a factor that health care providers need to address in meeting their duty of care.

Virtually all the women in the current study preferred a female dentist, with the majority choosing the female Asian dentist, suggesting gender had a high importance for them. This is in line with the findings of Robinson *et al.*, in 2000. The main reasons identified for Bangladeshi women preferring female dentists were the perceived intimate contact and invasion of private space that can occur in the dental setting. In the current study, although some subjects commented on the dentist's ethnicity, the main comments related to choosing a dentist that looked kind, nice and good at their job who would spend time with them to explain things. This is in line with the findings of Gray (2005), where desirable qualities of a dentist were empathy, friendliness and good communication skills. For this group of people it would seem that cultural values and perceived good communication skills are the significant factors in selecting a dentist.

## Conclusions

Bangladeshi young adults with learning disabilities have complex and unmet oral health needs. However, the population was very self-aware of oral health and its related social implications. Oral health was found to be poor especially related to periodontal health. High levels of betel nut use were revealed. Dental attendance was irregular, with many people relying on carers who have poor English

language skills to initiate appointments. Women expressed a strong desire to see a female dentist from their own background. This study provides a wealth of knowledge for a population that has previously not been investigated and serves as a baseline for further research.

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### Address for correspondence

Mili Doshi

Senior Dental Officer

St Leonard's Family Dental Practice

1st Floor, 'B' Block

St Leonard's Primary Care Centre

Nuttall Street, London N1 5LZ, UK.

Email: mili.doshi@thpct.nhs.uk