Journey to the dental office: a study of dental illness behaviour exhibited by people visiting government and private dental services in Delhi, India

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Objectives: To study the dental illness behaviour exhibited by adult working men attending government dental services and private dental services in Delhi, India, and to explore how, when and why the services are accessed. **Methods:** A qualitative approach utilising semi-structured individual interviews with 20 participants randomly selected with a primary complaint of tooth related pain or discomfort. Clinic type was taken as proxy for socio- economic status. Informants' views were recorded on videotape and in notes. The data were translated and transcribed and analysed using Framework Methodology. **Results:** Three key areas were identified: Initial reaction to symptom experience; explanatory model for symptoms; and primary reason for delay in seeking help. Respondents attending the private dental services were more likely to: respond immediately on experiencing symptoms; make use of alternative systems of care, specifically self-medication; give tooth specific explanations for discomfort. The primary reason given for a delay in seeking treatment was the nature of symptoms. Respondents attending the government run clinics were more likely to: delay responding to symptoms and to seek help from unlicensed dental practitioners; favour non-tooth specific explanations; cite professional commitments as the primary reason for treatment seeking delays. Restricted opening hours of dental clinics during the working day is a key factor for daily or hourly paid workers with few rights. **Conclusions:** Those with low levels of education, a lack of control over their working environment and living on subsistence pay are more likely to delay seeking treatment and also more likely to use unlicensed practitioners.

Key words: Dental illness behaviour, private dental services. Government dental services

INTRODUCTION

There are two assumptions at the heart of any treatment based health service: that people who utilise the service benefit from its use and that when they fall ill they utilise the service. Evidence suggests that the latter assumption does not hold true, many studies show that only a small portion of people who experience symptoms seek health services and a considerable 'symptom iceberg' exists in the community. This phenomenon has been observed with respect to both general and oral health. In a study in the UK, for example, Locker (1989) found that 40% of people interviewed reported oral or facial pain but less than half (44%) of these consulted a dentist. In fact only 62% of those who experienced severe toothache sought dental care (Locker, 1989). The most recent Adult Dental Health survey found that 55% of people had on average, one and a half unsound teeth (Gibson, 2004). There is a large discrepancy between need for medical and dental care and the utilisation of healthcare services.

This paper presents the findings of a study exploring the dental illness behaviour exhibited by adult working men attending government dental services and private dental services in Delhi, India. There is very little literature relating specifically to health and illness behaviour in the Indian context and this study provides an interesting insight in to a previously unexplored area. We start by looking at the literature around accessing dental services and the factors which impact upon dental service usage before moving on to briefly look at health and illness behaviour and the use of alternative healing systems. The results of the study are then presented and some possible conclusions are drawn along with recommendations for improving dental service usage amongst the most vulnerable populations.

Accessing dental services

Whether and how a person accesses a health or dental service, depends upon a number of factors. These can be grouped under following categories (Gibson, 2004): Accessibility of Health (Dental) Services and Financial & Organisational Barriers to Service Utilisation; Personal (psychological) characteristics: childhood experience and anxiety; Social characteristics: age, gender, employment and culture & ethnicity; Health and Illness Behaviour. There are very little data on use of dental care services in India. What little information there is focuses on accessibility and health and illness behaviour.

Accessibility of dental services is one of the key barriers to dental service utilisation (Finch *et al*., 1988). Penchansky and Thomas (1981) suggested 5 A's to define accessibility of health services: availability; accessibility; affordability; acceptability and accommodation. Availability refers to the quantity of available care. For a developing country like India, the biggest challenge in improving population health has always been in providing healthcare facilities to a one billion strong population with limited resources. The Indian healthcare structure is referral based with primary practitioners acting as gatekeepers to secondary care and controlling access to limited resources. A large number of primary health centres with basic facilities act as point of first contact for the public, making referrals to specialist hospitals for those requiring more complex treatment. Specialist hospitals are concentrated only in the big cities such Delhi. Moreover, primary health centres in India do not generally offer dental services, and so people requiring dental care also come to these specialist hospitals in the city. This puts tremendous pressure on the dental services in the Delhi hospitals as they cater for a population much wider than the city itself.

There are two aspects of accessibility. Macro-accessibility refers to ease of reaching a service in terms of location, availability of transport, distance from people's residence etc. Micro-accessibility refers to the ease of getting into and navigating the individual premises. In the Indian context, micro-accessibility is not seen as a barrier for most disabled people. Joint family traditions ensure that most disabled family members are accompanied to appointments by non-disabled family members who are able to provide support and assistance. Travelling to hospitals may, however, pose some difficulty for those who depend on public transport as this is rarely accessible. Affordability refers to the costs involved in using services in terms of treatment, transportation, and absence from work (Curtis *et al*., 2007). Private dental clinics are beyond the means of the majority of people in India, while government dental services provide free or heavily subsidised care but only operate between 9am and 4pm on weekdays. Leave from work and possible loss of wages are necessary to access these services, and this ties in with the concept of accommodation which refers to the flexibility of services with respect to time. An individual who works on daily wages may not be able to take time off work as they do not get paid unless they work. This is a particular issue for lone family breadwinners. In addition, in India, people may be out at work from 8:00am until 9:00pm, Monday to Saturday (including travelling time). In such a scenario, people find it difficult to attend dentists especially if dental clinics are not open on Sundays.

HEALTH AND ILLNESS BEHAVIOUR

Health Behaviour is 'an activity taken up by a person who believes himself or herself to be healthy for the purpose of preventing health problems', whereas Illness Behaviour 'is the activity undertaken by a person who feels ill for the purpose of defining that illness and seeking relief from it' (Kasl and Cobb, 1966). In the context of access to dental services, these definitions imply that regular attendance at a dental clinic constitutes health behaviour and symptomatic attendance constitutes illness behaviour. The concept of routine attendance is limited mainly to the developed nations; and therefore health behaviour is of less significance than illness behaviour in relation to dental service utilisation in a less developed country such as India. This study is a contribution to the better understanding of the process through which illness behaviour occurs (Cockerham, 1995) in the sample population.

Behaviour models focus on the use of formal health care services. The vast majority of health and illness behaviours take place outside the formal healthcare system, however (Blaxter, 2004; Bury, 2005). This usually takes the form of home based self-administered or family- administered care. 'Even those illnesses for which consultation has been sought are cared for mostly at home' (Freund and Mcguire, 1991). Levin and Idler (1981) go so far as to suggest that members of the hidden healthcare system are the 'real primary care providers'. In India, traditional healing practices also play a very important role. Yoga is an ancient system of physical exercises and breathing techniques designed to maintain a healthy body and mind, and Ayurveda is a way of life concerned with the problems of body and mind, spirit and consciousness. 'Although allopathic medicine practices are available in almost all rural communities, poor Indians use more informal or traditional systems of medicine' (Chatterjee 2003).

Study background

India has one of the most privatised healthcare systems in the world and boasts a number of government funded premier medical institutions. Private healthcare is booming and there is a steady increase in consumer spending on non-governmental medical care (59%) as household incomes are rising. However, public healthcare facilities are still more frequently used (60%) for cases requiring hospitalisation (Chaterjee, 2003). While the private hospitals and clinics cater to the needs of those who can afford their fees, government funded hospitals and dispensaries mainly cater to those who cannot. The care provided in government hospitals is at minimal cost, and there are at present 24 government-funded hospitals in Delhi, most also providing dental services. These services are free but mainly limited to pain relief and sepsis (Municipal Corporation of Delhi, 2007:

National Informatics Centre, 2007). These hospitals (at tertiary level) carry a huge referral load from districts and rural areas adjoining the city, and tend to be used mainly by those with no alternative, hence treatment waiting times are very long (Chatterjee, 2003). Concomitant with the formal healthcare services in Delhi are the unlicensed dental practitioners. Often these are people who have attained some technical know-how through working as dental assistants and who then open up their own practices. These practitioners are not legally allowed to practice but are thriving in rural and slum areas of the city. Against this background and in light of a lack of formalised or standardised measures of socio-economic status in India, this study utilises attendance at government and private clinics as a proxy measure for socio-economic status. Whilst this is clearly not an ideal measure, it does allow us to compare samples of those with and without the resources to access private dental services.

METHOD

Qualitative methodology has been extensively applied in social science research and is now growing in popularity in dental research (Bower and Scambler, 2007). This study seeks to explore the process through which people come to attend a dental clinic and is therefore best suited to qualitative methods. Participants were purposively recruited through their attendance at government or private clinics. A list of clinics was compiled and permission sought to recruit participants, one government dental service and two private dental services were randomly selected from the respective lists. Each service was then visited on a randomly chosen day and patients who visited that particular service on that particular day and who fulfilled the inclusion criteria - working males aged 30-55 years - were invited to participate in the study. This procedure was repeated until the desired sample size of 20 participants (10 from the government dental service and 5 from each private dental service) was obtained. It was decided to interview only men of working age as this was a small study with the main aim of exploring issues of socio-economic status. Men were chosen as they are still likely to be the main breadwinners. If we were to repeat the study we would like to look at the experiences of women as well as men.

A semi-structured interview schedule was constructed (Freund and Mcguire, 1991) covering background information; key themes derived from the literature; and general questions on health and illness, beliefs and attitudes. All interviews were conducted in Hindi and video recorded. Recordings were translated, transcribed and analysed using framework analysis (Ritchie *et al*., 2003) which is a matrix-based approach to qualitative data management and analysis, successfully and widely used in health services research. It is a systematic approach that treats cases consistently and allows comparisons within and between cases. 'Raw data are reviewed, labelled, sorted and synthesised' before being developed into descriptive accounts' identifying key dimensions of the data. 'Explanatory accounts' are then developed (Spencer *et al*., 2003). Throughout the process the data were checked and rechecked across the levels of abstraction in an iterative process.

In India at present, social science research projects which involve non-invasive procedures for collection of data (such as interviews) and do not pose a present or future threat of harm or injury (physical, mental or social) to the participants do not require ethical approval from any formal body. Ethical approval was therefore not obtained. However, the good practice principles of non-malificience and autonomy have been safe guarded by highlighting the voluntary nature of participation, ensuring that participants are aware of their right to withdraw at any point, maintaining confidentiality throughout, ensuring the safe storage of all data and obtaining informed consent prior to interview or recording.

Measuring socio-economic status

Like many developing nations, the biggest challenge for India is the widening income gap between the richest and poorest in society. This study set out to examine the impact of socio-economic status on the process through which people make decisions about attending dental clinics. There is no accepted system of occupational classification in India. Two alternative measures often used are the poverty line and the caste system. In India, the line of absolute poverty is described as the expenditure required for a daily calorie intake of 2400 per person in rural areas and 2100 in urban areas. This system is controversial, however, as the absolute poverty line is set so low as to only cover the destitute. 0.4% of the rural population and 9.42% of urban population falls below this poverty line (Economic Survey of Delhi, 2005-6). The Caste system, in contrast, is a hierarchical stratification system applicable to followers of Hinduism and developed in medieval India. The Scheduled caste is the lowest caste and the majority of people born in to this caste are economically deprived. Approximately 17.0% of the population of Delhi belong to Scheduled Castes, (Census, 2001) and most will be economically deprived. Whilst this system gives an idea of some of the groups living in poverty in Delhi, the data are limited in that they apply only to Hindus (approximately 83.67% of the Delhi population) (Census, 1991).

In light of the problems described above a series of proxies were used in this study in an attempt to differentiate between respondents. Data were collected from three clinics, two private and one government run. The rationale behind this was to differentiate between the experiences and behaviour of men who could and could not access private care. Data were collected on additional proxy measures to get an approximation of socio-economic status including education level and occupation type. When these factors were taken in to account there was a clear difference between the group using private dental care and those using the government run clinics. For example, 9/10 users of the private clinics are either graduates or post graduates with a group average of 4.4 years of higher education. In comparison, only 1/10 users of the government clinic is a post graduate with a group average of 0.5 years of higher education. Similarly, 9/10 users of the private dental

clinics were non-manual workers and 9/10 users of the government clinic were manual workers.

RESULTS

The results of the study are presented in an approximation of chronological order as a process illustrating the journey from the initial symptom experience to the final destination of the dental clinic. This section is designed to chart the health and illness behaviour that is exhibited and the impact it has on attendance at the dental clinic. Three phases of illness behaviour are identified as: Explanation, Reaction and Justification. Each phase is presented with illustrations from the interviews where appropriate. In the quotes below 'G' is used to denote a government clinic user and 'P' denotes a private clinic user.

Results from the three phases of illness behaviour

Explanation

Respondents were asked to explain the nature of their symptoms and their understanding of the causes of those symptoms. Two explanatory models were developed according to the role attributed to teeth in the process. The first model revolved around the nature of the tooth and/or mouth and is categorised as 'Tooth-Specific'. The second model focuses on exterior causes and is categorised as 'Non Tooth-Specific'. (*Table 1*).

Tooth Specific explanations focused on the tooth and its immediate surroundings:

'There could be a cavity there though I can't see anything.' P02

Many of the Tooth-Specific explanations given also included an element of acknowledgement of culpability. All but one of the participants giving Tooth-Specific explanations attended the private clinic and 9 out of 10 private clinic users gave an explanation of this kind.

Non Tooth-Specific explanations, in contrast, looked at the predisposing situations that led to development of the disease:

'You would know it better but in my opinion one of the reasons is age. Another would be perhaps hot and cold food'. G04

'I think this is because of the mutton we eat. I think our teeth are meant for eating vegetarian food so eating mutton puts lot of stress on our teeth.' G10

In these cases, causes were deemed beyond the control of the individual and there was little evidence of an acknowledgement of personal culpability. All respondents giving this type of explanation used the government clinic and 8 out of 10 government clinic users gave a Non Tooth-Specific explanation.

Reaction

Phase one involved making sense of the symptoms. Phase two was concerned with reacting to them. Reactions ranged across a continuum from prompt attention resulting in immediate attendance at a dental clinic to taking no action at all. An immediate response culminating in a visit to a dental clinic was rare however, and the most common initial response was to ignore the symptoms. This was most often followed by a process of making sense of the illness through self examination:

'…problem is that I have complaint of pyorrhoea…My gums bleed when I brush in the morning……There is also pus in the tooth and it smells bad……I have been examining my mouth in the mirror and I have seen the pus with my own eyes.' G08

The initial recognition of the presence of symptoms was then followed by a period of symptom management. This commonly included the modification of oral habits (e.g. avoiding eating on the affected side), temporalising of symptomatology (waiting in the hope that symptoms would subside), and/or some kind of self-care measure (medication, lay remedy etc.).

Modification of behaviour and temporalising of symptomatology were used as strategies by both groups. Less than half (6 out of 10 of the private clinic users and 0 out of 10 of the government clinic users) made use of self care however. Those that did used a combination of an allopathic medication (invariably a painkiller) and a lay remedy (clove oil, warm saline rinses, alum mouth rinse etc.). Allopathic medications were used in a variety of ways based on advice, trial and error or previous experience:

'I became my own doctor you know, I have had similar experience earlier and I thought there must be a cavity you know and I thought I could apply the paste again and that would take care of it. But it didn't work.' P07

Only one respondent reported using an alternative healing system as a means Of controlling the symptoms. He talked of using an ayurvedic remedy:

'...I know of a remedy which gives a hundred percent relief. You do it once and you are away from the problem for three months……. If you do this twice a week, you will have no problem for the next three months……This remedy, I have tried myself, it is a hundred percent effective.' P10

Interestingly, no further information was given as to why the respondent had decided to use the dental clinic in this case. Alternative healing systems were not widely seen as effective in the treatment of dental diseases, although one further participant talked of using ayurvedic toothpaste and an oil and salt mixture for gum massage in childhood.

Justification

All of the respondents who participated in this study had delayed seeking help to a greater or lesser extent. Two reasons were given to justify delays in seeking help. The first

Table 1 Key factors influencing illness behaviour

	Nature of reported symptoms	Self care measure employed	Reason for delay	Explanation given	Acceptance of accontability
P01	Urgent	Pain killer	Berable pain	Tooth specific	Yes
P02	Normal	Lay remedy	Berable pain	Tooth specific	Yes
P03	Urgent	None	Berable pain	Tooth specific	Yes
P04	Normal	Combination	Berable pain	Tooth specific	Yes
P05	Normal	Pain killer	Berable pain	Tooth specific	Yes
P06	Normal	None	Berable pain	Tooth specific	-
P07	Urgent	Combination	Berable pain	Tooth specific	Yes
P08	Urgent	Combination	Berable pain	Tooth specific	Yes
P09	Normal	None	Berable pain	Unexpected symptoms	-
P10	Urgent	Lay remedy	Berable pain	Tooth specific	Yes
G01	Emergent	None	Work commitments	Non - tooth specific	No
G02	Emergent	None	Work commitments	Non - tooth specific	No
G03	Emergent	None	Work commitments	Non - tooth specific	No
G04	Emergent	None	Inadequate access	Non - tooth specific	No
G05	Urgent	None	None given	Non - tooth specific	Yes
G06	Emergent	None	Work commitments	Non - tooth specific	No
G07	Emergent	None	Work commitments	Non - tooth specific	No
G08	Emergent	None	Work commitments	Non - tooth specific	No
G09	Emergent	None	Work commitments	Non - tooth specific	No
G10	Emergent	None	Work commitments	Non - tooth specific	No

related to the nature of the symptoms (mild, moderate or rare in occurrence). Symptoms were deemed tolerable either because of 'bearable' levels of pain or through the use of self-medication:

'Initially I thought that I will be able to manage myself, it is a small thing...that was I think on Thursday night or Friday. So I thought I will give it a try if home remedies will work. On Saturday it was still bearable I would say but then…you know…Sunday happens to be an off day and also on Monday as well. And then when I couldn't manage with a pain killer I thought this needs treatment.' P04

One private patient visited an unlicensed practitioner before being forced to visit the clinic.

The second reason given for delaying help related to work issues. One problem was that work commitments did not allow for time off work to attend clinics which are only open during working hours:

'I work on daily wages. If I don't go, I don't earn any living that day. That's why I do not take leave until and unless it is absolutely necessary.' G01

An inability to take time off work clearly fits with work on the importance of affordability (loss of wages) and accommodation (flexible opening hours).

When clinic type was assessed, private clinic users favour the symptom explanation and government clinic users favour the work explanation. In this context the nature of the symptom could be taken to indicate the importance of an internal locus of control as measured through the stated ability to control symptom response, and work commitments could indicate the predominance of an external locus of control as affordability and accommodation issues were beyond the control of the individual.

Typologies of help-seeking

In the results section we presented the main elements of the process through which people travel from an initial symptom experience to the dental clinic. These elements can then be incorporated into three broad typologies of help-seeking. These wider typologies look more broadly at help-seeking behaviour and start to unpick some of the mechanisms at work behind the behaviours presented. The three typologies are:

- Early and late action takers
- Believers and non-believers
- Empowered and disempowered individuals.

Each typology elucidates a key phase in the decision making process. The typologies are presented chronologically, moving from the initial decision on whether to seek immediate treatment through alternative treatment courses and finishing with an overall classification related to power. It is worth bearing in mind, however, that these typologies are interdependent. There is a symbiotic relationship between levels of empowerment and treatment options available to people. Again each typology is also analysed in relation to socio-economic status.

Early and late action takers

This depends on both the speed with which people respond to symptom presentation and the course of action that they choose to take. Early action takers take some form of positive action which may involve a rapid visit to the dental clinic or, more commonly, some form of self care. Late action takers adopt a more passive position in response to their symptoms. They delay treatment decisions and do not engage in active self care.

Believers, partial believers and non-believers

Individual action choices are inseparable from beliefs about the different treatment options available. The study participants adopted three belief positions; believers, partial believers and non-believers. Degree of belief in alternative healing systems seems to correlate with decisions on self-care for tooth related illness. Non-Believers express no faith in alternative healing systems, do not visit alternative practitioners, utilise lay remedies or self-medicate with allopathic medicine. Interestingly, non-believers often seek out and make use of unlicensed practitioners. This is seen as a more accessible alternative to professional dental care but is distinct from self care. Partial believers are more likely to use at least one intervention and often combine alternative and allopathic self-care remedies. They predominantly use over the counter ayurvedic and homeopathic remedies rather than visiting alternative practitioners. Believers self-medicate and consult alternative practitioners, the most common being Ayurvedic, Homeopathic and Naturopathic. Firm believers prefer to avoid unnecessary medication and choose alternative remedies over allopathic ones where possible. Only one believer stated using an alternative healer for tooth related pain.

Empowered and disempowered individuals

The way that individuals make sense of their symptom experience, expressed responsibility and the reasons given for a delay in seeking care correlate. Levels of expressed responsibility and reasoning for action decisions relate to the level of control that individuals are able to exert over their lives and actions. In this study control is measured through the ability to engage in help-seeking behaviour when necessary and the reasons given for delaying such action. The statements of empowered individuals reflect feelings of control. They admit responsibility for symptoms and for delays in seeking treatment. Empowered individuals are also more likely to favour an internal locus of control in giving tooth-specific explanations for symptoms and basing decisions on attendance at the dental clinic on pain thresholds. In contrast, disempowered individuals give statements which reflect their lack of power and their subjection to factors beyond their control. Active self care is not utilised and a strategy of passive temporalising is adopted in the hope that symptoms will subside without intervention. Disempowered individuals give non-tooth-specific explanations for their symptoms, often implicating factors beyond their control. There is no evidence of reflexivity or personal responsibility for symptom development.

The impact of socio-economic status

Clear socio-economic divisions can be seen in all aspects of the journey from initial symptom experience to the dental clinic. Almost without exception those attending the private clinics (representing the more socio-economically advanced respondents) were more likely to take an active approach from the start. They were more likely to engage in self care, favour tooth specific explanations, and cite the 'bearable' nature of their symptoms as the reason for delaying seeking professional help. By contrast, those attending the government run clinics (the more socio-economically deprived respondents) were more likely to take a passive approach and avoid self care. They favoured non- tooth-specific explanations cited 'work commitments' (factors beyond their control) as the reason for delaying seeking professional help. Users of government run clinics were also disproportionately more likely to visit unlicensed practitioners before seeking professional or unlicensed help.

In addition, all of the private clinic participants were early action takers, either seeking dental care, employing self care

measures or modifying oral habits to avoid pain. Dental treatment was sought before symptoms become severe and distressing. All but one of the government service respondents were late action takers, frequently ignoring symptoms as a first reaction, not employing self-care and visiting the dental clinic only after symptoms have severely exacerbated. When looking at healthcare beliefs the same divisions apply with private clinic users as believers or partial believers utilising alternative practitioners and/or remedies for general health problems and government clinic users registering as non-believers and avoiding self-care. The latter were, however far more likely to visit unlicensed dental practitioners with 8/10 visiting an unlicensed practitioner before visiting a licensed one in comparison with 1/10 private clinic users. Unsurprisingly the same clear divisions can be seen when looking at power with all of the private clinic users categorised as empowered and all but one government clinic user classified as disempowered. Whilst the sample here is clearly too small to generalise from, the results do suggest trends in oral health and illness behaviours which can be seen to be related to educational level, occupation type and income satisfaction, suggesting that socio-economic factors play an important role is shaping these behaviours.

DISCUSSION

The results of this study suggest that there are a series of stages through which people travel when determining whether or not to seek professional dental care. On experience of initial symptoms, the main decisions taken concerned whether to seek help immediately and whether to engage in any form of self treatment. Decisions about treatment options were dependent on internal and external factors. Internal factors included explanatory models for the symptom experience and external factors included financial and work constraints. Three distinct typologies can be ascertained through which it is possible to classify the respondents through their actions and beliefs. The main aim of this study was to look at the relationship between this process and socio-economic status. There are, however, a range of other linked factors which have been touched upon and which bear further analysis such as educational attainment. This was used as a proxy indicator for socio-economic status but may also (at least partly) explain choices that were made in relation to self-care. The extent to which people have an accurate understanding of their teeth and the factors that cause disease will determine the way people make sense of their illness and therefore the way they attempt to manage it. This is evident in statements of illness causation made by respondents. Private dental clinic users had significantly higher levels of educational attainment and made tooth-specific and focused causal statements whilst those using the government dental clinic made more generalised non-tooth-specific statements.

Another salient factor relates to power and the degree of power that individuals are able to exercise over their lives and their immediate (and wider) surroundings. Empowerment can be seen to directly influence choices about self-care, acknowledgement of responsibility for the presence of symptoms and treatment choices. A lack of empowerment would show, for example, in an inability to take time off during the working day without losing pay, and the lack of options in accessing care outside of the working week. Clearly this is also tied into socio-economic status and material circumstances. Those with least power and fewer treatment options are more likely to wait until symptoms are advanced before seeking help and so are more likely to experience the distress of pain and of a lack of choice and control over the situation. Interestingly, the vast majority of respondents from both groups make use of a lay referral network (usually a wife or colleague) in deciding whether or not to seek professional help. Resulting recommendations differed according to clinic however, with
8/10 private clinic users being referred to a specific practitioner whilst 9/10 government clinic users were referred to a specific clinic. In addition, government dental service participants stated a preference for local services whereas private dental service participants were willing to travel. All government clinic respondents visited a clinic within a 5 km radius of their home whilst half of the private clinic users travelled between 5km and 10km and half travelled over 10 km to attend a specific clinic. The reason for this difference may lie in the structure of the healthcare system in Delhi.

Private dental care is mainly provided at private dental clinics scattered across the city, and owned and operated by a single dental surgeon. In such a scenario, it is relatively easy for the dentist and their patients to develop a long-term trusting relationship. As a result the dental surgeon becomes the symbol of dental care. Government dental care on the other hand is provided at dental departments in government hospitals where there are usually a number of dental surgeons who may be permanent clinic staff or on rotational duties. In such a scenario, a 'one to one' doctor-patient relationship is very unlikely. In the absence of a dental surgeon as a symbol of dental care, the hospital becomes the symbol of dental care. Thus those utilising private care are referred directly to a specific dental surgeon whilst those utilising government services are recommended to a specific hospital.

A final point relates to the use of unlicensed practitioners and the rationale for using these services. Almost all of the individuals belonging to the lower socio-economic group reported visiting unlicensed dental practitioners before attending the government dental service. The inflexibility of daily wage jobs combined with the lack of availability of government dental services in the evenings plus the inability to pay private fees leave little option for many other than visiting unlicensed dental practitioners in the hope of a cure. Only when symptoms become so severe as to cause distress do these individuals take leave from work to visit the government dental service. Dental surgeons in India have always objected to the existence of unlicensed practitioners stating that it is an injustice to the qualified dental professionals as well as to those people who seek care from them. People who go to these unlicensed dental practitioners, however, do so

out of necessity rather than choice. They are predominantly those who cannot afford care at private dentists and are unable to attend government dental services in the working hours simply because many of them are daily wage earners and have to arrange for evening meals for their families. Similar trends have been found in other studies focusing on unlicensed practitioners where the most vulnerable sections of the population have little choice but to use these practitioners and are significantly more at risk if they do so (Frazao and Borlotti, 2006).

Due to the small sample size and age, gender and occupation specific nature of the sample used in this study it would be disingenuous to suggest that the results can be generalised to the whole population of Delhi, or beyond. There are, however, a number of findings which bear further study and may relate to the experiences of socio-economically deprived working men across similarly disadvantaged populations. When looking at dental illness behaviour what becomes apparent is that there are a number of ways in which the oral health of those who are most vulnerable (those in the lower socio- economic groups) in Delhi could be improved. The most obvious recommendations would improve not only their oral health but also their general health and overall standard of living. These relate to reducing poverty, introducing sick-pay and other benefits for those working for daily wages and improving educational levels and specific health related knowledge. Other recommendations relate more directly to the health services themselves and, more particularly to opening hours of clinics. If clinics were open outside of the normal working week then those on daily wages who cannot afford to take time off except in the most extreme circumstances would make more use of the services.

Another possibility is the development of a training programme for unlicensed practitioners providing education in basic dental care provision so that they are better equipped to provide quality basic dental care to their patients. In this manner, these practitioners can be incorporated into the organised healthcare sector and can help to better serve those sections of the population which depend on them for their oral healthcare needs. Using Friedson's distinction, what is needed is an expansion of the occupation of dentistry beyond the boundaries of the profession of dentistry (Friedson, 1970; Friedson, 2001). In combination, these recommendations would go some way towards improving the oral health of those in most need amongst the population of Delhi.

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