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Barriers to oral health care amongst different social classes in India.

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Objective **-** To investigate and compare the influence of social and cultural factors as access barriers to oral health care amongst people from various social classes. ***Basic research design and participants*** **-** A cross sectional survey in Pimpri, was conducted using a pilot tested 15 item- structured, close-ended and self-administered questionnaire. Two hundred and fifty people aged 35-45 years (50 participants each in five social classes as per British Registrar's General classification of occupation) were selected. The chi-square test was applied to check statistical differences between social classes at 5% level of significance. ***Results*** Overall, it was observed that irrespective of the social class difference 88% participants wished to seek only expert/professional advice for the dental treatment. Unavailability of services on Sunday (63%), going to dentist only when in pain (57%), trying self care or home remedy (54%), inadequate government policies (50%), budgetary constraints (40%) were among the major access barriers. Statistically significant difference in the access barriers among the social classes were found related to: Inadequate government policies, budgetary constraints, appointment schedules, far-off located clinics, myths and fear about dental treatment. ***Conclusion*** **–** Social and cultural factors act as access barriers to oral health care and social class differences have a significant influence on the access barriers.

Key words: Access barriers, India, oral health care, social and cultural factors, social class.

Introduction

The norms of the society to which the individual belongs, fashions and governs the lifestyle and the habitat. The relationship between people and the socio-cultural system of the community plays a significant role in defining their health profile and illness, which ultimately have an important bearing on the outcome of the programmes aimed at improving community health (Paul, 1956). A review of the literature reveals that social and cultural factors act as important barriers to accessing and accepting health or dental care (Freeman,1999a; Freeman,1999b; Friedman,1994; Flores *et al*,1998). Factors such as race, location, social class, culture, diagnosis, inadequate knowledge and awareness of health insurance policies and language problems have been investigated as non-financial barriers by Friedman (1994). Another study by Flores (1998) identified access barriers to health care of Latino children and found out that language problems, cultural differences, clinic location, scheduling appointments, poverty, lack of health insurance, inconvenient office hours, taking time off from work and long waiting hours were the major access barriers. Also, Freeman (1999a) enumerated four factors which played a major role in preventing a patient from accessing dental care; dental anxiety state, financial costs, perception of treatment need and lack of access to care. Furthermore, Freeman (1999b) believed that psycho-social factors are important in influencing dental attendance and compliance with dental treatment.

Hence, health care providers must consider the social and cultural factors when planning health care programmes so that they are suitable to the requirements of the population at large and there is maximum utilization of the dental services.

Pimpri city is an industrial belt of the state of Maharashtra (India) with a combined population of 1,006,417 of Pimpri-Chinchiwad township (2001 census). The oral health care delivery system in Pimpri comprises of one private dental college, dental units in the medical hospitals and approximately 125 private dental clinics. Also, dental quacks and traditional healers have their roadside open clinics. In view of the government provision, there is one primary health care centre but is not equipped to provide dental care. There is neither provision of dental insurance nor financial support from the government. Some industries here have a medical reimbursement facility, but it covers dental expenses only to a small extent, and although the private dental college offers services at a concessional rate , people mostly have to bear their own expenses for the dental care.

With the literature background indicating that social and cultural factors influence access to dental care and with no such studies carried out among the population of Pimpri, the present study was designed. Also, the population of Pimpri is a mixed group of different social classes and since social class is one of the important discriminators of health inequalities (Gupta and Mahajan,2003), the study was carried out among people of different social classes. The aim of the study was to investigate the social

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and cultural factors as access barriers to oral health care and also to evaluate whether social class difference had any influence on the access barriers.

Methods

Ethical approval for the study was granted by the Institutional Ethics Committee, Dr.D.Y.Patil Dental College and Hospital, Pune. A convenience sample of 250 participants, aged 35-45 years was recruited for the study. British Registrar classification of social class (Abramson and Abramson, 1999; John, 2003) was used to select 50 participants each in the five social classes.

Social class I: Upper and middle class
(Higher professionals such as doctors, engineers, large employers and directors of business).
Social class II: Intermediate class
(Lower professionals such as teachers).
Social class III: Skilled and clerical worker class
(Clerks).
Social class IV: Partly skilled worker class
(Semi-skilled workers such as factory workers).
Social class V: Unskilled worker class
(Laborers and casual workers).

The data was collected using a structured and self administered questionnaire. The questionnaire was pilot tested before it was used for the final data collection. It was made available in English and two local languages (Hindi and Marathi). The questions were based on three variables : attitude, social class and government policy for the social factor and four variables : traditional beliefs, misconception, preferences and taboos for the cultural factor. The questionnaire was self -designed following the instructions of questionnaire designing by Abramson and Abramson (1999), referring to the other studies in the literature and the investigators experience. The questionnaire had two parts. Part I sought information about the participant's name, age, gender, occupation and address. The second part consisted of 15 close-ended questions with "YES" and "NO" options for every question (Table 1). The data were collected by a door to door survey among the social class I and V at their homes in the evening, while at school, office and the factories for class II, III and IV respectively during the morning hours. The responses received were entered in a Microsoft excel sheet. For analysis, the simple counts of "YES" and "NO" responses were made and the percentages were calculated for every question. SPSS version 10.0 was used for analysis. The chi-square test was used to check the differences among the different social classes at 5% level of significance.

Results

The age range of the 250 participants was 35-45 years (Mean ±SD was 39.7±3.2). There were 156 (62.4%) males and 94 (37.6%) females.

There were nine barriers which showed a statistically significant difference with respect to the social class.

People who were affected by inadequate government policies that acted as access barriers were 15(30%) in social class I, 14(28%) in social class II, 30(60%) in social class III, 27(54%) in social class IV and 38(76%) in social class V (χ^2 = 33.506, p = 0.001).

Those participants who found high cost of dental treatment as access barrier to oral health care were 03(6%) in social class I, 17(34%) in social class II, 23(46%) in social class III, 27(54%) in social class IV, 29(58%) in social class V; whereas those who were not affected by the high cost of the dental treatment were 47(94%) in social class I, 33(66%) in social class II, 27(54%) in social class III, 23(46%) in social class IV and 21(42%) in social class V (χ^2 = 36.524, p = 0.001) .

The fear of some serious problem being detected during routine dental care acting as access barriers in various social classes were 09(18%) in social class I, 12(24%) in social class II, 12(24%) in social class III, 22(44%) in social class IV and 24(48%) in social class V (χ^2 = 16.730, p = 0.002).

The distance of dental clinics from the residence of the people that acted as access barriers in the various social classes were 04(8%) in social class I, 03(6%) in social class II, 08(16%) in social class III, 20(40%) in social class IV, 24(48%) in social class V; whereas, unsuitable clinic locations that did not affect people from various social classes were 46 (92%) in social class I, 47 (94%) in social class II , 42 (84%) in social class III, 30 (60%) in social class IV and 26 (52%) in social class V (χ^2 = 41.787, p = 0.001).

Visiting dental clinics by prior appointments was found to be an access barrier in 12 (24%) in social class I, 10 (20%) in social class II, 18 (36%) in social class III, 27 (54%) in social class IV, 24 (48%) in social class V (χ^2 = 18.730, p = 0.001).

Myth that oral prophylaxis leads to loosening of teeth was found to be an access barrier in 10 (20%) in social class I, 7 (14%) in social class II, 17 (34%) in social class III, 24 (48%) in social class IV, 23 (46%) in social class V (χ^2 = 21.075, p = 0.001).

Loss of vision following tooth extraction was an access barrier in 02(4%) in social class I, 07(14%) in social class II, 20(40%) in social class III, 20(40%) in social class IV, 23(46%) in social class V (χ^2 = 33.669, p = 0.001).

Influence of traditional healers

Traditional healers as the preferred first choice of treatment was found to be an access barrier to oral health care in 0(0%) in social class I, 0(0%) in social class II, 08(16%) in social class III, 09(18%) in social class IV, 10(20%) in social class V (χ^2 = 20.595, p = 0.001).

Fear that the dentist would carry out unwanted treatment for monetary gain formed an access barrier in 16(32%) in social class I, 13(26%) in social class II, 08(16%) in social class III, 25(50%) in social class IV, 20(40%) in social class V (χ^2 = 15.353, p = 0.004).

In social class I and II – Trying self care and home remedy (56% and 68%) , unavailability of services on Sunday (52% and 60%) and going to dentist when one can no longer bear the pain (48% and 56%) were the three major access barriers to oral health care. In social class III- unavailability of services on Sunday (74%), inadequate governmental policy (60%) and trying self care and home remedy (56%) were the major access barriers. In social class IV- going to dentist when one can no longer bear the pain (66%), unavailability of services on Sunday (64%), appointment schedules (54%), budgetary

Table 1. Responses to the questions by the participants belonging to five different social classes.

QUESTIONS	*Responses*	*Social Class I n (%)*	*Social Class II n (%)*	*Social Class III n (%)*	*Social Class IV n (%)*	*Social Class V n (%)*	*χ2 , p- value*
Q.1 I like to seek only expert / professional advice when I take dental treatment and I would not like to go to a dentist who does not have specialized qualification.	Yes No	43(86%) 17(14%)	49(98%) 1(2%)	41(82%) 9(18%)	44(88%) 6(12%)	43(86%) 7(14%)	6.818, 0.146
Q.2 Inadequate government policies makes it difficult for me to take to oral health care.	Yes No	15(30%) 35(70%)	14(28%) 36(72%)	30(60%) 20(40%)	27(54%) 23(46%)	38(76%) 12(24%)	33.506 0.001*
Q.3 I will go to a dentist only when I no longer can bear the pain.	Yes No	24(48%) 26(52%)	28(56%) 22(44%)	25(50%) 25(50%)	33(66%) 17(34%)	33(66%) 17(34%)	5.980 0.201
Q.4 I will not go to a dentist alone until I am accompanied by family members, friends or neighbours.	Yes No	9(18%) 41(82%)	15(30%) 35(70%)	12(24%) 38(76%)	14(28%) 36(72%)	11(22%) 39(78%)	2.472 0.650
Q.5 I find it difficult to avail of oral health care facilities because they are not available on Sundays.	Yes No	26(52%) 24(48%)	30(60%) 20(40%)	37(74%) 13(26%)	32(64%) 18(36%)	 32(64%) 18(36%)	5.411 0.248
Q.6 I do not take dental treatment because the treatment provided is beyond my budget.	Yes No	3(6%) 47(94%)	17(34%) 33(66%)	23(46%) 27(54%)	27(54%) 23(56%)	29(58%) 21(42%)	36.524 0.001*
Q.7 I fear taking dental treatment because of the fear of some serious problems being detected by the dentist.	Yes No	9(18%) 41(82%)	12(24%) 38(76%)	12(24%) 38(76%)	22(44%) 28(56%)	24(48%) 26(52%)	16.730 0.002*
Q.8 I avoid taking dental treatment because I do not like the cleanliness of the dental clinic.	Yes No	15(30%) 35(70%)	9(18%) 41(82%)	13(26%) 37(74%)	16(32%) 34(68%)	14(28%) 36(72%)	2.977 0.562
Q.9 I don't like to take oral health care because the location of the dental clinics are not suited for me.	Yes No	4(8%) 46(92%)	3(6%) 47(94%)	8(16%) 42(84%)	20(40%) 30(60%)	24(48%) 26(52%)	41.787 0.001*
Q.10 I don't like to take oral health care because I don't like to go by appointments.	Yes No	12(24%) 38(76%)	10(20%) 40(80%)	18(36%) 32(64%)	27(54%) 23(46%)	24(48%) 26(52%)	18.730 0.001*
Q.11 Before I take dental treatment, I like to try self care and home remedy for dental problems.	Yes No	28(56%) 22(44%)	34(68%) 16(32%)	28(56%) 22(44%)	24(48%) 26(52%)	21(42%) 29(58%)	7.729 0.102
Q.12 I don't like to go to dentist and get my teeth cleaned because I feel that cleaning the teeth makes them loose.	Yes No	10(20%) 40(80%)	7(14%) 43(86%)	17(34%) 33(66%)	24(48%) 26(52%)	23(46%) 27(54%)	21.075 0.001*
Q.13 I believe that extracting the teeth will lead to loss of vision and because of this fear I avoid going to the dentist.	Yes No	2(4%) 48(96%)	7(14%) 43(86%)	20(40%) 30(60%)	20(40%) 30(60%)	23(46%) 27(54%)	33.669 0.001*
Q.14 I like to first go to traditional healers and get the treatment done.	Yes No	0(0%) 50(100%)	0(0%) 50(100%)	8(16%) 42(84%)	9(18%) 41(82%)	10(20%) 40(80%)	20.595 0.001*
Q.15 I don't like to go to a dentist because I feel that once I go to the dentist, the dentist will try to do the extra treatment which is actually not required.	Yes No	16(32%) 34(68%)	13(26%) 37(74%)	8(16%) 42(84%)	25(50%) 25(50%)	20(40%) 30(60%)	15.353 0.004*

*- Significant Values

constraints (54%) and inadequate governmental policy (54%) were among the major access barriers. In social class V- inadequate government policy (76%), going to dentist when one can no longer bear the pain (66%), unavailability of services on Sunday (64%) and budgetary constrains (58%) were among the major access barriers.

Fig 1 shows the percentage distribution of the access barriers in a descending order among all the participants. It was observed that unavailability of facilities on Sunday (63%), going to the dentist only when one can no longer bear pain (57%) trying self care or home remedy (54%), inadequate government policy (50%) and budgetary constraints (40%) were among the major access barriers .

Discussion

When speaking of access to dental care today, we must consider both the availability of care and the willingness

of patients to seek care (Guay, 2004). This discussion aims to describe factors as access barriers to seeking oral health care in two parts: Part I- Barrier factors common to all persons and not influenced by social class differences corroborating the fact that "Money isn't everything" and Part II - Factors as resistance to seeking oral care influenced by social class differences.

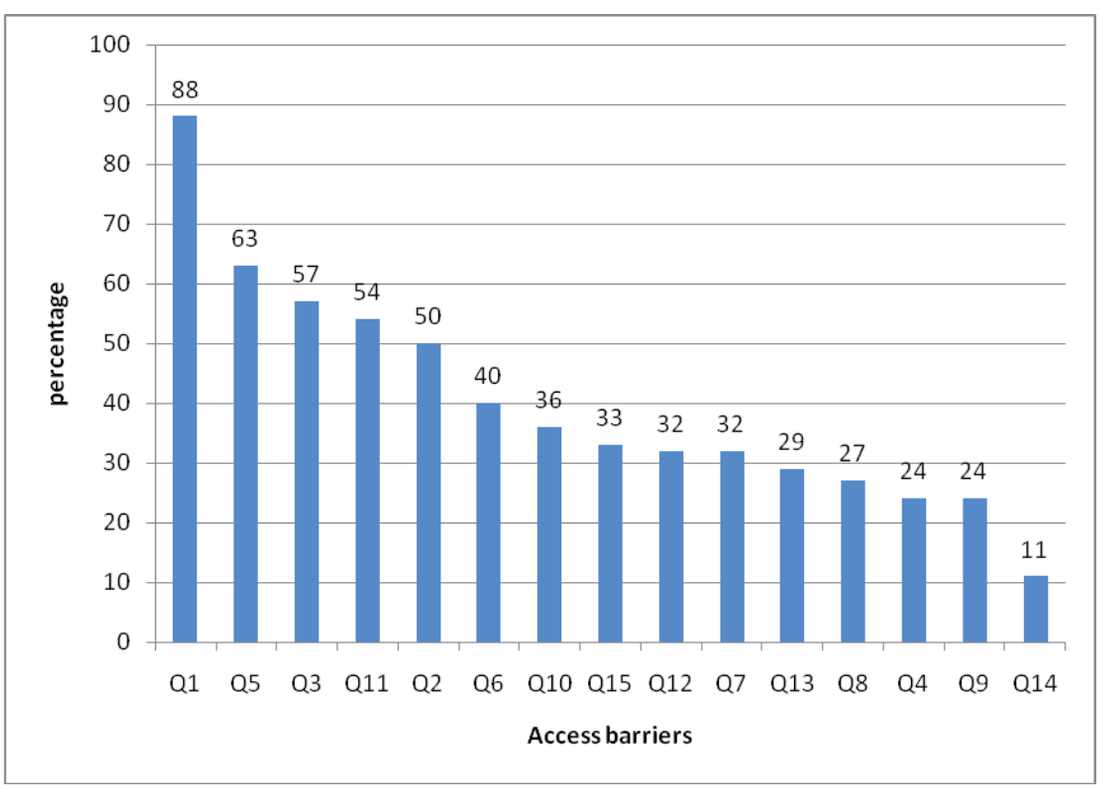
Barriers common to all persons.

A key finding in this survey was that the participants irrespective of social class preferred expert/professional advice when they sought dental treatment (Q.1). This was indeed surprising since their habitat, occupation, educational background and social status was different but their expectation for the specialized dental care was similar. Perhaps the conversion of need for dental services to demand in the long run may be inhibited by the various access barriers.

Unavailability of dental services on Sundays (Q.5) was one of the major barrier observed in a maximum of 63% of the sample. It is for the obvious reasons that people surveyed have long working hours on week days which makes it inconvenient to avail dental services on week day. Similar results have been reported in earlier studies (Friedman, 1994; Flores, 1998). For maximum dental service utilization dental services must be made available on Sunday. However, in Pimpri one class of people (the factory workers) have Thursday as their day off and this helps them to complete their dental appointments as it is a working day for the dental college and the other clinics.

Trying self care or home remedy (Q.11) and going to the dentist only when one can no longer bear pain (Q.3) act as an impetus to change their felt needs to demand for dental care among 54% and 57% participants respectively. This barrier may be due to the fact that dental diseases are not life threatening and people have enough knowledge of pain killers readily available over the counter which relieves them of their dental pain and also people like to try home remedies which are an indigenous methods of treatment before they consult the dentist. Lim *et al* (1994) in his study reveals that only when people are in a very acute situation, they attempt to take relief as soon as possible. Also. the decision to visit the dental clinic, when in pain is, a psycho- social determinant of dental health which hinders access to regular dental care (Freeman,1999). However, such an attitude becomes very difficult to tackle when it comes to motivating and educating masses regarding regular dental visits or adopting preventive measures for dental diseases.

Trithart (1968) has summarized the attitudes of lower class people towards health care as coming in crowds with family and friends, as they do not like to be outnumbered by the people providing treatment and the aseptic cleanliness of a dental office may convey the feeling of personal uncleanliness which may be the reason to avoid visiting a dentist. However such a finding has not been observed with the class V sample in the present study as it was seen that response to Q.4 (Avoiding dentist if one is alone) and Q.8 (Avoid dentist because one does not like the cleanliness of the dental clinic) marginally differed amongst all the social classes.



Refer Table 1 for details of Q1-15(access barriers).

Figure 1. *Access barriers to oral health care among all the participants.*

Part II: Factors as resistance to seeking care influenced by social class differences

The cost of dental treatment is the sum total of the consultation fee and treatment cost which may include laboratory charges and transportation costs if the clinic is located far away. Cost has undoubtedly been a major barrier in seeking appropriate heath care (Freeman,1999a) and the results of our study supports this finding and it is specifically true with the Class III, IV and V participants as their responses indicate that inadequate governmental policy (Q.2) and dental treatment beyond ones budget (Q.6) were a disincentive to seek dental care. In India, the magnitude of out-of-pocket expenses on dental care is almost always 100% which is not the case in countries like the United States (Manski *et al.,* 2002) and Australia (Marshall and Spencer, 2006) which have governmental or insurance support.

Usually the dental treatments are complex, multiple visits are needed for its completion and also the appointment may take longer time. When it comes to people of class IV and V going by appointments (Q.10), necessarily acts as access barrier because missing one day at work, they loose wages for one days pay. Work and time pressure has been shown to inhibit dental attendance (Freeman,1999a).

Avoiding dental care because of the fear that some serious problem may be detected by the dentist (Q.7), the belief that cleaning makes the teeth loose (Q.12) and that extracting teeth leads to loss of vision (Q.13) and the feeling that dentists will try to perform extra treatments which are actually not required (Q.15) were the significant access barriers affecting majorly the class IV and V participants. This can be attributed to the lack of awareness, low educational levels in these groups, anxiety, apprehension and myths about dental treatment entrenched in their minds (Peter, 2003).

Response to Q.14 (I like to first go to traditional healer and get the treatment done) was 0% in Class I and II and 11% from class III, IV and V . It has been observed that these healers influence the people by showing them worms, which are removed from their teeth and telling them that these worms are responsible for the dental caries, which probably seems convincing to the people. This can also be attributed to the lack of awareness and low educational levels in these groups,

This study is not free of limitation and one can raise a questions on the sampling method and for using Registrar's General classification by occupation for selecting a sample of different social classes for the Indian population. The classification of social class for an Indian population has been suggested by Pareek for rural population and for urban population the scale is developed by Kuppuswamy (which considers the individual's occupation, education and income) and another by Prasad BG (which is based on family size and income) (Gupta and Mahajan,2003). In both these classification for urban population "income" is the deciding factor for the social class. However, it was realized that, during the pilot study and by the investigators experience that people are reluctant to reveal their actual income which affects the determination of the social class. Hence to avoid such a bias the Registrar's classification of social class by occupation was used in the study.

Since, there was no documented data of social stratification of the Pimpri population, a convenience sample of 250 participants was included in the study with a distribution of 50 participants representing each of the five social classes. This may have over-presented or under-presented some social classes in Pimpri. However, this study is first of its kind in Pimpri, Maharashtra and can be considered as a pilot study for a future study with a larger representative sample.

However, within the limits of the present study it can be concluded that differences in social class influences access barriers to oral care and unavailability of facilities on Sunday, trying self care or home remedies, going to the dentist only when one can no longer bear pain and an inadequate government policy are the major access barriers experienced by more than 50% of all the participants.

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