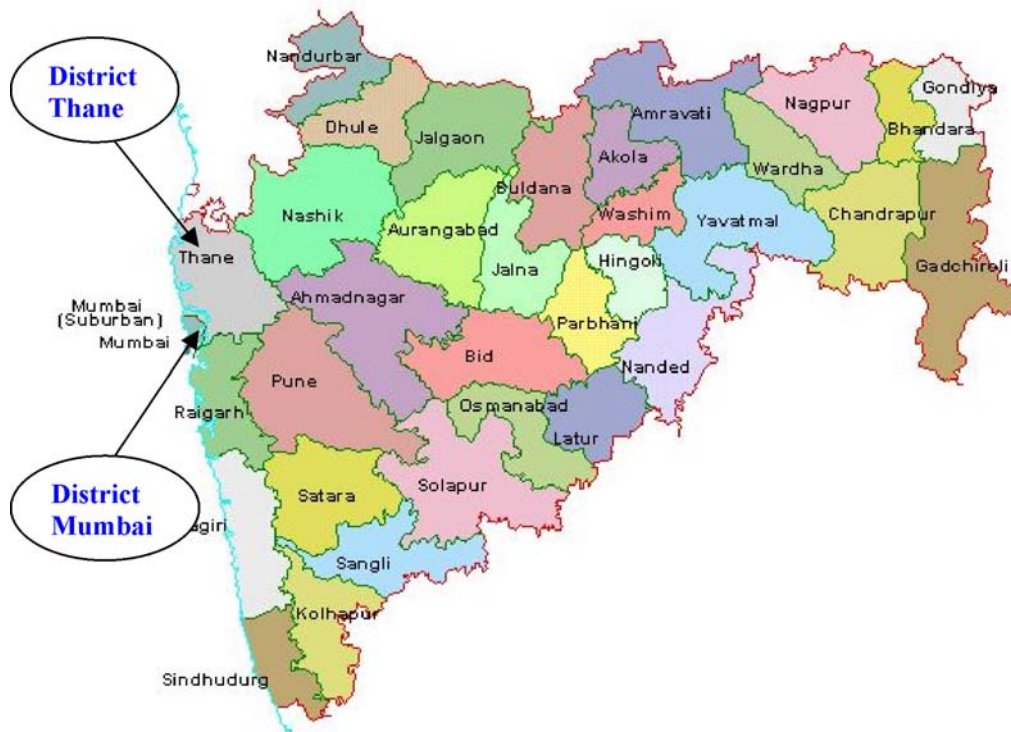


Site specific reports

7.3 Maharashtra - District Mumbai and Thane



Indicators (Maharashtra)	
Total Population	96,878,627
Population – Male	50,400,596
Population – Female	46,478,031
Sex-ratio	922
Total Literacy Rate	76.9%
Literacy Rate – Male	86.0%
Literacy Rate – Female	67.0%

As per 2001 Census

	Sample Area (Thane)	Sample Area (Mumbai City)	
		Rural	Urban
1	Bolinj	Tardeo	Ward No. 417
2	Wagholi	Santacruz (E)	Ward No. 1048
3	Gas	Chunabhatti	Ward No. 1977
4	Naigaon	Mulund	Ward No. 2486

Introduction

Maharashtra state is one of the bigger state of the country and extends about 308 thousand sq. km. Located in the north centre of Peninsular India, with a command of the Arabian Sea through its port of Mumbai. The state area, barring the extreme eastern Vidarbha region, parts of Kolhapur and Sindhudurg, is practically co-terminous with the Deccan Traps. The total population is about 96 million. The literacy rate is 76.9% and the gender ratio is 922 females per 1000 males. The urban population is about 42.4%. There are 35 districts and 353 sub divisions in the state.

In contrast to the agrarian economy that characterizes India, Maharashtra stands out, with the highest level of urbanization of all Indian states. The mountainous topography and soil are not as suitable for intensive agriculture as the plains of North India; therefore, the proportion of the urban population (38.69 per cent) contrasts starkly with the national average (25.7 per cent). The state has one metropolitan city, two mini-metropolises and many large towns. Mumbai is the state capital, with a population of approximately 9.926 million people. The other large cities are Pune, Nasik, Nagpur, Aurangabad and Kolhapur.

There are 1028 general hospitals, 2058 dispensaries and 93 beds per 100,000 population. The birth rate is 19.9/1000, death rate is 7.2/1000 and Infant mortality rate is 42 per thousand live births.

The Dental health care is being looked after the Health Ministry in whole state except Mumbai where the health services are under Mumbai Municipal Corporation. All the District hospitals (35) have a post of Dental Surgeons but the Community Health centres and Primary health centres do not have dental facilities in the state. The City of Mumbai has several hospitals under the Municipal Corporation and most of the hospitals have a post of dental surgeons. There are in all approximately 53 dental surgeons employed under Municipal Corporation. Apart from this, Municipal Corporation also runs a Dental Teaching College and Hospital - Nair Hospital Dental College - where around 50 dental staff are working. There are 28 Dental teaching institutions in the state including five Govt. Dental Colleges which supports dental health care services.

The Demographic Profile of Mumbai and Thane District

Mumbai

Mumbai is the commercial capital of the country with highest number of immigrants.

The Health and Family welfare is being looked after by Municipal Corporation of Mumbai. The Public Health Department is mainly responsible for preventive healthcare and Municipal Hospitals are responsible for health care services.

The health services are performed by the staff in the words, etc., under the supervision and guidance of the Executive Health Officer, the Deputy Executive Health Officer, 4 Zonal Assistant Health Officers and the Epidemiologist.

For the efficient discharge of these functions, Greater Bombay has been divided into Wards which, have been grouped into six zone as follows. Each zone is in charge of each of four Assistant Health Officers. There are in all 24 wards, each ward being in charges of a Medical Officer of Health. The Medical Officers work under the directions of their Zonal Asstt. Health Officer. This district has 5 dental teaching institutions with 100 admissions each and most of these also run post graduate courses in various disciplines of Dentistry.

Thane

Thane district ranks second in the state in respect of its Population size as per the Census of 2001. Population of the Thane district, according to the 2001 Census is 81,31,849 and is distributed over fifteen tahsils. The rate of increase of population in Thane district during the decade 1991–2001 was 54.92 % which is probably due to large scale migration of people from outside the district in search of employment to Thane and Mumbai. The population growth rate is 2.42 times more than that of state in 1991–2001. The sex ratio per 1,000 males is 857. The % of urban population in the district is 72.58 and that of rural population 27.42 as per 2001 Census.

Thane district has one Dental college.

Public Health Facilities	
Hospitals	28
Dispensaries	43
Primary health Centres (PHC)	122

Profile of the Study Population

Occupation

35–44 years

42.9% were housewives, 29.7% were skilled workers or professionals (urban 54.7 vs. rural 29.1%). Women constituted only 7.7%. Non-skilled workers constituted 5.7% and the rest were housewives (84.6%)

65–74 years

In this age group, only 28% of elderly were not working, 43% were housewives, 9.2% were professionals/ skilled workers and 8.4% were non-skilled workers. The difference between men and women's occupational status was very significant; only 4.1% women were skilled workers against 14.2% men.

Educational level

Parents of 12 and 15 years age group. About 15% of parents had low education (unfinished primary school), 35% had more than or up to secondary level education and only 16% were graduates or above.

35–44 years

22% in this group had less than primary level education, 28% more than or up to secondary level and only 18% were graduates or above. Surprisingly, there was not much difference between urban and rural population, but the literacy level was comparatively low in women.

65–74 years

In the elderly population, 54% were below primary level, 13% were more than or up to secondary level and only 8.5% were graduates or above. Educational status was significantly low in rural than urban (77.5 vs. 30.9% below primary level) and higher in men than in women (only 39.3% of men vs. 69% of women had more than primary level education)

Results of Children (12 and 15 years)

Oral Health Perception

Status of teeth and gums

12 years

11.3% urban and 27.1% rural respondents rated health of their gums and teeth as excellent or very good, 78.8% urban and 60.4% of the rural respondents as good or average and 9.3% urban and 12.5% rural respondents rated their own oral health as poor or very poor. 21% males and 16.7% females respondents rated health of their gums and teeth as excellent or very good, 69.2% males and 71.4% females as good or average and 9.8% males and 11.8% females respondents rated them as poor or very poor.

15 years

17.5% urban and 24.4% rural respondents rated health of their gums and teeth as excellent or very good, 72.5% urban and 68.7% rural as good or average and 17.9% urban and 6.9% rural respondents rated them as poor or very poor.

21.9% males and 19.9% females respondents rated health of their gums and teeth as excellent or very good, 70.3% males and 71% females as good or average and 7.9% males and 9% females rated them as poor or very poor. Most of the respondents in both the age groups rated the health of teeth and gums as Good or Average,

Whether experienced pain in teeth/mouth during past one year

12 years

About 46% of the respondents in 12 year old age group never experienced toothache, however 41.6% urban and 53% of the rural respondent reported of tooth ache occasionally. Among these, 47.9% boys and 52.4% girls reported of having occasional tooth ache.

15 years

There are about 56% of the respondents in 15 year old age group who never had pain in teeth. However, 38 had experiences it occasionally or rarely. Only 5% of the children had complain of regular toothache. The distribution was marginally higher in urban population and in boys. 50 % of the respondents of both the sexes and in both the populations reported of tooth ache and/or discomfort during past 12 months.

Visit to Dentist in past one Year

12 years Only 22.5% urban and 20.3% of the rural respondents visited dentist during last 12 months, whereas 73.6% urban and 76.8% of rural respondents never visited a dental health facility.

15 years A total of 23.4% urban and 11.6% rural respondents visited dentist during last 12 months, whereas 72.7% urban and 84% of the rural respondents did not visit dentist in last 12 months.

It was observed that in both the sexes and in both rural as well as urban population, most of the respondents (Approx. 76%), did not visit a dentist in past one year.

In spite of 50% of the respondents of both the sexes and in both the populations reporting of tooth ache and/or discomfort during past 12 months, it was seen that, there were no regular visits to the trained dentist.

Reason of your last visit to the dentist

12 years Only 23.5% of the children in this age group replied to this question. Out of which 85% urban and 88.6% of the rural respondents visited dentist with the complaint of pain in teeth or gums in last 12 months, whereas 15% urban and 11.3% rural respondents visited dentist for other reasons including check up during the last 12 months. The girls were found to have more visits (90%) to a dental care provider for pain than boys (84%).

15 years

This question was replied by only 20% of the children in this age group. More than 80% of the respondents have utilized Dental Health services for pain in teeth. The other reasons for visit were only 15% (urban) and 20% in rural population.

Approximately 86% of the respondents in both the populations and sexes, visited the dentist when in pain. It was observed that irrespective of 50% of the population having dental related problems, the visits to the dentist for regular check ups was minimal (Approx 11% overall).

Oral Health Behavior

Frequency of teeth cleaning

12 years

About 60% of the children in this age group reported to be brushing their teeth once daily and rest were brushing twice a day. The frequency of brushing was nearly equal among rural urban and male female population.

15 years

About 99% of the children in 15 year age group were found to be having brushing frequency once or twice a day. Urban females were having twice daily brushing habits than their rural counterparts. Out of total respondents 56% had once daily brushing habit while 44% had twice daily brushing routine. Approx. 97% of the total respondents cleaned their teeth at least once a day, though the number of respondents cleaning their teeth twice a day was also very significant in both the populations (Approx. 40%) and more so in females (48%).

Use of tooth paste containing fluoride

12 years

Only 10% of the children could reply to this question since most of the people in India are not aware of fluoride content of the toothpaste and neither they give attention towards components of a toothpaste. Of the respondents, more children from rural background (25 out of 31) reported use of fluoridated tooth paste than urban children (15 out of 50). The number of boys (24 out of 43) reported use of fluoridated toothpaste was higher as compared to the girls (16 out of 38).

15 years

The 15 year old children were also not very aware of the fluoride content in the toothpaste and only 9.5% of the children responded to this question. A total of 46 children out of 76 respondents reported fluoridated toothpaste use.

The use of fluoridated tooth paste was more in the rural population than in the urban. It was surprising to that a approx. 40% of the respondents were not using toothpaste at all.

Methods of teeth cleaning

12 years

About 95% of the children in 12 year old age group reported use of tooth brush for oral hygiene maintenance. The proportion of tooth brush users was higher among rural (99%) respondents then urban (92%). The other options used were wooden picks (2.7%), charcoal (0.4%) and chew sticks (6.9%). None of the children reported use of dental floss in this age group.

15 years

Among 15 year olds about 96.5% of the children reported use of tooth brush for oral hygiene. The proportion of tooth brush users was higher among rural (99%) respondents then urban (92%). These children also reported use of other aids like wooden picks (2.8%), dental floss (0.5%), charcoal (1.9%) and chew sticks (4.5%) etc.

NB: The options to this question were not mutually exclusive.

Dietary Habits

12 and 15 year old children

Bakery products were consumed once or more than once a day by 42% and 40 % and candies by 17% and 15% by 12 and 15 year old children respectively. Fresh fruit consumption was relatively low: about 35% of both age groups children consumed fresh fruits daily. An average of only 13% of children in both the age groups reported regular use of chewing gums. There were no significant differences in the eating habits between male: female and urban: rural population in both the age groups.

Tobacco Habits

Smoking Habits

Of the studied population only 1 child in each age group reported regular smoking habit.

Chew tobacco or snuff habit

None of the children in 12 years and 15 years age groups reported of having tobacco chewing habit.

Oral Health Perception- Adults (35-44 years and 65-74 years)

Number of natural teeth present

35 - 44 years

In this age group, 91.9% urban and 97% rural respondents reported having more than 20 natural teeth, 6% urban and rural respondents had 10-19 natural teeth 95% males and 93% females had more than 20 natural teeth present, 5% of males and females had 10-19 natural teeth present



65 - 74 years

About 54% urban and 69% rural elderly respondents reported that they have more than 20 natural teeth, 23% urban and 21% rural respondents had 10-19 natural teeth whereas 8% urban and 3% rural respondents had no natural teeth. 61% males and 63% females had more than 20 natural teeth present, 25% of males and 21% females had 10-19 natural teeth present, whereas 6.4% males and 4% females had no natural teeth present.

Pain in teeth during past one year

35 - 44 years

About 73% urban and 60% rural respondents in 35- 44 year age group reported that they have experienced pain in teeth during last 12 months, whereas 26% urban and 40% rural respondents did not have of any pain in past 12 months. 59% of males and 73% females have experienced pain in teeth and gums in the past 12 months.

65 - 74 years

Occasional or regular pain in teeth and gums was reported by about 61% urban and 63% rural population in this age group, whereas 36% urban and 37% rural respondents did not complain of any pain in past 12 month. 58% of males and 66% females complained of pain in teeth and gums in the past 12 months, whereas 41% of males and 34% of females did not complain of any pain in teeth and gums in the past 12 months.

Use of removable prosthesis

35–44 years

The self reported use of removable prosthesis was found in 6 urban and 3 rural subjects, while four persons (0.5%) reported use of complete denture.

Out of total, 3 of males and 6 of females reported use of partial denture, whereas 2 males and 2 females reported use of complete denture.

65–74 years

A total of 33 subjects reported use of partial denture and 22 subjects were using complete denture in the geriatric age group in the studied population. The number of people using prosthesis were significantly more in urban (47) than rural population (9). Similarly there was imbalance in prosthesis use among males (43) and females (21).

Status of teeth and gums

35–44 years

The subjects were asked to report their perception about their own oral health and majority considered their own oral health to be average (64%) or poor (10%). Only 24% of adults considered their own oral health as good or excellent. There were no significant differences in self perception among urban rural or male female populations.

65 – 74 years

In the geriatric age group only 14% rated their own oral health as good or excellent while rest 86% considered it to be poor or very poor. The differences in opinion about their own oral health among urban rural and male females were only marginal.

Oral Health Behavior

Frequency of teeth cleaning

35 – 44 years

Most of the adults (98%) reported brushing once or more times a day. Once a day frequency was found in about 40% of urban and 53% of the rural respondents

while 59% urban 47% of the rural respondents reported it to be two or more times a day.

65–74 years

Among the elderly, about 96% of individuals reported brushing once or more times a day. Approximately 2.3% of them reported that they are not brushing while, about 1% were not brushing daily. There were no significant differences in urban and rural or male and female population with respect to frequency of brushing

Methods of teeth cleaning

35 – 44 years

In this age group more than 86% reported use of tooth brush for cleaning teeth while 28% reported use of wooden toothpicks etc. The use of dental floss (0.4%), charcoal (0.3%) and chewstick (4%) was quite low. There were only marginal differences in urban (85%) and rural (89%) regarding use of tooth brush an aid to oral hygiene method. The use of chewstick was slightly higher in rural population than urban.

65 – 74 years

As compared to the adults, less number of elderly people were using toothbrush for cleaning of teeth. Approximately 65% of total population was using brush and 35% were using other aids like, Toothpicks (33%), Charcoal (0.5%) and chew stick (4.8%) etc. The rural and urban elderly and male females both were showing the same trend as far as oral hygiene aids are concerned. The responses to this question were not mutually exclusive therefore few people have reported more than one method for cleaning the teeth.

Use of tooth paste containing fluoride

35 – 44 years

As discussed elsewhere, the people in India do not give attention in general about contents in toothpaste therefore; this question was responded by only 24% of the subjects. Of the 188 respondents, only 58 people reported fluoride tooth paste use and 144 people were not using paste at all.

65–74 years

As significantly more number of subjects (38%) among the elderly replied to this question as compared to adults. Out of total 309 respondents only 34 persons (11%) reported fluoride tooth paste use and 266 (88%) reported not using a paste for cleaning of teeth.

Oral Health Seeking Behaviour

Last visit to a Dentist

35–44 years – About 38% of the respondents reported not receiving any dental care among the adults. 16% of the respondents had seen a dentist more than five years ago and another 11% visited a dentist more than 2 years ago. 13% of them visited a dentist more than one year ago and only 23% of the respondents visited a dentist in the past one year. The difference between the urban and rural populations not receiving the dental care was significant (29 vs. 45). However, there was no significant difference between male and female population.

65–74 years – Among the elderly, 30% of the respondents never received any dental care, 29% visited a dentist more than 5 years ago, 13% visited more than 2 years ago, 11% visited more than one year ago and 19% visited a dentist in the past one year. The difference between the urban and rural populations not receiving the dental care was significant (23 vs. 36). There was no significant difference between male and female population.

Dietary Habits

35–44 years and 65– 74 years

Among the adult and geriatric age groups, the use of bakery product was not popular and only 45% of 35–44 year olds and 25% of the 65–74 year olds were found to be having habit of using bakery foods daily. Once or more than once use of candies and sweets was reported by only 8–10% of the respondents in adult and geriatric age group. About 21% of the adults and 25% of the geriatric population used colas and beverages once of more times a day. There were no significant differences in dietary habits among males, females and urban: rural population in both age groups.

Tobacco Habits

Smoking cigarettes, cigars or pipe

35–44 years

Of the studied population, 2% respondents were occasional smokers whereas 6% were regular smokers.

65–74 years

In this age group, 0.5% respondents were occasional smokers whereas 6% were regular smokers

Chewing tobacco or snuff

35–44 years

Of the studied population, 1% were occasional tobacco chewers whereas 14% were regulars. There were no significant differences between urban: rural population.

65–74 years

In this age group, 0.5% were occasional tobacco chewers whereas 14% were regulars.

There were no significant differences between urban: rural population.

Oral Health Status

Extra oral appearance– Nothing significant was reported in all the age groups, except mild ulcer/fissure or swelling in less than 1% of studied population of 35 and above age group.

Mucosal condition

12 and 15 years Only 2.4% of younger population had few ulcerative lesions, probably aphthous ulcers.

35–44 years –The significant finding in this age group was leukoplakia in 4.3%, candidiasis in 2.1%, abscesses in 2% and other conditions in 3.1% of cases. Leukoplakia was higher in urban and in men (6 vs. 2.5 and 7.8 vs. 0.7% respectively)

65–74 years Leukoplakia was seen in 3% , candidiasis in 2% and oral cancer in only 0.1%.

Denture wear– Only 1.1 and 4.6% were using partial denture and only 0.1 and 1.9% were using complete denture in 35–44 and 65–74 age groups respectively.

Dentition status

12 years Total average caries experience was recorded in 50% of the examined population, of which decayed teeth constituted the highest (47%), missing teeth in 1.6% and filled teeth in just 1% was recorded. Caries prevalence was significantly higher in urban than in rural population (60.5 vs. 40.2 %) with equal distribution among boys and girls.

In 15 years age group, the total caries experience was recorded in 58%, of which filled teeth was recorded in only 2% of the cases. Urban: rural difference in caries experience was smaller (64.2 vs. 52.7%) and was higher in girls compared to boys (64.2 vs. 52.7%).

In 35 and above age groups, 86.4% had caries experience. Missing teeth was very high, i.e., 44.6% and filled teeth in 9.6%. Missing teeth were higher in urban than rural population (49 vs.40%) and more in women than men (49 vs. 40%).

In 65–74 years age group, caries experience was almost the same as in 35–44years age group, i.e. 83%, of which missing teeth were found in 46.7% and filled teeth in only 3.5%. Missing teeth were more in rural than urban and more in women than men (50.7 vs. 42.7% and 53 vs. 40% respectively). There was not much difference found between urban: rural or male: female population.

Average DMFT in only caries affected subjects

12 years: Average DMFT in this age group was found to be 2.6, which was higher in urban compared rural (2.7 vs. 2.3).

15 years: The DMFT was 2.9 in this group. Again it was found to be higher in urban compared to rural (3.1 vs. 2.7).

35–44 years : DMFT was 5.4, which was significantly higher in urban than in rural (6.9 vs. 5.5) and in women compared to men (7.3 vs. 5)

65–74 years DMFT was a 7.8 and the same pattern of higher index in urban and in women as found in 35 – 44 years Old was observed (8.7 vs. 7 and 8.8 vs. 6.9 resp.)

Periodontal Status

12 years –35% of children had bleeding gums

15 years: Bleeding status was similar to 12 years i.e. 35% of children in this group had bleeding from gums.

35–44 years: Bleeding was reported in 72%, shallow pockets in 48% and deep pockets in 2.9%. Deep pockets were found more in rural subjects and more in males compared to females (4.5 vs. 1.3 %and 3.5 vs. 2.3% respectively)

65–74 years Bleeding was recorded in 64.6% , shallow pockets in 55.2% and deep pockets in 4.5%. The same trend as in 35–44 years age group was noted; deep pockets were more in rural than urban and more in males than in females. (6.5 vs. 2.5 %and 6.0 vs. 3%)

Loss of Attachment

35–44 years– Loss of attachment of 4–5 mm was recorded in 2.6% and more than 6 mm in only 0.1%. In 5.7%, it was excluded.

65–74 years Loss of attachment of 4–5mm was seen in 7.6% and more than 6 in another 0.5%. The rural population with loss of attachment were twice the % of urban population (10.8 vs. 5.4%) with marginally higher % of women having loss of attachment than men. In 47.7%, it was excluded.

Fluorosis

Only mild fluorosis was observed in 3% and moderate in 0.6% in 12 and 15 years age group. With advancing age, evidence of dental fluorosis was negligible (0.4%)

Summary

The state of Maharashtra is one of the larger states of the country and is located on western sea coast. The geography of the state is suggestive of wide variation in climatic conditions, food habits and culture. Mumbai, the capital city of the state, is also the commercial capital of the country. The literacy rate

is high, specially among males but the sex ratio is not very encouraging (922/1000).

Oral health care utilization was not found satisfactory. About 75% of children and 35% of adults and geriatric population in the present study were found to have never received any dental care, despite 46% of the children and 64% of the adults reported to have suffered from occasional or frequent toothache. The prevalence of dental caries was 54% among children and more than 85% in adults and geriatric age group. The DMFT score was low (1.3) in children but was higher in adults (5.3) and elderly persons (6.4). The habit of using sweet eatables once or more times a day was found in about 40% of all subject in all age groups but use of liquid sugar (cola and beverages) was low in children (10–15%) as well as adults (20–25%). Habit of brushing teeth at least once a day was seen in 90% of children and 86% of adults and elderly population. The adult (90%) and elderly (75%) population had good perception about their own oral health.

Though the selected districts of Mumbai and Thane do not fall in the fluoride endemic zones, overall dental fluorosis was reported in 3–4% of 12 year olds and 5.4% of 15 year old children, though it was only mild. The prevalence of gingival bleeding was reported in about 48% children and 85% adult and elderly population. More than 3 mm loss of attachment was observed in 78% of adults and 96% of the geriatric population studied.

More than 58 (7.5%) of 800 adults and elderly examined were found to have leukoplakia and about 25 adults (6%) had oral sub mucous fibrosis. Tobacco smoking habit was reported in 5.5% of adults and elderly while tobacco chewing habit in 13% of the subjects.

It can be concluded that periodontal disease was the major oral health problem. Another major oral health problem was oral pre malignant lesions including submucous fibrosis due to tobacco smoking and chewing habits. Hence oral prevention needs to focus on curtailing these health problems by oral health education programs and aggressive tobacco cessation campaign and activities.