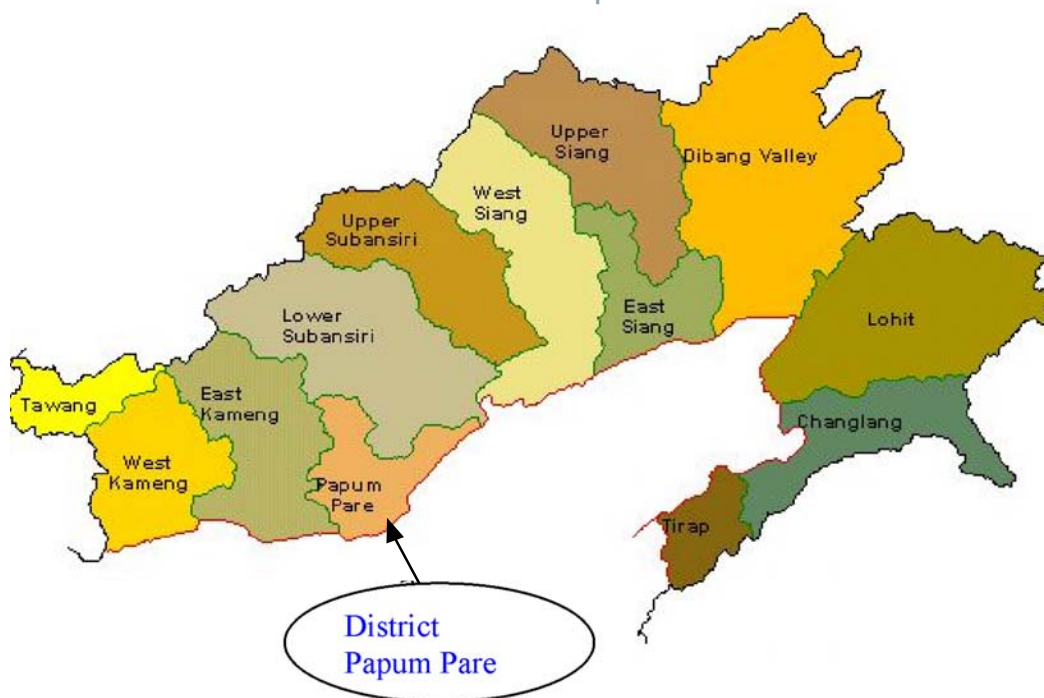


## B. Site specific reports

### 7.1 Arunachal Pradesh – District Papum Pare



Indicators	
Total Population	1,097,968
Population – Male	579,941
Population – Female	518,027
Sex–ratio	893
Total Literacy Rate	54.3%
Literacy Rate – Male	63.8%
Literacy Rate – Female	43.5%

As per 2001 Census

Sample Area (Papum Pare)		
	Rural	Urban
1	Dikmukh	Itanagar Township (Chimpu)
2	Sagalee	Ganga
3	Balijan	Naharlagun Township (Naharlagun)
4	Kimin	Nirjuli

## Introduction

The state of Arunachal Pradesh is situated in the north east end of the country with sharing of international borders with China, Bhutan and Myanmar. The population of the state is more than one million and male: female ratio is 5.7:5.3. The literacy rate is about 54.7 % and Gender inequality is more than the country average, i.e. 893 females for 1000 males. The people mainly belong to three types of tribals and village system is the main administrative hub for the state.

There are 3 general hospitals and 11 District hospitals in the state. The overall health facilities are poor with very few sub divisions having specialists. The numbers of dental surgeons in Government services are only forty eight. The majority of the dental surgeons are posted in district hospitals and very few are in Community Health Centers.

## The Profile of Papum Pare District

The Papum Pare district is one of the 16 districts of the state with its Head Quarter at Yupia. It has an area of 2,875 Sq. Km. with a population of 1, 21,750. The Principal inhabitants of the district are Nyishi tribe. By virtue of being the capital complex of the state, this district portrays a cosmopolitan character where all the major tribes of the state constitute the tribal community of the state, reflecting their socio-cultural oneness.

The socio-demographic status of the district is as follows:

INDICATORS	RATE
Population - Total	121750
Population - Male	64122
Population - Female	57628
Decadal growth rate (1991-2001)	% + 67.21
Sex ratio (No. of females/1000 males)	899
Population Density/Sq. Km	35
0-6 Years Population - (% of Total Population)	16.55
0-6 Years Population - Male	50.57
0-6 Years Population - Female	49.42
Literacy rate - Total	70.89
Literacy rate - Male	79.00
Literacy rate - Female	61.72

Health and Family Welfare Service in the Papum Pare district is managed by one district Medical Officer (DMO) who is the district Health authority. One General Hospital in the district is under the control of the Chief Medical Officer where different specialties are available including dentistry.

State Directorate of Health and Family Welfare control the District Medical Officers/ Chief Medical Officers (DMOs/ CMOs) who is assisted by district level Programme Officer in implementation of various National Health Programmes.

Dental Health facility of the district

- |                            |   |                    |
|----------------------------|---|--------------------|
| a) General Hospital        | - | 4 Dental Surgeons. |
| b) Community Health Centre | - | 4 Dental Surgeons. |
| c) Primary Health Centre   | - | NIL                |
| d) Sub-Centre              | - | NIL                |

## Profile of Study Population

### *Occupation*

35-44 years Group In this group, 38.4 % were non-skilled workers, 26.8% were housewives, 34.3 % were skilled workers and 26.8% were professional/ skilled workers/businessmen. Non-skilled workers in rural population were more than double of those in the urban area. (43.4 vs. 15.2 % respectively.)Men comprised the majority of skilled workforce as compared to women. (56.3 vs.12.1% respectively)

65-74 years Group In this group, 41.2 % were non-skilled workers, 25.4% were house wives and 32.7 % were professional/ skilled workers. The non-skilled workers were higher in rural than urban (61.9 vs. 21.7%) and more men were skilled professionals than women (50.5 vs. 13.9%)

### *Educational level*

Parents of 12 years old-Almost half of the parents/guardians did not respond to this query (46.2%). of Parents having less than primary level education comprised 12.% and less than secondary level to graduation level comprised 21.8% . It was observed that higher education level was more in urban than rural (45.3 vs. 24.7), but surprisingly more in women than in men. (42.1 vs. 29.1)

Parents of 15 years old–In this group 23–46 % were non–respondents, 21% had primary level education, 51.9% had less than secondary level and 25.4% had up to graduation level education. Education level was higher in urban than in rural persons (39.5 vs. 13.4 %) and more in men than women (26.9 vs.14.0 %)

35–44 years–Only 9.4% of this group had less than primary level education. 85.7% were educated with the up to less than secondary level and 4.8% had higher secondary to graduate level education. Lower educational status was more in urban than in rural persons (56.6 vs. 3.3%). People with higher level were also more in urban than in rural groups (6.6 vs.3%). More than secondary special and more than primary level were higher in rural than urban (93.7 vs. 77.9%)

65–74 years–In this group, 24.7% had less than primary level, 68.6% had secondary special level and only 6.8% had education higher than secondary special to graduation level. In this age group, not a single woman had higher education.

## Results of Children (12 and 15 years)



### Oral Health Perception

#### *Status of teeth and gums*

The various categories were summarized into three groups: good, average and poor

12 years – Of the studied population 57% respondents rated health of their gums and teeth as average, 21% as good, and 22% rated it as poor. It was seen that there were no significant differences between the urban: rural and male: female populations

15 years – In this age group 17% of the male and female respondents of both the populations rated the health of their gums and teeth as good, whereas 64% of them rated it as average and 20% rated it as poor. It was seen that there

were no significant differences between the urban: rural and male: female populations

#### *Oral discomfort / pain*

12 years – Of the studied population 50% respondents of both the sexes reported an occasional toothache, whereas 50% had no complain in past one year.

15 years – This group also showed the same pattern as the younger age group.

### Oral Health Seeking Behaviour

#### *Reason for the last visit to the dentist*

12 years – Out of the studied population, 73% of the respondents never visited a dentist (63% urban vs. 85% rural), 22% visited 1–3 times and 3% visited e·4 times. Male and female population followed the same pattern.

15 years – The same pattern were observed as in the age group of 12 years

#### *Reasons for visiting a dentist in past 12 months*

12 years – Out of the studied population, 69% respondents in urban: rural and male: female population visited the dentist with the complaint of pain, whereas 31% of them visited for routine dental check up.

15 years – In this age group, 66% respondents in urban: rural and male: female population visited the dentist with the complaint of pain, whereas 34% of them visited for routine dental check up

### Oral Health Practices

#### *Frequency of teeth cleaning*

62% of respondents in both 12 and 15 years age group irrespective of urban: rural and male: female were cleaning their teeth once a day and 30% of the respondents, twice daily.

#### *Use of toothpaste with or without fluoride*

12 years – Out of the studied population, 56% of the respondents were using fluoridated toothpaste, and only 2% were not using tooth paste. It was seen

that there were no significant differences between the urban: rural and male: female populations

15 years – In this age group, 64% of the respondents were using fluoridated tooth paste, and 3% were not using tooth paste. It was seen that there were no significant differences between the urban: rural and male: female populations.

## Dietary Habits

### 12 and 15 year old children

Bakery products were consumed once or more than once a day by 41% and 29 % and candies by 27% and 24% by 12 and 15 year old children respectively. Fresh fruit consumption was relatively low: only 20% and 39% of 12 and 15 years consumed fresh fruits. An average of 29% of both the age groups was chewing gums. The girls were using more colas and beverages than boys among the 15 year olds. However, there were no significant differences in the eating habits between urban and rural population in both the age groups.

## Tobacco Habits

### *Smoking Cigarettes, Cigar /Bidi etc.*

12 years – Of the studied population, only 21 respondents responded, out of which 4 smoke occasionally and 15 smoked regularly. It was observed that more of the males were smoking than the females (11 vs.4). There were no significant differences between urban: rural population.

15 years – In this age group, 69 respondents responded, out of which 13 smoke occasionally, whereas 42 regularly. It was observed that more of the males were smoking than the females (40 vs.15), and more rural than the urban (40 vs.15).

### *Chewing tobacco*

12 years – Only 119 respondents responded, out of which 66 chewed tobacco occasionally, whereas 54 chewed regularly. It was observed that more of the males were chewing tobacco than the females (76 vs. 40). There were no significant differences between urban: rural population.

15 years – In this age group, 135 respondents responded, out of which 89 chewed tobacco occasionally, whereas 46 chewed regularly. It was observed

that more of the males were chewing tobacco than the females (85 vs.50). There were no significant differences between urban: rural population.

## Oral Health Perception – Adult population (35–44 years and 65–74 years)

### *Number of natural teeth present*

35 – 44 years – Of the studied population 98% of the respondents have reported having more than 20 natural teeth It was seen that there were no marked differences between the urban: rural and male: female populations.

65 – 74 years – In this age group 84% of the respondents have reported having more than 20 natural teeth, there were no marked difference between urban :rural and male: female populations.

### *Oral discomfort / pain*

35 – 44 years – Of the studied population, 7% respondents experienced frequent pain in their teeth and gums, It was observed that the urban population complained of pain more then the rural (8% vs. 3%), whereas there were no significant difference between male and female population (6% and 6% respectively).

65 – 74 years – In this age group, 27% respondents experienced frequent pain in their teeth and gums, there were no marked difference between urban :rural and male: female populations.

### *Use of removable prosthesis*

35–44 years – Of the studied population, 36% respondents were using a partial denture, there were no marked difference between urban: rural and male: female populations

65–74 years – In this age group, 19% of the respondents were using a partial denture, there were no marked difference between urban: rural and male: female populations.

### *Status of teeth and gums*

The various categories were summarized into three groups: good, average and poor

35–44 years – Out of the studied population, 88% of the respondents rated the health of their gums and teeth as average, 4% as excellent and another 8% as poor. It was seen that there were no marked differences between the urban: rural and male: female populations.

65 – 74 years – In this age group, 69% of the respondents rated the health of their gums and teeth as average, 1% as good and another 30% as poor. It was seen that there were no marked differences between the urban: rural and male: female populations.

## Oral Health Practices

### *Frequency of teeth cleaning*

35 – 44 years – In this age group, 87% respondents cleaned their teeth once a day. 5% respondents did not clean their teeth daily. It was seen that there were no marked differences between the urban: rural and male: female populations

65–74 years – In this age group, 75% respondents cleaned their teeth once a day. 4% respondents were not brushing daily. It was seen that there were no marked differences between the urban: rural and male: female populations

### *Methods of teeth cleaning*

35 – 44 years – Of the studied population, 97% of the respondents were using the tooth brush to clean their teeth. Only 5% of the respondents were using charcoal and Miswak to clean their teeth. It was seen that there were no marked differences between the urban: rural and male: female populations.

65 – 74 years – In this age group, approx. 92% of the respondents of both the sexes in urban and rural areas were using the tooth brush to clean their teeth. It was also seen that a significant number of the respondents were using charcoal and Miswak to clean their teeth (4%), It was seen that there were no marked differences between the urban: rural and male: female populations.

### *Use of tooth paste with or without fluoride*

35 – 44 years – Of the studied population 4% of the respondents used fluoridated tooth paste, whereas 2% respondents did not use tooth paste at all. It was seen

that there were no differences between the urban: rural and male: female populations

65–74 years – Of the studied population 14% of the respondents used fluoridated tooth paste, whereas 2% respondents did not use tooth paste at all. It was seen that there were no differences between the urban: rural and male: female populations

### Oral Health Seeking Behaviour

35–44 years – Almost half of the respondents had never received any dental care. 21% of the respondents had seen a dentist more than five years ago and another 21% had visited a dentist more than 2 years ago. 7% had visited a dentist more than one year ago and 3% of the respondents had visited a dentist in the past one year. Among those who had never received any dental care it was surprising to find that the urban respondents were almost twice the rural (58% vs. 38%) and males were more than double the % of women respondents.

65–74 years – Again in this age group 34% of the respondents had never received any dental care. 15% had visited a dentist more than 5 years ago. 24% had visited more than 2 years ago, 19% had visited more than one year ago and 8% had visited a dentist in the past one year. The difference between the urban, rural and male female as regards to visit in the past one year was significant (11 Vs. 4 and 10 Vs. 5 % respectively).

#### *Last visit to a Dentist*

35–44 years – Almost half of the respondents had never received any dental care. 21% of the respondents had seen a dentist more than five years ago and another 21% had visited a dentist more than 2 years ago. Ten percent of the respondents had visited a dentist in the past one year. Among those who had never received any dental care it was surprising to find that the urban respondents were almost twice the rural (58% vs 38%). Similarly, the number of males who visited a dental health facility was more than double the number female respondents (68% vs 32%).

65–74 years – Again in this age group, 34% of the respondents had never received any dental care. 15% had visited a dentist more than 5 years ago, 24% had visited more than 2 years ago, 27% had visited a dentist in the past one

year. The difference between the urban, rural and male, female as regards to visit in the past one year was significant (11% Vs 4 % and 10% Vs 5 % respectively).

## 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 40% of 35–44 year olds and 20% 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 90% and 86% of the respondents in adult and geriatric age group respectively. About 58% of the adults and 47% of the geriatric population used colas and beverages once of more times a day. In general females were using more colas and beverages etc. than males in both age groups. But there were no significant differences in other dietary habits among males, females and urban: rural population in both age groups.

## Tobacco Habits

### *Smoking cigarettes, cigars/ bidies*

35–44 years – Of the studied population, 53% respondents were occasional smokers whereas 6% were regular smokers.

65–74 years – In this age group, 50% respondents were occasional smokers whereas 19% were regular smokers

### *Chewing tobacco*

35–44 years – Of the studied population, 4% were occasional tobacco chewers whereas 6% were regular chewers. There were no significant differences between urban: rural population.

65–74 years – In this age group, 3.3% were occasional tobacco chewers whereas 18% were regular chewers. There were no significant differences between urban: rural population.

## Oral Health Status of the Population

*Extra oral lesions* -No abnormality was recorded in any of the age groups.

*Oral mucosal conditions* – Nothing significant was reported in any of the age groups

*Denture wear*– Overall, denture wear was found to be very low. Only one each from urban and rural person in 35–44 age group were wearing partial denture. None had complete denture. But surprising finding was that none were found to have complete denture even in 65–74 age group, though a small %, i.e. 1.3% of this group had partial denture.

#### *Dentition status*

12 years Decayed teeth were found in 43.6% and missing teeth in 3.9%, but the filled teeth were found only in one child, i.e. 0.1%. Though the difference between urban and rural was small, caries and missing teeth were more in girls than boys (47 vs. 39% and 4.2 vs. 3.4% respectively) Overall, caries experience in this group was 44.4% and 9.4% had more than 4 DMFT.

15 years– Decayed teeth were found in 45.6%, missing teeth in 7.3% and filled teeth in only 1.2%. Caries was more prevalent in urban children and more in girls (48 vs. 43.4 and 52.3 vs. 38% ) More % of boys had filled teeth compared to girls (6 vs. 3) but the total % of children with filled teeth was only 1.2%. Overall, 48.5% of examined children had caries experience and 16.6% had more than 4DMFT which was almost double compared to 12 years age group (16.6 vs. 9.4%).

35–44 years Fifty % of this group had carious teeth, 35% had few missing teeth and only 1.4% had filled teeth, indicating a huge caries burden and negligible care. Urban: rural as well as male: female differences were significant (54 vs. 44% and 44 vs.54 % respectively) More urban subjects had missing teeth than rural (40 vs. 30%) and there was no sex difference. Filled teeth were found more in urban than rural and in women compared to men(2.2 vs. 0.5 and 0.7 vs. 2%). In this age group, more than 62% of the examined persons had experienced caries and 29.7 % had more than 4 DMFT.

65–74 years – There was significant increase in % of decayed and missing teeth in this group compared to 35–44 years group. Decayed teeth were found in 63.7%, missing teeth in 58%, while filled teeth in only 0.2%. Rural elderly had higher % of decayed teeth compared to urban (68.8 vs. 58.8%) with no sex difference. Missing teeth were more in men compared to women without any difference between the urban: rural population. In this age group, persons with caries experience were very high, i.e. 80.7% and even the % of persons with more than 4 DMFT was 59%.

### *Average DMFT score for different age groups*

12 years old The DMFT score was 2.4. The U:R as well as male: female difference in DMFT score was small, i.e. 2.5 vs. 2.2 and 2.2 vs. 2.5

15 years At this age an increase in DMFT score was found. It became 3.02. Though there was a small difference in urban: rural DMFT score (3.14 vs. 2.90), male: female difference was significant (2.7 vs. 3.3).

35–44 years –The DMFT score in this group was alarmingly high at 8.84. The difference between urban: rural as well as male: female was significant (8.62 vs. 9.17 and 8.42 vs. 9.16 respectively) The high score could probably be explained by higher missing component in this age group.

65–74 years –The DMFT score in this age group decreased compared to 35–44 years age group, which was 7.48. Also, there was no significant difference between urban: rural and male: female population (7.58 vs. 7.38 and 7.34 vs. 7.63).

### *Periodontal Status*

12 years Bleeding gums were found in 10% of children, more in urban than rural and more in boys compared to girls (11 vs. 9.8 and 14 vs. 7.6% respectively). Lack of care and attention towards hygiene in boys compared to girls could reflect carefree attitude in this age group boys.

15 years– With maturity, bleeding score decreased to 4.8%. Again the same trend was observed, more in boys than in girls (7.5 vs. 2) . However, in this group, bleeding was higher in rural compared to urban children (5.4 vs. 3.9)

35–44 years Majority of subjects, i.e. 85.2% of those examined, had healthy periodontium. Shallow pocket and bleeding was recorded in approx. 15 and 20% respectively and only 2.6% had deep pockets. The only striking finding was that deep pockets were recorded only in rural population.

65–74 years All healthy sextants were found in 87.7%, bleeding and shallow pocket in approx. 12 and 18% and deep pocket in only 0.6%, all in rural men. Probably, with advancing age, gingival recession is more marked and hence, prevalence of pockets is decreased.

### *Loss of Attachment*

35–44 years Normal attachment level was found in 83.7%. Attachment loss of 4–5 mm was recorded in 3.3%. Attachment loss in rural population was 3 times higher than in urban ( 22.7 vs. 9%) with very small difference between male: female, higher in males than females (17.6 vs. 14.1%)

65–74 years -Normal attachment level was found in 78%. Total % of persons showing more than 6mm attachment loss was only 0.6%, which can again be explained by the fact that with increased gingival recession, pocket formation is reduced and hence loss of attachment recorded is less than that found in the 35–44 years age group.

### *Fluorosis*

The entire studied population in all age groups and in both, urban and rural areas had no evidence of dental fluorosis.

## **SUMMARY**

The state of Arunachal Pradesh is located on the north east border of the country with low population density and below national average socio– economic status of the population. The district Papumpare has been selected keeping in mind the operation ease of conducting the survey. This district has mixed population mainly comprised of three different tribal of Arunachal Pradesh.

The Dental caries prevalence was found to be higher (60–80%) in adults as compared to the children (45–48%). The average DMF score was about 1– 1.5 in children and 2.6 in adults. The geriatric population had higher score in the range of 6 and 7 because of more edentulousness in the these groups. There were less than 1% filled teeth in the entire population due to poor oral health care services in the state and lack of awareness. No case of dental fluorosis was reported in the population, therefore it is difficult to mention about the fluoride rich zone in the NE region. Surprisingly the gingival bleeding was quite low in all age groups and possible region for the same may frequent usage of betel nut and quid among the whole spectrum of population. Similar trends were also seen in loss of attachment and adult and geriatric group had only 16 and 20% prevalence respectively. The tobacco smoking habits were seen in 6% adults and 17.5% of geriatric population. The chewing tobacco habits were reported in 6–7% of the children and 17% of geriatric population,

however, there are no cases reported for oral pre cancer and cancerous conditions.

The eating habits of the population was found to be having highly skewed towards sweet intake and in adults about 70–80% were found to be having regular use of sweet eatables. The use of cola and beverages were relatively low in the population. Poor and very poor self perception of oral health was reported by about 30% of geriatric population indicating complete negligence about oral health care in the elderly. The proportions of population who have never visited as dental operator were 50–70% high in almost all age groups.

Overall it seems that the prevalence of gingival problems is low in the population but it requires steps in the direction of dental caries prevention and oral hygiene maintenance. The oral health services require augmentation specially in the prosthodontic and restorative aspect.