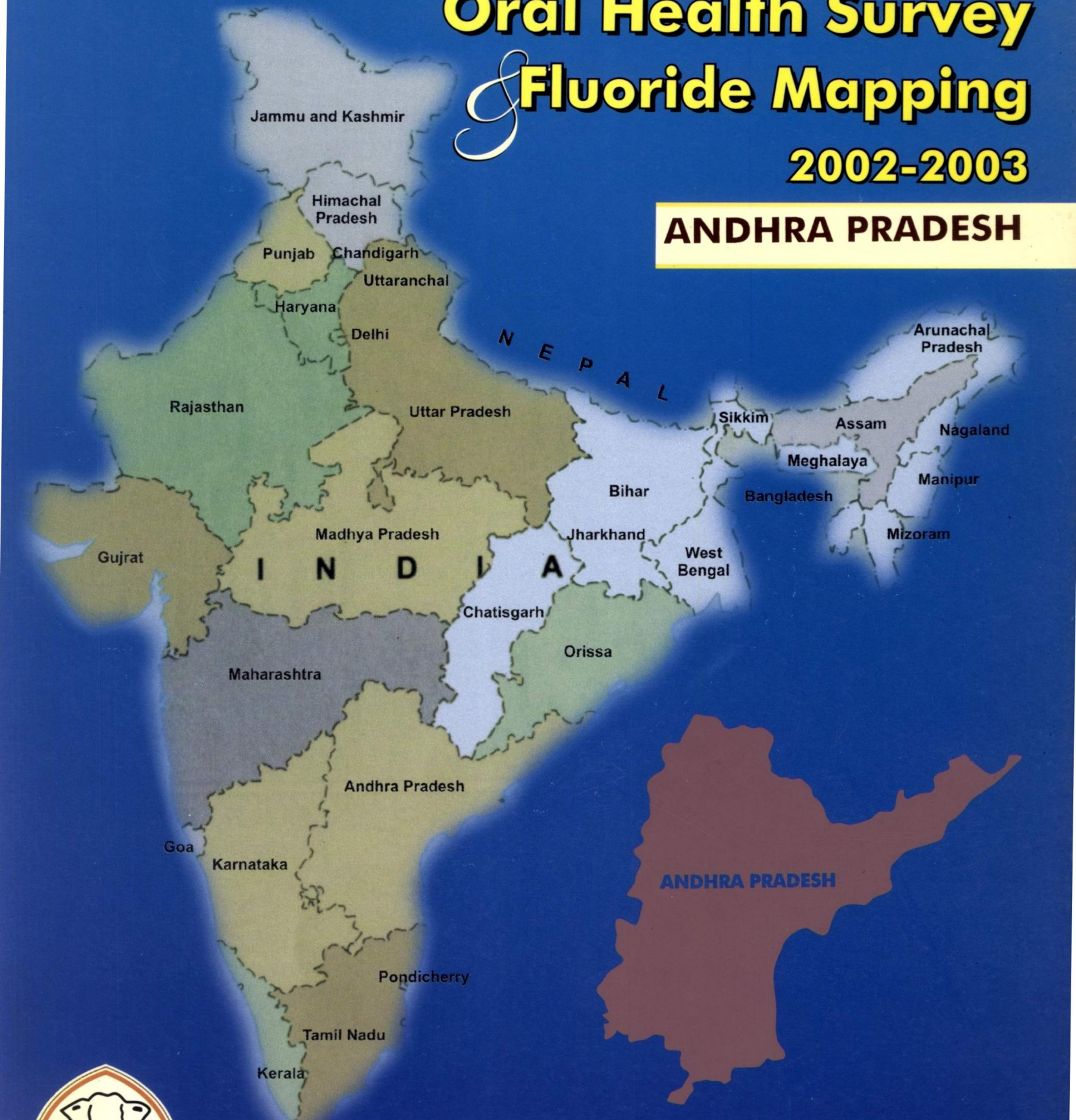
National Oral Health Survey & Fluoride Mapping 2002-2003

ANDHRA PRADESH



Dental Council of India
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NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING

2002-2003

ANDHRA PRADESH

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DENTAL COUNCIL OF INDIA
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ABBREVIATIONS & ACRONYMS

NOHS & FM	National Oral Health Survey & Fluoride Mapping
DCI	Dental Council of India
NFHS	National Family Health Survey
NDP	Net Domestic Product
WHO	World Health Organisation
CEB	Census Enumeration Block
BDS	Bachelor of Dental Surgery
MDS	Master in Dental Surgery
M.P.H.	Master in Public Health
M.Sc	Master in Science
D.P.H.	Dental Public Health
deft	Decayed, indicated for extraction and filled primary (deciduous) teeth
dmft	Decayed, missing and filled primary (deciduous) teeth
DMFT	Decayed, missing and filled permanent teeth
dt/DT	Decayed teeth (primary/ permanent)
mt/MT	Missing teeth (primary/ permanent)
ft/FT	Filled teeth (primary/ permanent)
SIC Index	Significant Caries Index
CPI	Community periodontal index
DAI	Dental Aesthetics Index
TMJ	Temporomandibular Joint
mnt/ MNT	Mean number of teeth (primary/ permanent)
ppm	Part per million (of fluoride)

FOREWORD

It gives me great pleasure to write a foreword to this report on the National Epidemiological Oral Health Survey & Fluoride Mapping of the Dental Council of India. This is a historic document as it is for the first time that a scientific survey on oral health problems at state and national levels has been undertaken in India. With this report in place, we are amongst those few countries in the world where data on oral health problems has been collected through a scientifically conducted sample survey. The report, I am sure, will prove to be an invaluable tool for effective planning and implementation of oral health programmes in the country.

This gigantic national survey, with the states as component units, would not have been possible without the commitment and the efforts of a large number of organizations and individuals. At the outset, I must acknowledge the role of the members of the Executive Committee of the Dental Council of India and its General Body, who supported me in this endeavour and gave all help as and when necessary. The survey work in the states was entrusted to Regional Coordinators who were selected from senior faculty members in Community Dentistry or allied fields from reputed dental colleges. I am pleased that a large number of dental colleges, through their managements and the Principals/ Deans responded to my request to collaborate in this national endeavour. A list of the participating dental colleges and individuals has been given elsewhere in this report.

I would particularly like to acknowledge the contribution of the members of the core technical team for all pre-survey planning and designing activities, who include Drs V.B. Mathur, P.P. Talwar, Shankar Aradhya, S.S. Hiremath, K.V.V. Prasad, M.B. Aswathnarayan, (Ms) Amrit Tiwari, and S.G. Damle.

A central team was established early in the course of the survey at the office of the Dental Council of India to help develop project protocols, coordinate and liase with regional coordinators, manage logistics, compile, computerise and analyse data and develop tabulation plans and reports. This report, for which there was no precedence or example, is evidence of the hard work and professional competence of the team. As the leader of the team, it is with a sense of pride and satisfaction that I acknowledge the painstaking and dedicated work of the members, namely Dr. V.B. Mathur, Prof. P.P. Talwar and Mr. H.B. Chanana.

I gratefully acknowledge the cooperation and support of the Municipal Corporation of Delhi, particularly its Health Officer and Director, Health Services, Dr. K N Tiwari, who spared the services of Dr. V B Mathur for this national cause.

It would be impossible to conduct a large scale national survey of the present magnitude without sufficient resources. We are indebted to our esteemed partners, Colgate-Palmolive Co., U.S.A., and Colgate-Palmolive (India) Ltd., for supporting the project.

I am sure that results of this survey will pave the way for improving the oral health of the people of India. We recognise that this is only the first step in this direction, where oral health problems and related practices have been identified. The next crucial step will be to use the findings of this survey to plan and implement an appropriate and need-based oral health programme. Here, I hope the national and state governments will use the findings of the survey for planning and implementation of oral health programmes.

As President of the Dental Council of India, I would emphasise and recommend to all those concerned with dental education in the country to review the oral health needs of the people in the context of dental education and use the results of the survey to help strengthen the teaching/ training curriculum of the dental colleges. The students should be taught to look at survey results critically and make decisions about dental care strategies based on age, geographical areas and disease levels in the communities they serve. The dental colleges should use its findings and lay the correct emphasis so that the oral health needs of the people are met with quality services.

This survey must not remain a solitary event. We must ensure that a MIS (Management Information System) is established so that future trends of oral disease and action taken to combat it are monitored regularly through continuing periodic surveys.

The challenge for all of us lies in ensuring a more equitable and need based distribution of resources for oral health, making sure that the benefits of the survey reach the communities in improving their oral health.

Dr R. K. Bali

President, Dental Council of India.

July 2004.

PREFACE

The National Oral Health Survey & Fluoride Mapping of the Dental Council of India is the first-ever national-level epidemiological survey in the country, the need for which was felt for a long time. This massive initiative could not have been carried out without the partnership, participation, cooperation, support and help from a number of institutions, organizations and individuals, all of whom have directly and indirectly assisted the Dental Council of India in this magnanimous task.

We are indebted to the Ministry of Health & Family Welfare for providing the necessary permissions and management support since inception. We gratefully acknowledge the valuable contribution made by the Chief Director, Dr. K.V.Rao, National Family Health Survey, at the stage of sampling design, sample selection and training. We also gratefully acknowledge the contribution of Professor Fauj Ram, of the International Institute for Population Sciences, Mumbai, who was instrumental in setting the sampling frame for the selection of rural and urban primary units from where households were selected for data collection.

In the planning phase, the proposed survey was discussed with international experts in the field of oral epidemiology, health promotion and community dentistry. Prominent among these were Professor Aubrey Sheiham, Head, Department of Community Dentistry, University College, London; Professor Robert Bagramian, Chairman, Department of Community Dentistry, University of Michigan, Ann Arbor, USA; Professor Martin Hobdell, Ireland; and Dr Michael Craft, UK. We remain most indebted for their valued inputs and time.

Dr. P E Petersen, Responsible Officer, Oral Health Program, World Health Organization (WHO), Geneva, found time and visited us at the Dental Council of India, New Delhi, in November 2002. He volunteered the full cooperation and support of the WHO for the project, including assistance in data analysis and reports. We gratefully acknowledge his valuable inputs and feel sure that the information collected will find its appropriate place in the oral global databank maintained by the WHO and in their other publications.

The active participation of dental colleges, their managements, Principals Deans and faculty was envisioned since the inception of the project planning. It was, however, most gratifying to note the extent of enthusiasm and support that was received from the managements and faculty members of some of the colleges. They took upon themselves to meet Herculean challenges that were in front of them in the face of limited resources. The role of some of the colleges strengthens our belief that our colleagues are alive to their professional responsibilities and are dedicated to selfless service in the interest of research and community benefits.

The chairperson, Dr. Ram Das Pai, and the management, faculty and staff of the Manipal Academy of Higher Education (MAHE), Manipal (Karnataka), deserve a special thanks for co-hosting the large-scale training and calibration meeting for all Regional Coordinators and Supervisors at the Manipal Dental College in March 2002. We would specially like to record our sincere appreciation of the Dean, Dr. Shobha Tandon, and her able team, including Dr. V Surendra Shetty, Dr. Soben Peter and others for the professional management of this meeting and the excellent hospitality extended by them.

We also extend a very special thanks to Dr. S.G. Damle, Dean, Nair Dental College & Hospital, Mumbai, who co-hosted the report-writing workshop in January 2004 in Mumbai, where issues relating to state reports were discussed.

The central survey team, from time to time, has received valuable suggestions and active feedback from some senior members of the profession, including Drs. Ganesh Shenoy, Shankar Aradhya, A Jaykumar, S S Hiremath, S G Damle, N C Rao, and Mahesh Verma, and we wish to place on record our appreciation and grateful thanks for their inputs. Drs Arundeep Kaur, Pankaj Goel and C L Dileep assisted the central team in Delhi from time to time and deserve our sincere thanks for their inputs.

We are indebted to the members of the Executive Committee and the General Body of the Dental Council of India, New Delhi for their wholehearted support to this initiative of the Council President. We gratefully acknowledge the able leadership of Mr A L Miglani, Secretary (Retd.), the Secretary Incharge of the Dental Council of India, Mr S S Arora, and Mr C L Bhatia, Coordinator, who though working in the background put in every effort for the success of the survey. While every member of staff has made a valuable and selfless contribution to the survey, we wish to place on record the special contribution of Mr K V Abraham, Mr P K De, Mr. Shiv Kumar, Mr. Praveen Dewan, Mr. Puneet Bansal, and Mr. Anil Verma.

We acknowledge the valuable support, both technical and financial, provided by Colgate-Palmolive. While technical support was provided by Dr. Tony Volpe, Dr. Kedar Rustogi, Dr. Raj Kohli and Dr. Surendra Manek, valuable project management input was given by Mr. Mahendra Jauhari and Mr. Mahender Ashtekar.

Fluoride mapping of drinking water sources in the country to determine areas with optimal or high levels of fluoride was an integral part of the project. Dr. P M Dixit, his team and the management of M/s Medlar Labs, Mumbai, deserve our special thanks, as they were instrumental in completing the task of analysing more than 4,000 water samples that they received directly from the Regional Coordinators as per schedule despite various constraints.

We acknowledge the support of TNS MODE, New Delhi, a prominent marketing, advertising and research organization, who took responsibility of computerization and tabulation of the massive data sets and provided tables according to our tabulation plan. Later on, they also helped in the collection of water samples from the states which could not be covered so far under the survey.

We appreciate the efforts and patience of Mr Rajiv Mathur, an independent Consultant in Information Technology and data management, who has painstakingly worked in programming and reprogramming till we were satisfied with the final set of tables.

We wish to record our gratitude and thanks to all other organisations and individuals, whose names do not appear here but who have supported our work and contributed towards its success in one way or the other.

Dr. R. K. Bali

Dr. V. B. Mathur

Prof. P. P. Talwar

H.B. Chanana

July 2004.

ACKNOWLEDGEMENTS

At the outset, I would like to express my deep sense of gratitude to the Dental Council of India for reposing its confidence and trust in entrusting the survey work related to Andhra Pradesh to Sri Sai College of Dental Surgery, Vikarabad

The commitment and enthusiasm of Dr R. K. Bali, President, Dental Council of India in day-to-day events of the Survey is exemplary. The moving spirit behind this Survey, his has been truly a captain's role, always leading from the front. Dr. V.B..Mathur has been a fountainhead of energy, an unlimited storehouse of patience and perseverance. I have drawn on his help on countless number of times and he always obliged with a cheerful face. If the survey is what it is today, it is in no small measure due to the combined efforts of Dr. Bali, Dr. V.B. Mathur and Prof. P. P. Talwar

I thank the seven Dental Colleges and their Principals for their cooperation. They have deputed their doctors, paradental staff and provided transport to the survey teams. Even though this involvement in the survey caused some inconvenience, they cooperated in an exemplary way

I thank the doctors who have worked hard and willingly in the field. Fieldwork is not glamorous or pleasant. It is a daunting and grueling exercise done under difficult circumstances and in different terrain. Most of the doctors did their job splendidly and quality of data and the conclusions there on solely does credit to these indefatigable and dedicated group of young doctors

The Secretary, Medical, Health and Family Welfare, Govt. of Andhra Pradesh has issued necessary instructions to her subordinate officers to extend all cooperation to the Survey teams and I am grateful to her and through her to the Govt. of Andhra Pradesh. A special word of appreciation to Director, Survey and Land Record, Govt. of AP, who has provided elaborate and accurate maps of most of the villages. These maps were of utmost help in fieldwork.

The local people of the villages, community leaders, government officials, sarpanchs have all extended utmost cooperation during fieldwork. But for their active involvement, this work would not have seen the light of the day.

A note on acknowledgements would not be complete without a mention of the Survey subjects. The subjects willingly participated, answered all questions and patiently subjected themselves to examination procedures. They are the reason for this Survey, and the cooordinator and survey team salute them for their understanding cooperation.

I thank the management of Sri Sai College of Dental Surgery which gave me unlimited freedom and support to get involved in the Survey wholeheartedly. I thank Dr. Ravindra Ratolikar who gave us this opportunity by suggesting our name.

It has been an experience to be involved in the Survey, an experience which has been pleasurable, rewarding and educative and I thank the Dental Council of India for giving me such an opportunity. If Survey findings in any way contribute to people's awareness about dental health and make administrators plan dental services in a better way, my team's little role would have been more than justified.

Dr. A. Jayakumar
Regional Coordinator
Hyderabad
Andhra Pradesh

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CHAPTER 0
EXECUTIVE SUMMARY

1. GENESIS

Oral health is a very important component of the general health of the people. However, it is one segment about which very little is known and the implications of which are not so clearly understood. The high prevalence of dental diseases, like dental caries, periodontal diseases, various stages of malocclusion, and lack of access to needed services, leads to significant absenteeism and economic loss, apart from ill-affects on the health of the person afflicted. The adverse effects of poor oral health make it important to take preventive measures and create the needed services. For this purpose, it is necessary to know the prevalence of oral health problems and understand the dental health practices that people follow. Such information is basic for the formulation of oral health policies and implementation of appropriate programmes to improve the awareness and knowledge of people on the preventive aspects of oral health, create needed services and train necessary dental manpower to meet those needs.

The Dental Council of India has been greatly concerned about this gap in knowledge and the resultant lack of appropriate policies and programmes. A need has long been felt to conduct an epidemiological study on oral health problems, which will also include a study of the related oral health practices and a mapping of fluoride levels in drinking water from various sources in the country, to help such concerns and issues. Such a study may help bring about a balance between the oral health needs of the people and the services provided. It could help plan and organise need-based services so that the level of oral health of the people could improve. The present study is a community-based survey with the objectives of assessment of (1) awareness and knowledge of people on oral health problems; (2) current status of oral health problems in the community; (3) practices people adopt for both prevention and treatment of their oral and dental problems; and (4) levels of fluoride in the drinking water of the people across the country.

Keeping this in view, the Dental Council of India undertook a national-level epidemiological study, "National Oral Health Survey and Fluoride Mapping," to assess oral health problems of the people and practices they adopt in this regard. The survey was initiated in 2002; the aim was to know the ground situation and help decision-makers formulate policies and programmes to improve the oral health of the people. Mapping of fluoride levels in drinking water was made a part of the survey since the fluoride level is directly associated with oral health problems, such as dental and skeletal fluorosis.

2. SCOPE OF THE SURVEY

The scope of the survey was to collect information covering the following dimensions of oral health:

- Prevalence of oral health problems,
- Fluoride levels in drinking water,
- Eating habits affecting oral health,

- Dental cleaning practices,
- Awareness and knowledge of people on factors affecting oral health, and
- Treatment-seeking behaviour of people for their oral health problems.

It must be noted that this survey delved into areas much beyond the usual oral health surveys that generally focused on levels and problems of oral health in the community. This survey collected data on many dimensions so as to enable an understanding of the practices people adopt that cause oral health problems and the steps they take to seek treatment.

3. DESIGN OF THE SURVEY

Recognising the fact that India is a vast country with great diversity in eating habits and behavioural practices, the survey was so designed and conducted that state-wise oral health problems and related practices could be determined. This was expected to help the formulation and implementation of state-wise policies and programmes.

3.1 Sample size

Three considerations were made in deciding the sample size: (1) The estimates should be valid at the state level; (2) Intra-state regional variations may be captured in oral health problems and practices; and (3) it should be completed within the limited budget available. With this in view, the WHO recommendation that the sample comprise 300-600 dental examinations of people aged 5, 12, 15, 35-44 and 65-74 years from a homogeneous region was adopted. Accordingly, it was decided that 315 households, both in rural and urban areas, would be taken from each homogeneous region in a state and oral examinations done on 315 subjects in each identified age group. Also, the sample size would increase in case all the 315 subjects in each of the five identified age groups (5, 12, 15, 35-44 and 65-74 years) were not available in the selected 315 households. Besides, it was also decided that the examinations in each age group would be equally distributed between males and females. Further, of the selected sample size of 315 households, 210 households were to be from the rural areas and 105 from the urban areas. Thus, 105 males and 105 females were examined in each of the five age groups in rural areas, and 53 males and 53 females in each age group in the urban areas.

3.2 Sample selection

Each state was divided into a few homogeneous regions, comprising of a number of districts, on the basis of agro-climatic factors used by the Planning Commission, and the physio-geographic factors used by the Office of Census Commissioner and Registrar General of India. The total sample of households from a state thus depended upon the number of such homogeneous regions.

A three-stage sampling design was adopted to select 210 rural households from each homogeneous region. The first stage was the random selection of a district from a region. The second was selection of 15 villages with probability proportional to size (pps) of the village and finally, selection of 14 households randomly from each selected village.

In the case of the urban sample of 105 households from a homogeneous region, eight blocks/wards were randomly selected from the selected district. From these eight blocks, 15 wards or census enumeration blocks (CEBs) were randomly selected (each CEB has a population similar to that of a ward). In the next stage, 7 households were selected from each CEB. Again, examination was to be done for 105 subjects from each age group (5, 12, 15, 35-44 and 65-74), with half of them being males and half females.

4. STUDY TOOLS

In order to cover the total scope of the study, two types of questionnaires/schedules were used in the survey. One was the WHO schedule on Oral Health Assessment and the second was an individual questionnaire (specially developed by the Dental Council of India) for collecting information on etiologic factors related to oral health awareness, knowledge and practices of individuals on factors affecting oral health and their treatment seeking behaviour.

5. DATA COLLECTION

A small nucleus Central Survey Unit was set up in the office of the Dental Council of India in New Delhi. For the fieldwork, one dental state coordinator and his/her dental college were selected for each state. This coordinator was to oversee the fieldwork in the state in coordination with the Central Survey Unit. Each coordinator was to form field teams consisting of two dentists and one social worker. While the dentists were to examine the oral health of the subjects and record information on the Oral Health Assessment questionnaire, the social worker was to record information on etiological factors.

The quality of data was given utmost consideration. Besides a state coordinator, supervisors were appointed to move with the teams when went for data collection. The supervisors, who were senior members of the dental colleges, were given total responsibility for scrutiny and checking of the data. The data was scrutinised at three levels, in the field, in the state coordinator's office and at the central level before processing.

Water samples were taken from the selected households for testing fluoride levels. Such tests for all water samples were conducted in a laboratory in Mumbai.

6. CALIBRATION AND TRAINING WORKSHOPS

A three-day calibration and training workshop was organised where all the coordinators and supervisors were given training in field logistics, data collection and standardisation of the assessment of oral health problems. The last was very important and a very thorough training was given for it, so that all field teams adopted uniform assessment methods to record dental problems. Another workshop on report writing was organised in Mumbai to standardise the format of each state report.

7. COVERAGE IN THE SURVEY

The National Oral Health Survey was designed to cover the six Agro-Climatic regions of the state and all were covered.

8. FINDINGS (ORAL HEALTH KNOWLEGE AND PRACTICES)

8.1 Characteristics of households surveyed

- About 54 per cent households were living in pucca houses, more so in urban areas than in rural areas. Only about 14 per cent households had kuccha houses in the state.
- A majority of the households had a monthly expenditure of less than or equal to Rs. 2,500.
- About 80 per cent of the population was comprised of Hindus and 9 per cent Muslims. Also, 51 per cent of households belonged to Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Castes (OBCs) categories.
- Rice was staple food, and about 66 per cent of the people being non-vegetarians.
- Almost 61 per cent of the subjects were getting drinking water from pipe/taps.

8.2 Profile of population across age groups

- About 28 per cent of the respondents across age groups were illiterate. The level of illiteracy increased with increase in age group.
- With regard to exposure to media, TV was found to be the most utilised media. Analysis of daily habits across age groups revealed that about 65 per cent respondents watched TV while 16 per cent read newspapers and 13 per cent listened to the radio daily. About one-third of the respondents across age groups watched cinema once in 3 months.

8.3 Abnormal habits across age groups

- Occurrence of each of the abnormal habit, across age groups was very low.
- The occurrence of habit of "sucking or biting fingers/thumb and "grinding and gritting teeth" were slightly higher across age groups.

8.4 Eating habits across age groups

- 58 percent respondents across all age groups did not take sugar in last one day
- Sugar intake declined with increase in age in rural as well as in urban area.

8.5 Oral Hygiene practices across age groups

- The practice of cleaning teeth was universal.
- About 47 per cent across all age groups and across both sexes and more subjects in urban areas reported the use of toothbrush to clean their teeth.

- About 99 per cent, across both sexes and more people in rural areas cleaned their teeth once a day. In urban areas, more people reported cleaning teeth twice a day.
- About 66 per cent, across ages and sexes, and more in the urban areas reported the use of toothpaste. Usage was more in North Coastal Andhra and South Coastal Andhra.
- About 87 per cent, across all ages and both sexes, and more in rural areas reported the use of non-fluoridated toothpaste/powder. Greater use of fluoridated toothpaste/powder was reported in Nellore and South Telengana.
- About 30 per cent, across all ages, more males and more in urban areas changed their toothbrushes once in 1-3 months. The change was less frequent in rural areas – four to six months or even after six months. Change in toothbrush was less frequent in Rayalseema.
- About 48 per cent of the respondents, across all ages and both sexes, and more people in rural areas reported rinsing their mouth after every meal. The practice was more prevalent with increase in age. This percentage was also higher in South Coastal Andhra and South Telengana

8.6 Dental problems and treatment practices across age groups

- Around 11 per cent of 15-year age & below and about 55 per cent of 35-years age & above group reported suffered from dental problems in the last one year. This was the case across sexes and more in rural areas and was reported more in Rayalseema region.
- The most common problem reported across age groups was dental decay. In addition, the problem of gum disease was reported by about 14 per cent. About 14 per cent also reported problems of bleeding gums.
- Only about 2 per cent, across all ages, consulted trained dentist. More than half did not consult anybody. There were no significant differences among regions. However, about 27 per cent subjects, across all ages and both sexes, but more in urban areas reported the availability of governmental dental care facility. But, more respondents were aware of private dental care facilities.
- Most respondents reported that it took half-an-hour to one hour to reach the dental care facilities. This was especially so in urban areas. About 13 per cent even reported more than one hour to reach the dental care facility.

8.7 Awareness of dental health problems across age groups

- All the subjects across ages and both sexes were aware of oral health problems in the state.
- About 9 per cent of respondents were not aware of the factors that cause oral health problems.
- Of those who were aware, most of them reported "not brushing regularly" (70 per cent), followed by "eating sweets/ice cream" (39 per cent) as two important factors.
- About preventive measures in regard to oral health problems, one-third of subjects across all ages and sexes reported no knowledge.

8.8 Tobacco smoking and chewing habits across age groups

- About 26 per cent in the 35-44 and 65-74 age groups had the habit of smoking in the state. The habit was more prevalent among males and in rural areas. Higher percentages were reported from North Coastal Andhra. More than half of them, more females and more from rural areas, smoked cigars. Cigarette smokers were next, and they were more in the urban areas. Fortunately, 85 per cent of smokers, across both sexes and place of residence, were smoking less than 10 times in a day.
- About 6 per cent, across all ages and place of residence, but more males in the 35-44 age group and more females in 65-74 age group said they chewed pan or pan masala with tobacco. Around 59 per cent of them, across all ages and both sexes and place of residence, were chewing it for more than five years.
- About 13 per cent, across all ages, but more males and more in rural areas, said they were taking alcohol.

9. FINDINGS (ORAL HEALTH ASSESSMENT)

The oral health status of the subjects was clinically assessed in field conditions by teams of dental surgeons, who had been previously trained and calibrated. The WHO Clinical Assessment Form (1997) was used to record the clinical conditions. The clinical findings are presented in Chapter VI under the following broad heads:

1. Dental Caries Status and Treatment Need
2. Periodontal Disease Status
3. Malocclusion Status
4. Oral Cancers and other Oral Mucosal Lesions
5. Dental Fluorosis Status
6. Other conditions:

   Extra Oral Lesions; TMJ Signs and Symptoms; Enamel Opacities and Hypoplasia; Prosthetic Status and Need; and Community Need for Immediate Care and Referrals.

9.1 Dental caries

- Overall, 43-8 per cent of the subjects had caries experience. For subjects in the younger age group, the prevalence was a high 54 per cent. caries prone younger age group the prevalence is 54 %. The elderly group where missing teeth confound DMFT values, it is around 90 %. Most subjects fall under the DMF values of 1-3.
- Overall, the mean number of teeth present in the mouth of individuals decreased as age advanced. In the age group of 65-74 years, the mean number of teeth present was about 21.4 indicating a loss of about 10.6 teeth out of the normally present 32 teeth in an average mouth. About 15 percent subjects across both sexes in the age group of 65-74 years were fully edentulous (without natural teeth).

- The prevalence of caries in children aged 5 years (primary teeth) was 41.5 percent. The prevalence (permanent teeth), was approximately 53.1 percent in the age groups 12 years; 57.9 percent in 15 years; 76.7 percent in 35-44 years; and 88.8 percent in 65-74 years, respectively.
- In the 5 year age group, where only primary teeth are present, the mean dmft value is 1.5. The decayed teeth (dt) component contributed to the whole of dmft value in this age group. The mean DMFT as incrementally higher as age advanced. It was 1.7 in 12 year olds; 2.0 in 15 year olds; 3.9 in 35-44 year olds; and 12.8 in 65-74 year olds. The decayed teeth (DT) component contributed most to the DMFT in the age groups of 12 years, 15 years and 35-44 years. In the 65-74 year age group, the missing teeth component (MT) contributed the most. The pattern of distribution of the components of DMFT was similar in rural and urban areas.
- The SIC Index, which provides a measure of the mean DMFT value of the one third of the subjects with the highest mean scores of DMFT, was consistently high across age groups and was two to three times more than the mean dmft/ DMFT values in the respective age groups. In the highest age group of 65-74 years, the SiC index was 26.7 while at 12 years, it was 3.9.
- The percentage of subjects with root caries was approximately 7.0 and 7.9 respectively in the age groups 35-44 year and 65-74 year. In the regions, Vishakapatnem had the highest root caries (34 per cent).
- The mean number of teeth with root caries was less than one (0.2 and 0.4 respectively) in both age groups. The percentage of subjects with root fillings was negligible in both age groups in the state.
- There were no marked gender related, or rural and urban differentials. The prevalence of caries was uneven in between regions. The pattern of distribution of caries by dmft/ DMFT values was similar in rural and urban areas and in between regions.
- None of the 5 year olds and males of the 12 year group had any teeth filled. This is a disturbing fact. In fact, none of the middle aged and elderly have also any teeth filled. Except for a sporadic filling, none of the people surveyed in the state had any restorations in their mouths. This speaks of either utter lack of awareness, facilities or affordability for dental care.

9.2. Treatment need

- Approximately 39.1 percent children aged 5 years required some treatment. This percentage was 54.8 percent (12 year olds); 58.4 (15 year olds); 78.2 percent (35-44 year olds); and 87.2 (65-74 year olds).
- The most prevalent need was for one or more surface fillings, ranging from 36.5 percent in 5 year olds to a maximum of 62.6 percent in 35-44 year olds, followed by the need for extractions (ranging from about 2.1 percent in 5 year olds to 45.4 percent in 65-74 year olds. Pulp care and crowns/ veneers ranked next in the order of prevalence of treatment need. Besides, there was a high prevalence of other but unspecified need, especially in adults.
- The mean number of teeth which required treatment was highest in the highest age group of 65-74 years (11.8) and lowest in the subjects aged 5 years (1.6). The mean number of teeth needing treatment at 12 years was 1.7. Ranking by the type of treatment need, the mean number of teeth was highest for fillings (one or more surfaces), extractions, pulp care and crowns/ veneers.

- There were no major differentials in the pattern of type of the treatment need between sexes, rural and urban populations, or in between regions.

9.3. Periodontal status

- The periodontal status was assessed using the Community Periodontal Index (CPI) with its three indicators of gingival bleeding, calculus and periodontal pockets. In addition, the loss of periodontal attachment was also measured to provide an indication of the status of periodontal health.

- The prevalence of periodontal disease in the state was generally high: it was 52.9 percent in 12 year olds; 61.1 percent in 15 year olds; 94.9 percent in 35-44 year olds; and 88.5 percent in 65-74 year olds. Bleeding and calculus, in that order, were the two most prevalent conditions in 12 and 15 year olds. In 35-44 and 65-74 year olds, calculus was more prevalent than bleeding. Nearly 30 percent and 6 per cent subjects in the 65-74 year age group had shallow (4-5 mm) and deep (6 mm or higher) pockets respectively. In 35-44 year age group, shallow pockets were present in 12.3 per cent subjects while a negligible 0.9 per cent subjects had deep pockets

- The prevalence of periodontal disease in general, tended to be marginally higher in rural areas compared to the urban areas with the exception of 65-74 years where the prevalence was almost even between rural and urban subjects. But the pattern of distribution of periodontal disease by conditions present (bleeding, calculus and pockets) was similar in both rural and urban areas in the state and in between regions.

- The mean number of sextants with periodontal disease conditions was lowest in 12 year olds (1.8) and highest in 35-44 year olds (5.0), when the 5 year age group is excluded. While bleeding was the principal constituent in 12 and 15 year olds, calculus was the major contributor in 35-44 and 65-74 year olds.

- Loss of attachment had an incrementally higher prevalence as age advanced from 15 years to 65-74 years. Overall, the prevalence of Loss of Attachment in one or more sextants was lowest in 15 years (6.5 per cent) and highest in 65-74 years (60.2 per cent) in the state The least severe form of loss of attachment (4-5 mm), followed by the more severe form of 6-8 mm, was the most prevalent across age groups and place of residence. The mean number of sextants with loss of attachment was not very high in 35-44 years (1.7) and 65-74 years (2.2).

9.4. Malocclusion status

- The Dental Aesthetic Index (DAI), recommended by the WHO, was used to analyze the severity of malocclusion in the surveyed population.

- No malocclusion was recorded in children aged 5 years with primary teeth. Malocclusion ranged from 11.5 per cent in 12 year olds to 19.3 per cent in 35-44 year olds. The majority of those affected in 12 and 15 year age groups, where the detection and treatment of malocclusion is of greatest importance, definite, 'severe' and 'very severe' malocclusion was present in that order of severity. In the 35-44 year age group, 'definite' malocclusion was most prevalent followed by 'very severe' and 'severe' malocclusion.

- The urban residents appeared to have marginally higher prevalence of malocclusion than rural residents and males appeared marginally less affected than females.

9.5. Oral cancer & oral mucosal lesions

Oral cancer was detected in one subject each in the 35-44 year (female) and 65-74 year (male) age groups. The prevalence of oral mucosal lesions was overall quite low in the state and ranged from about 0.5 percent in 5 year olds to a maximum of about 9.0 per cent in subjects aged 65-74 years. The precancerous lesion, leukoplakia was reported in 11 out of 1836 subjects (0.6 per cent) examined in 65-74 year age group while lichen planus were reported in 2 subjects in that age group. Other notable conditions reported in adults were ulceration and abscesses. Lesions were marginally higher in rural areas but the pattern of distribution of lesions by type was similar in between regions and between rural and urban residents.

9.6. Dental fluorosis status

The prevalence of dental fluorosis, especially moderate and severe forms, was reportedly quite low in the state.

The fluorosis status in the state as reported in this survey does not correspond with the perspective of fluorosis burden of the state of Andhra Pradesh. The two most endemic districts viz Nalgonda and Prakasam, which have the highest fluoride levels in water do not form the sample regions of the present survey having got eliminated during randomization process. The fluoride scenario of the present survey has to be viewed along with established data available for the whole state of Andhra Pradesh.

9.7 Other lesions

9.7.1 Extra oral lesions

There was a very low prevalence of extra oral lesions in the state, not exceeding 4.0 percent in 65-74 year olds. These lesions were mainly ulceration, sores, erosions or fissures located in the commissures and head, neck or limbs region.

9.7.2 T M joint symptoms and signs

The prevalence of T M Joint symptoms recorded was very low in all age groups. Signs were present in 3.0 per cent subjects aged 35-44 years and 7.5 per cent subjects aged 65-74 years. The signs of TM Joint disorder were clicking, tenderness and reduced jaw mobility, in that order.

9.7.3 Enamel defects (opacities, hypoplasia)

Overall, there was a low prevalence but even distribution of enamel defects by age groups and sex in the state. The prevalence was relatively higher in children (12 and 15 years) than adults. The most prevalent enamel defect was demarcated opacity followed by diffuse opacity across age groups. The mean number of teeth affected was no more than 0.9 in any of the age groups. There were no major rural and urban or male and female differentials in the pattern of distribution of enamel defects by type.

9.8 Prosthetic status & need

- The dental prosthetic status and need for both upper and lower dental arches was recorded for subjects 15 years and above. The information was collected to assess the extent to which subjects were wearing or needing dental prostheses including bridge, partial dentures and full dentures.
- There were virtually no subjects were wearing a prosthesis in the age group of 15 year. The overall proportion of subjects (65-74 years) wearing one or the other type of prostheses in the upper/ lower arch was low (4.4 and 3.8 per cent in upper and lower arches) though its need existed. About 16.9 and 20.6 per cent subjects in the age group 35-44 years were in need of prostheses in the upper and lower arches respectively. These figures for 65-74 year age group were 59.1 and 62.1 percent in 65-74 years.
- The full mouth removable dentures were being worn by 2.5 per cent subjects (65-74 years) while the need for full mouth removable dentures existed in 21. 3 per cent subjects in this age group.
- The majority of those wearing prostheses were wearing full denture prostheses followed by partial dentures in the 65-74 year age group, while in the 35-44 year old group, the partial denture was most prevalent. The prevalence pattern of subjects wearing prostheses and their pattern of distribution by type of prostheses was similar in rural and urban area and in regions.
- The most prevalent need in 35-44 years and in 65-74 year old subjects was for multi-unit prostheses followed by full dentures. The need was similar for upper and lower arches, in rural and urban area, between sexes and between regions.

9.9 Community need for immediate care and referrals

Overall, life threatening conditions were reported in 0.1 to 0.2 percent subjects in various age groups. Pain or infection was reported in 0.2 percent subjects aged 5 years to a maximum of about 0.9 percent subjects aged 65-74 years. Referrals were made for almost all of the conditions recorded. There were no marked differentials that could be detected between sexes, rural and urban residents or in between regions.

Table: Summary of findings of important oral health conditions and practices by age in Andhra Pradesh state.

	Findings	Age in years				
		5	12	15	35-44	65-74
1.	**Oral disease conditions**					
1.1	Dental Caries					
	% Prevalence	41.5	53.1	57.9	76.7	88.8
	Mean DMFT	1.5	1.7	2.0	3.9	12.8
	SiC Index	4.6	3.9	4.5	8.4	26.7
1.2	Periodontal disease					
	Bleeding, calculus or pockets	20.5	52.9	61.1	94.9	88.5
	% Prevalence					
	Mean no of Sextants affected	0.0	1.8	2.5	5.0	4.1
1.3	Loss of attachment					
	% Prevalence	NA	NA	6.5	39.6	60.2
	Mean no of Sextants affected	NA	NA	0.2	1.7	2.2
1.4	Malocclusion (%)	0.2	11.5	13.1	19.3	NA
1.5	Dental Fluorosis (%)	2.7	14.1	15.0	8.4	4.9
1.6	Oral mucosal conditions (nos.)	10	13	22	95	165
1.7	Oral Cancer (nos.)	0	0	0	1	1
1.8	Edentulousness (%)	NA	NA	0.0	0.2	21.3
2	**Oral Health Practices**					
2.1	Sugar Intake in last 24 hours					
	Once	26.0	26.4	26.6	24.8	20.3
	Two & more times	36.0	23.2	17.7	6.6	4.1
2.2	Clean teeth with					
	Tooth Brush	70.2	76.2	76.0	66.4	35.7
	Fingers	24.6	16.2	15.2	14.3	33.8
2.3	Rinsing mouth					
	Always	39.8	42.8	47.3	52.8	56.5
	Sometimes	24.4	30.7	31.8	32.0	28.4
2.4	Tobacco smoking	NA	NA	NA	24.0	27.4
2.5	Frequency of tobacco smoking					
	Less than 10 times	NA	NA	NA	85.5	85.4
	10 or more times	NA	NA	NA	9.2	8.6

CHAPTER 1
INTRODUCTION

1.1 BACKGROUND OF THE STATE

1.1.1 Geographical location

Located in South India, Andhra Pradesh is the fifth largest state in the country. The State has the longest coastline (972 km) among all the States in India. Andhra Pradesh is endowed with a variety of physiographic features ranging from high hills, undulating plains to a coastal deltaic environment.

The state can be divided into three important regions—the coastal region comprising of nine districts, generally called Andhra; the interior region consisting of four districts collectively known as Rayalseema; and the Telengana regions, consisting of the capital Hyderabad and nine adjoining districts. Comprises of 23 districts

The state is situated on the Deccan Plateau, one of the oldest geological formations of the country. The Godavari and Krishna rivers cut through the state, forming large deltas before joining the Bay of Bengal. The Tunghabadra, a large tributary of the Krishna is another important river of the state.

1.1.2 Population and demographic profile

The total population of Andhra Pradesh is 75,727,541 according to the 2001 Census. The decadal growth of population in the state has come down from 24 per cent during 1981-1991 to 13.86 per cent in 1991-2001. The rural population comprises nearly 73 per cent of the state's population.

The sex ratio (i.e. number of females per thousand males) was 978 in 2001 census.

1.1.3 Socio-economic characteristics

The state enjoys a position of pre-eminence in respect of crop production particularly food grains and has the distinction of being called the "Rice Bowl" of South India. It is normally a surplus state in rice production and contributes a major share of food grains annually to the central pool. The food grain production during 1999-2000 was 149.05 lakh tonnes as against the average of 122.68 lakh tonnes.

It is also the leading producer of cash crops like tobacco, groundnut, chillies, turmeric, oilseeds, cotton, sugar and jute. It produces some of the finest varieties of mangoes, grapes, guavas, sapotas, papayas and bananas.

1.2 NEED FOR ORAL HEALTH SURVEY

1.2.1 Oral health problems

Oral Health is a very important component of the general health of the people. The high prevalence and severity of oral diseases such as dental caries, periodontal disease, oral cancers and various stages of malocclusions and crippling nature of these diseases lead to significant absenteeism and economic loss. Dental illness, thus, contributes to considerable reduction in national productivity and overall national development.

It is reported that almost 85 per cent of children and 95-100 per cent of the adult population suffers from periodontal disease at any given point of time. About 35 per cent of children suffer from misaligned teeth and jaws, which affects their proper functioning. These children lose school time and suffer from pain of dental origin. This not only affects their normal life but also causes a good deal of discomfort to their parents in several ways. These dental problems are initially painless but can become chronic and self-destructive, eventually leading to tooth loss. Dental caries has a crippling effect on the functional components of oral cavity that leads to malnutrition because of one's incapacity to chew any coarse food. Unfortunately, this is still not considered a public health problem and thus no action has been taken to correct it. In other words, there is need to make people aware of the preventive and curative aspects of oral health so that quality of their life can be improved.

Oral diseases also have an adverse effect on other vital organs of the body. Pus oozing pockets in advanced periodontal disease in adults act as a focus of infection for other vital organs of body like the kidney, heart, lungs, brain, etc. Limited information available from micro-level studies suggests that 35-40 per cent of all body cancers are oral cancers. That is, incidence of simple oral morbidity becomes chronic and ultimately life threatening. One needs not only to take preventive measures, but early curative steps as well. It is unfortunate that oral health has received much less attention perhaps because of its lower life threatening risk. Its role in quality of life has now been recognised and thus all efforts should be undertaken to improve the oral health of the people.

Several adverse effects of poor oral health necessitate preventive, curative and educational services/ activities. These necessitate a proper understanding of people's knowledge, awareness and attitudes towards oral health and oral health practices, besides the magnitude of the problems and the corrective and treatment-seeking measures that people adopt. This information is basic for the formulation of policy, developing strategic measures and meeting appropriate manpower needs, and creating programs for improvement of the oral health of people.

1.2.2 Lack of data for policies and manpower development

No authentic, reliable or consolidated data on the magnitude of oral health problems, behavioural practices of people for preventive and curative care, dental manpower, infrastructure and on the appropriateness and efficiency of existing oral health care services, including educational and awareness-raising activities, are available in the country. However, a wide spectrum of oral health services exists in many urban/rural areas. These services range from rudimentary and sporadic in rural areas to sophisticated and state-of-the-art in urban areas. It is unfortunate that there has neither been any systematic assessment of the need and form of educational activities and curative services, nor of the impact of existing services on the oral health of the people. The vacuum of an effective monitoring and evaluation system is being felt; dental professionals are very keen to fill the gap between emerging needs and existing services. A strong need exists to understand oral health care practices and treatment-seeking behaviour of the people and to assess the existing oral health care services. An appropriate and relevant oral health policy for the country should address local problems in the broad context of the World Health Organization's (WHO) primary health care approach framework. Ultimately, data needs to be generated to help address and improve the overall oral health of the people in the country.

Since the quantity of intake of fluorides has an effect on dental caries prevention and control, it is also necessary to know the intake of fluoride through water, toothpaste or any other source. This will help to bring out area-specific policies to meet the fluoride needs of the people.

In conclusion, it was felt that two types of studies were needed. One, on the incidence/ prevalence of oral health problems and the knowledge and behavioural practices of people for the prevention/ treatment of such problems. Second, an assessment the existing facilities and infrastructure for their cost effectiveness and utilisation patterns. Such studies and their analysis, it was felt, would ultimately help in bringing about a balance between the needs and the services required to meet such needs.

1.3 INITIATIVE OF THE DENTAL COUNCIL OF INDIA

The Dental Council of India, as per its objective, has always been concerned with the oral health of people in the country. It has, on the one hand, been attempting to strengthen the quality of oral health activities by arranging workshops/seminars to inform and involve dentists in this important area, and, on the other, been raising its concern with the Government on the poor oral health situation prevailing in the country. The idea is to work with both the stakeholders in improving oral health in the country. It has also been making recommendations and suggesting ways and means to bring about an improvement in the overall oral health situation in the country.

1.4 NATIONAL ORAL HEALTH SURVEY

As indicated above, it was felt that there was a need to conduct two types of studies on oral health to bring about a balance between the oral health needs of the people and the services needed to meet such needs. The first involved a community survey to assess (i) the knowledge of the people on appropriate dental health promoting behaviours, including treatment seeking behaviours, and (ii) the oral health status of the population. The second was a survey and assessment of available dental care services. The Dental Council of India undertook a community survey, the National Oral Health Survey, to assess the dental problems and practices related to oral health in 2002. This report presents the results of this survey, where a representative sample of community members in all the states were contacted to assess their dental service needs and understand their knowledge and behaviour with regard to practices affecting oral health. The priority and the need for such a survey had first been emphasised in 1991 in the National Workshop on "Exploring New Frontiers in Dental Public Health: Planning for the Future" that had been organised by the Dental Council of India under the Presidentship of Dr. R.K. Bali. This workshop had highlighted the lack of data and framework for planning oral health manpower and services in the country and had recommended a nation-wide oral health survey to assess the current status of oral health. As a follow up of this recommendation, the Dental Council of India, again under the Presidentship of Dr. R.K. Bali, developed a proposal to conduct a National Oral Health Survey to assess oral health problems in the country and the behavioural practices affecting them. Mapping of the fluoride levels in the country was also made a part of this survey. It approached several individuals and agencies for technical and financial support for undertaking this national survey.

1.4.1 Support of Government of India

The proposal to conduct a National Oral Health Survey was submitted to Ministry of Health & Family Welfare, Government of India for (i) seeking their formal approval, and (ii) grant of financial assistance and necessary logistical support. While the Government recognised the need and importance for national survey after several meetings between the President of the Dental Council of India and officials of the Ministry of Health & Family Welfare, it, however, could not provide financial assistance for the survey in view of its other more pressing commitments. However, the Ministry of Heath & Family Welfare agreed to support the Council's efforts to seek financial and technical support from other agencies.

1.4.2 Support from Colgate India/International

The President of the Dental Council of India, Dr. R K Bali, subsequently approached Colgate India and Colgate International for funding this survey. After a series of meetings in New Delhi, Mumbai and in the US, the company management agreed to grant a major financial assistance for this national survey.

1.4.3 Support of individuals and dental colleges in India

The Dental Council of India did not have the manpower to manage such a large survey by itself and thus decided to undertake it in collaboration with dental colleges in India and the Indian Association of Public Health Dentistry (IAPHD). A bare minimum technical unit was set up for this purpose. It consisted of Dr. R.K. Bali as Chairman and Project Coordinator, Dr. V.B. Mathur as Project Officer and Mr. H.B. Chanana as Statistician. Professor P.P.Talwar, an eminent expert in statistics and demography, was appointed as the consultant for survey methodology. **Annexure-1** Collectively, they formed the Central Survey Team for the National Oral Health Survey & Fluoride Mapping and were located in the office of the Dental Council of India in New Delhi. It was also decided that the Central Survey Team would involve Principals/ Deans/ Heads of Dental Colleges at Regional/ State levels and a few members of the IAPHD for technical development of the survey, data collection in their states and subsequently for report writing. This model was thought to be the best for inducing a sense of ownership and commitment among the dental colleges. Accordingly, the President of the Dental Council of India sent a copy of the proposal/ protocol of the National Oral Health Survey to these colleges, seeking their active support and participation. On their part, the colleges enthusiastically took part in the survey and generated, shared and pooled local level resources to supplement the grant for the survey. In fact, almost all resource persons and Deans/ Principals of the dental colleges agreed with his request and expressed willingness to participate in this national endeavour.

The Dental Council of India also appointed a core technical committee consisting of experts in oral health and survey methodology (statistics) to work out technical and field details for the National Oral Health Survey. Joint expertise was felt necessary so that the survey could provide scientific estimates of the prevalence of various oral health problems and the knowledge and behavioural practices of the people. The members of the committee are listed in the annexure to this report. **Annexure-2**

1.5 SCOPE OF THE SURVEY

This survey recognised the fact that India is a vast country with great diversity in eating habits and behavioural practices which could affect the oral health of the people. It was, therefore, decided to conduct the survey in such a way that state-wise oral health problems and practices could be determined. This would help in formulation and implementation of state-wise policies and programmes on oral health activities and services.

As indicated earlier, it was also decided to collect water samples from representative areas to assess the level of fluoride in water because of its implications on oral health. Such data was ultimately to help in fluoride mapping at the state level.

The scope of data collection was enlarged in the sense that it would collect data not only on the incidence/ prevalence of oral health problems (WHO clinical form), but also on dental hygiene practices, food habits, knowledge of dental problems and behavioural practices related to dental health.

Thus, the scope of the survey was to have state-wise and national data and reports containing information on the following components of oral health:

- Prevalence of important oral health problems
- Fluoride mapping
- Dental cleaning practices
- Awareness and knowledge of people on factors affecting oral health and their related dietary and dental cleaning practices
- Treatment-seeking behaviour of the people for their oral health problems.

The survey also explored the association between oral health and its related practices.

1.6 OBJECTIVES

The long-term goal of the survey was to provide state-wise data for improvement of the overall oral health of the people of India. It was done by collecting enough information for formulation of a national oral health policy and for implementation of oral health programmes in each state. All its dimensions of preventive, promotive and curative oral health care was to be addressed in the survey.

More specifically, the objectives of the National Oral Health Survey were:

1.6.1 To collect data on oral health status, particularly on,

- Dental Caries
- Periodontal disease
- Malocclusion
- Oral cancers
- Fluorosis
- Mucosal and Bony lesions

1.6.2 To understand eating and dental cleaning practices that affect oral health and determine the degree of association/ correlation between some of the known etiologic factors which affect oral health status; particularly included were

- Food habits (affecting oral health)
- Eating habits (affecting oral health)

- Dental cleaning practices, and
- Intake of fluoride

1.6.3 To assess awareness and knowledge of people on the factors affecting oral health, and

1.6.4 To determine the treatment-seeking behaviour of the people for their oral health problems.

It was presumed that the data collected would lead to development of programmes on preventive, promotive and curative dimensions of the oral health problems in each state. It was also to serve as a baseline data against which progress of dental programmes could be assessed in future years.

1.7 CHAPTERIZATION PLAN

The report is comprised of the following main chapters:

0 Executive Summary

1. Introduction
2. Methodology & Data Collection
3. Background Characteristics of the Surveyed Population
4. Mapping of the Fluoride Levels
5. Food habits and Oral Health Practices
6. Status of Oral Health

CHAPTER II

METHODOLOGY AND DATA COLLECTION

2.1 BASIC CONSIDERATIONS IN SURVEY DESIGN

The following considerations were taken into account while designing the survey:

1. Estimates of oral health problems and related practices needed to be made at the state level.
2. The study should be able to capture intra-state regional variations in oral health problems. Thus, regional differentials (within a state) in oral health problems should be assessed to suggest region-specific programmes.
3. The scope of information should be so decided that individual states should be able to formulate oral health policies and programmes. Thus, information should be collected on:
   - Levels of oral health problems
   - Etiological factors affecting oral health
   - Behavioural practices with regard to dental cleaning practices
   - Awareness of dental problems and practices followed to seek treatment, and
   - Fluoride mapping and issues related to fluoride in toothpaste/ powder
4. Available financial resources (limited) should be used to undertake the survey in all states, unless some other prohibitive factors operate in a state.

2.2 Sample design

2.2.1 Sample size

The following considerations were made in working out the sample size:

(i) The estimates should be valid at the state level, and

(ii) Intra-state regional variations in oral health problems and related practices may be captured.

The World Health Organization (WHO) has recommended a sample of 300-600 dental examinations of people in the 5, 12, 15, 35-44 and 65-74 age groups from a homogeneous region of a state. Hence, this sample size was kept in mind while deciding on the number of households to be selected from different homogeneous regions (within a state). It was decided that 315 households, covering both rural and urban areas, would be selected from each homogeneous region in the state. It was expected that this sample would give 315 respondents/examinees in each of the five age groups of 5, 12, 15, 35-44 and 65-74 years. In case this number of respondents (315 in each of the five ages) was not available from the selected 315 households, then more households would be covered to get these numbers of examinees/ respondents. It may be pointed out that while the selected sample size was closer to the lower limit of the WHO recommendations, this was done given the financial constraints under which this study was undertaken.

It may be reiterated here that the sample size of 315 households or more was for each homogeneous region within a state. Thus, the actual sample size at the state level varied according to the number of homogeneous regions in which the state had been divided. For instance, if a state had five homogeneous regions, then the total sample size would be 5x315= 1,575 or more households to cover 1,575 respondents/ examinees of each of the five age groups, resulting in a total 7,875 oral examinations.

In order to give representation to urban population, which forms a small proportion of the total population in most regions/states in India, the urban sample was over-sampled so as to get estimates with a reasonable margin of sampling error of the parameters under study. Accordingly, it was decided that two-thirds of the sample would be from the rural areas and one-third from urban. Thus, 210 households were selected from rural areas and 105 from urban areas. Weights (for rural and urban proportions) were applied to these estimates to get parameter estimates at the stratum (region) level and then at the state level.

As indicated above, though it was expected that 315 households from each region would yield a sample of 315 individuals each in the 5, 12, 15, 35-44 and 65-74 age groups. Instructions were, however, issued to the field teams that they should visit more households if there was shortfall in any category in the 315 selected households.

It was also decided to have an equal number of males and females in the sample. Therefore, when the field teams were to visit the households, they had to make sure that the 315 respondents/ examinees were equally divided between males and females. In other words, the field teams had to start with a larger sample of households in order to cover 315 respondents/ examinees of each of the five age groups with an equal number of males and females.

2.2.2 Selection of sample

The Planning Commission of India in an exercise to group districts into homogeneous regions in a state had divided each of the 18 major states into a few homogeneous agro-climatic regions on the basis of socio-economic indicators and agricultural parameters. In the case of the remaining states/Union Territories, the homogeneous physio-geographic regions determined by the office of Registrar General of India, were used. Each homogeneous region thus formed a stratum for collection of data from 315 respondents/ examinees of each age, equally divided between males and females. **Annexure-3**

2.2.2.1 Rural sample

In order to get a sample of rural households in a stratum (region), the three-stage sampling method was adopted. The first stage saw the selection of one district from the group of districts in that particular region; the second stage, involved selection of 15 villages from this selected district and the third, selection of 14 households from the villages so selected. The district was selected randomly. For the selection of 14 sample villages, all villages in the selected district were arranged in an array according to their size, so as to get a cumulative total of their population. This cumulative total array was then divided into three sections, each having equal population size. Five villages with probability proportional to the population size (pps) of the village were then selected from each of three sections. The list of villages were taken from the sampling frame developed for the Rapid Household Survey, a district-wise survey conducted by the Government of India and

coordinated by the International Institute for Population Sciences, Mumbai; the list was based on the 1991 Census. In the third stage, 14 or more households were selected randomly from a village (by dividing it into two equal parts) to get a sample of 14 respondents/ examinees from each of the five age groups – 5, 12, 15, 35-44 and 65-74, half of them being males. Thus, a sample of 210 or more households was selected to interview 14 members (half male and half female) in each of the five age groups of 5,12, 15, 35-44 and 65-74 years.

2.2.2.2 Urban sample

For the urban sample also, the three-stage sampling design was adopted. In the first stage, eight blocks/ wards were selected randomly from the list of urban blocks/wards in the selected district. The second stage was selection of 15 Census Enumeration Blocks (CEBs) from selected eight blocks/ wards (the population size in each CEB is approximately equal). The list of CEBs was obtained from the District Census Office and was for the year 1991. The third stage was a systematic sample of seven or more households in each CEB to get seven members of each of the five age groups of 5, 12, 15, 35-44 and 65-74 years. Half of them were to be males in each age group. Thus, a total of 105 or more households were randomly selected from the selected 15 CEBs.

On the basis of this sampling design, the number of households to be covered in the state were 28,350 or more to cover 28,350 respondents/ examinees in each of the five age groups of 5, 12, 15, 35-44 and 65-74 years. Half of them were to be males. Thus, the total number of examinations to be done was 1,41,750. The actual coverage was a minimum of 18,585 households, a total of 92,925 examinations. Their state-wise, rural/urban distribution is shown below:

It may be noted that sample size shown, both on the basis of design and actual coverage, is for the minimum number of households. They were selected to give this number of respondents from each of the five age groups – 5,12,15, 35-44 and 65-74 years -equally divided between males and females.

Table 2.1 States, number of regions and sample of rural/urban households.

Sl. No.	State	Coverage as per design				Actual coverage			
		No. of regions	No. of households		Total	No. of regions	No. of households		Total
			Rural	Urban			Rural	Urban	
1.	Andhra Pradesh	6	1260	630	1890	6	1260	630	1890
2.	Assam	3	630	315	945	2	420	210	630
3	Bihar	3	630	315	945	Not covered			
4.	Jharkhand	2	420	210	630	Not covered			
5.	Gujarat	7	1470	735	2205	7	1470	735	2205
6.	Haryana	3	630	315	945	3	630	315	945
7.	Himachal Pradesh	2	420	210	630	2	420	210	630
8.	Karnataka	4	840	420	1260	4	840	420	1260
9.	Kerala	3	630	315	945	3	630	315	945
10.	Madhya Pradesh	8	1680	840	2520	4	840	420	1260
11.	Chattisgarh	3	630	315	945	Not covered			
12.	Maharashtra	6	1260	630	1890	5	1050	525	1575
13.	Orissa	5	1050	525	1575	5	1050	525	1575
14.	Punjab	3	630	315	945	3	630	315	945
15.	Rajasthan	5	1050	525	1575	3	630	315	945
16.	Tamil Nadu	7	1470	735	2205	7	1470	735	2205
17.	Uttar Pradesh,	6	1260	630	1890	2	420	210	630
18.	Uttranchal	2	420	210	630	Not covered			
19.	W. Bengal	6	1260	630	1890	Not covered			
20.	Jammu & Kashmir	3	630	315	945	3	630	315	945
21.	Chandigarh	1	105	210	315	1	105	210	315
22.	Delhi	1	105	210	315	1	105	210	315
23.	Goa	1	105	210	315	1	105	210	315
24.	Pondicherry	1	105	210	315	1	105	210	315
	Total	**91**	**18690**	**9975**	**28665**	**63**	**12810**	**7035**	**19845**

Note: Names of the regions and selected districts are shown in Annexure-3.

Table 2.1(a) : Presents regions/districts within region and sampled district in the state of Andhra Pradesh

Table 2.1(a) STATEMENT SHOWING REGIONS/DISTRICTS WITHIN REGIONS AND SAMPLED DISTRICT IN THE STATE OF ANDHRA PRADESH

Code	Region	Districts	Sampled District	*Coverage as per design*			*Actual Coverage*		
				No. of Households			*No. of Households*		
				Rural	Urban	Total	Rural	Urban	Total
1	North Coastal Andhra	i) Srikakulam							
		ii) Vijaynagaram							
		iii) Vishakhapatnam	Vishakapatnam	210	105	315	210	105	315
2	South Coastal Andhra	i) East Godavari							
		ii) West Godavari							
		iii) Krishna							
		iv) Guntur	Guntur	210	105	315	210	105	315
		v) Prakasam							
3	Nellore	i) Nellore	Nellore	210	105	315	210	105	315
4	Rayalasema	i) Chittor	Chittoor	210	105	315	210	105	315
		ii) Cuddapah							
		iii) Kurnool							
		iv) Anantpur							
5	South Telangana	i) Mehaboobnagar							
		ii) Nalgonda							
		iii) Ranga Reddy	Ranga Reddy	210	105	315	210	105	315
		iv) Hyderabad							
6	North Telangana	i) Medak							
		ii) Warangal							
		iii) Khammam	Khammam	210	105	315	210	105	315
		iv) Nizamabad							
		v) Adilabad							
		vi) Karimnagar							
Total	**6**	**23**	**6**	**1260**	**630**	**1890**	**1260**	**630**	**1890**

2.3 STUDY TOOLS

In order to cover the total scope of the study, two types of questionnaire/ schedules were used for data collection. The first was the Oral Health Assessment Questionnaire (WHO, 1997) for recording the results of the examination of oral health of individuals. The second was the Individual Questionnaire (specially developed by DCI) for collecting information on etiologic factors related to oral health awareness, knowledge and practices of individuals on factors affecting oral health and their treatment seeking behaviour. These questionnaires were pre-tested and finalised by the Central

Survey Unit in Delhi with the help of a consultant. A copy each of the tools used is annexed in this report. **Annexure - 7**

2.3.1 Oral health assessment form

This survey used the Oral Health Assessment form recommended by the World Health Organization. It followed all the instructions given in the WHO publication, "Oral Health Surveys: Basic Methods". By keeping the WHO form unchanged, it was considered possible to collect data comparable to other sets of data in the WHO databank.

2.3.2 Questionnaire on food habits and oral health practices

As indicated, this survey did not limit itself only to oral health assessment because its aim was to help formulate dental policies and programmes. Therefore, it was essential to collect information on all parameters like food habits, dental cleaning practices and treatment seeking practices that ultimately affect the oral health of the people.

The core technical group working on this national survey developed a questionnaire wherein all information related to factors that affected oral health was collected from respondents/ examinees. The idea was (1) to understand factors that affected their oral health status, and (2) determine relationships between different etiological factors and the oral health status. The questionnaire had the following sections:

1. Socio-economic and demographic characteristics of the population
2. Abnormal oral habits
3. Eating habits
4. Oral hygiene practices
5. Pattern of practices for dental treatment
6. Awareness and knowledge of dental problems, and
7. Tobacco smoking and chewing habits

2.4 DATA COLLECTION

Since individuals of different ages and sex were to be examined/ interviewed, it was necessary that dentists should be involved in the data collection teams. Therefore, it was decided that dental colleges, particularly their Departments of Community Dentistry, should be involved in the data collection work. It was also hoped that their involvement would help reduce the cost of the survey

as not only could their manpower but also their infrastructure and equipment be deployed in the survey work. However, this was based on the assumption that it would be in their interest, both professionally and personally, if they cooperated with the Dental Council of India in conducting the national survey, a long overdue activity of immense importance to the dental profession. Keeping this in mind, the technical group formed for the survey identified dental colleges and individuals in each state whose involvement could be helpful in quality data collection work. The President of the Dental Council of India then wrote to these identified individuals and dental colleges seeking their cooperation in this national effort. The response was very positive and almost all the invitees were very enthusiastic about their involvement. **Annexure - 4**

The first stage in the data collection work was to set up a Central Survey Unit in the Dental Council of India's Office in New Delhi to coordinate all activities related to the survey in each state. Because of the limited resources available, a small nucleus was set up in the office of the DCI. This nucleus consisted of an experienced senior public health dental surgeon, whose services were taken on deputation from the Delhi Municipal Corporation, a full-time statistician and a part-time consultant in survey techniques.

This Central Survey Unit worked out the fieldwork logistics to get maximum output at minimum cost. Based on the pre-test and the experience of the WHO Assessment Form, it was found that two field teams, each comprising two dentists and one worker having a social science background, could complete field work in one village – i.e. cover 14 or more households, involving interviews/ examinations of 14 individuals in each of the five age groups — in one day. The two dentists in the team had an inter-changeable role of examining the mouths of the respondents and completing the WHO Assessment Form, in order to reduce the fatigue factor. The worker with the social science background, the third member of the team, was to complete the questionnaire related to awareness and practices of the respondents related to dental health.

The quality of data was given utmost consideration. It was decided that supervisors would continuously move with the field teams to guide data collection work. They were to help the team select the households (as per the study design) whose members were to be interviewed/ examined, and also scrutinise the completed forms before sending them to the state headquarters. In view of the limited resources available, it was decided that there would be one supervisor for every four field teams. This would enable them to accompany the teams alternately (as stated earlier, two teams were to travel together to collect data).

After working out logistics of the fieldwork, it was necessary to identify the teams in each state that would be involved in the survey. Three types of persons were needed from each state, a Coordinator, a Supervisor and dentists for the field teams. The former was to coordinate all survey activities at the state-level and liase with the Central Survey Unit. The Supervisor was to supervise and guide fieldwork activities, working under the overall direction of the Coordinator. The Coordinators were expected to be senior, experienced professionals having an inclination for research – principals, deans or professors of the Departments of Community Dentistry in various dental colleges. The Coordinators were selected by the Technical Committee for the survey, which then asked them to select their field team Supervisors — senior dental surgeons from dental colleges. **Annexure - 5**

These Coordinators and Supervisors were to identify the field teams. The number of field teams was to be equal to the number of homogeneous zones/ regions in the state so that each team could complete fieldwork in a district within two months. Again, the two-dentists/ dental surgeons/ interns for each team were to be from dental colleges in the state. This was not only to reduce costs but was also meant to give them 9 dentists with experience in oral examinations under the guidance of Supervisors.

2.5 CALIBRATION AND TRAINING

Before initiating work at the state level, it was necessary to evolve common standards for the examination and recording of dental problems. For such training and standardisation, the Dental Council of India, in collaboration with the Manipal Academy of Higher Education (MAHE), organised a three-day calibration workshop at Manipal, Karnataka in March 2002. All state Coordinators and selected Supervisors were invited to this workshop. They were explained the sampling design, study tools and the field logistics of data collection. They were taken to the field to practice selection of sample households and complete the questionnaire related to practices that affect oral health. They were also taken to dental chairs in the Manipal Dental College to get practical experience of the dental problems of the patients. A good deal of discussion was held along with the Coordinators and the Supervisors to ensure that all had a common and uniform understanding of the dental problems that were to be recorded. This was an ongoing exercise until it was felt that all the Coordinators and Supervisors had a uniform understanding on how to measure dental problems. The calibration workshop helped standardise measurement of dental problems, vital to ensure comparability of data from different states. After their training, the Coordinators and Supervisors then had to train their field teams, which would actually collect the data.

2.6 CLINICAL ASSESSMENT AND CONSIDERATIONS

The information on behavioural practices was sought directly from the respondents and their answers recorded on the prescribed proforma. In the case of clinical assessment of oral health status, however, there was need for common and uniform understanding of the recording criteria amongst the field teams. Therefore, special efforts were made to standardise methods of assessment and the field teams were trained and calibrated accordingly. The details on how the clinical assessment was made and some considerations in clinical assessment are described below.

The recording criteria used for various oral health conditions were as prescribed and described for pathfinder survey methodology in "Oral Health Surveys: Basic Methods", 4th Edition, 1997, WHO, Geneva. The WHO Oral Health Assessment Form 1997 was used in the National Oral Health Survey. All columns for clinical data (column no. 32 to column no.180) were filled by the teams in the field.

The main instruments and utilities that formed a part of the field kit carried by each of the teams during the course of clinical examinations were:

1. Mouth mirrors, tweezers, curved double-ended probes and WHO CPI ball-ended probes.
2. Supplies of cotton rolls, masks and gloves, cold sterilizing solution, alcohol or spirit, instrument trays and chittle forceps. The cold sterilising solution was used in field conditions for the instruments, although these were previously boiled for 20-30 minutes.

3. Lightweight folding chair for clinical dental examination of subjects.

4. Torches and batteries.

A portable, lightweight field chair was used to seat the subjects in such a manner that the head was aligned with the back of the chair and the lower jaw was horizontal (parallel to the floor). Examinations were carried out in natural light (daylight) and a simple two-cell torch was used to illuminate oral and dental tissues. The examiner stood behind and on-side of the subject during the examination. A combination of natural and torchlight was used to provide consistency and adequate visibility during examinations of different subjects. The torch was held in place by an assistant from within the team or from the community where the examinations were being carried out. (As stated earlier, all trainers were trained in the Manipal workshop to adopt this method so that the approach and results were uniform and widely comparable.)

Clinical oral examinations were carried out by previously trained and calibrated dental surgeons, who were normally interns, junior residents or other dental surgeons drawn from regional dental colleges. They were carefully selected by senior faculty members responsible for the survey in their area. Two dental surgeons formed one clinical examination team. One member was the examiner who examined the selected subject and called out the scores for each item. The other member was the recorder, who orally repeated the scores for the examiner to hear and correct, if necessary, and then entered it in the appropriate place in the paper proforma. In order to avoid monotony and fatigue, the roles of the examiner and recorder were interchanged from time to time, but not during the course of any one examination.

The teams used the instruments and utilities as detailed above for the detection of caries, periodontal disease and other conditions. Sufficient numbers of instruments were carried by the field teams after proper sterilisation.

The data was collected by the field teams led by their Supervisors and scrutinised by the State Coordinators, who forwarded the completed forms to the Central Project Cell in the office of the Dental Council of India in New Delhi. The clinical data forms were scrutinised again before being sent for analysis and preparation of tables.

The clinical findings are presented in Chapter VI under the following broad heads:

1. Summary of Findings
2. Dental Caries Status and Treatment Need
3. Periodontal Disease Status
4. Malocclusion Status
5. Oral Cancers and other Oral Mucosal Lesions
6. Status of Dental Fluorosis
7. Other conditions:

   Extra Oral Lesions; TMJ Signs and Symptoms; Enamel Opacities and Hypoplasia; Prosthetic Status and Need; and Community Need for immediate Care and Referrals.

While the criteria used for recording caries is as described in the WHO manual, the data on caries status is presented in tables which also provide information on the distribution of subjects with mean values of dmft and DMFT. The following range is used for purposes of reporting the results of the survey:

Primary teeth (5 yr)	Permanent teeth (12 & 15 yr)	Permanent teeth (35-44 yr & 65-74 yr)
dmft = 0	DMFT = 0	DMFT = 0
dmft = 1 to 3	DMFT = 1 to 3	DMFT = 1 to 3
dmft = 4 to 5	DMFT = 4 to 7	DMFT = 4 to 8
dmft = 6 to 10	DMFT = 8 to 14	DMFT = 9 to 16
dmft = 11 to 15	DMFT = 15 to 21	DMFT = 17 to 24
dmft = 16 to 20.	DMFT = 22 to 28.	DMFT = 25 to 28.
		DMFT = 29 to 32.

A new approach to grouping of dmft/ DMFT by range according to the percentage of affected teeth in the mouth has been introduced in this survey report. The first range is the dmft/ DMFT value of 1 to 3. This provides an estimate of subjects who had less than 4 decayed, missing or filled teeth. Further, the dentition has been divided into 4 equal parts (quarters) on the basis of the number of teeth normally present (maximum being 20 for primary teeth and 28 or 32 for permanent teeth). The ranges, therefore, reflect these four quarters in each case as explained above. The rationale for this distribution is to facilitate reporting in terms of the percentage teeth that are decayed, missing or filled, out of the number of teeth normally present for the age group concerned.

The status of malocclusion as presented is based on the Dental Aesthetic Index (DAI) scores for the 12, 15 and 35-44 year age groups, computed as per the WHO's instructions.

The severity of malocclusion within a population is classified based on their Dental Aesthetic Index (DAI) Index scores. The regression equation (WHO 1997) used for calculating standard DAI scores is as follows:

(missing visible teeth x 6) + (crowding) + (spacing) + (diastema x 3) + (largest anterior maxillary irregularity) + (largest anterior mandibular irregularity) + (anterior maxillary overjet x 2) + (anterior mandibular overjet x 4) + (vertical anterior openbite x 4) + (antero-posterior molar relation x 3) + 13

2.7 FLUORIDE ESTIMATION IN DRINKING WATER SAMPLES

As stated earlier, drinking water samples from various states were directly sent for analysis by the various Regional Coordinators and received by M/s Medlar Laboratories Pvt Ltd., (a Unit of M/ s Cipla), Mumbai. Dr. P M Dixit, Chief Chemist, has provided the following information on the analysis procedure.

Medlar Labs used sophisticated equipment and intricate chromatographic separation methodology to analyse the water samples with accuracy and precision.

The procedure was based on the Ion Chromatographic separation in Anion Exchange mode and Suppressed Conductivity Detection. The basic separation was performed by anion exchange mechanism of water samples on high efficiency IonPac AG 11RC and IonPac AS 11RC connected in series and through elution (the process of extracting one material from another by washing it with a solvent to remove adsorbed material from an adsorbent) with sodium hydroxide mobile phase.

Under this technique, a standard stock solution of fluoride (100 ppm F anion) is prepared (0 – 5.0 ppm) in order to build a calibration graph prior to the start of the analysis.

The actual water samples were thoroughly mixed by vigorously shaking and filtering them through a 0.45 u Nylon membrane. The effluent was collected into a clean dry conical glass tube. This was used for fluoride estimation. The actual water sample was loaded into a mobile phase container connected to a pump and made to run on the system. After about 20 minutes to enable stabilisation, the actual concentration of fluoride ion in the water was analysed.

The following modules were used to assemble the fluoride analyser:

1. Isocratic pump-M/s Dionex Corp., USA, IP 20 Pump (I. No. -1)
2. AS300 Auto sampler- M/s Thermo Separation Products
3. Conductivity Detector-M/s Dionex Corp., USA, Model CD 20, (I. No. 4)
4. Anion Self Regenerating Suppressor- M/s Dionex Corp., USA, Model ASRS Ultra.
5. IonPac AG 11RC, as guard column, 4 x 50 mm- M/s Dionex Corp., USA
6. IonPac AS 11RC, as analytical column, 4 x 250 mm- M/s Dionex Corp., USA.
7. WinchromEx, data acquisition software in personal computer, PC 2.

In order to confirm the system stability and performance, one standard stock solution of fluoride (strength 1.0 ppm) was injected after every 10 samples.

2.8 FIELDWORK EXPERIENCES

2.8.1 Pre-fieldwork activity

In order to get help and support in the fieldwork, it was felt necessary to get Government clearances from the right authorities. All concerned authorities were approached and permissions taken. The Census office was also approached for getting maps for the Census Enumeration Blocks (CEBs) or taking sample of households.

2.8.2 Identification and training the field teams

Three teams were formed, each consisting of two dentists and one social scientist. The dentists were taken from the dental faculty of seven participating dental colleges nearest to the region.

In the month of July, extensive training was given to the field teams. They were explained the questionnaire and logistics of the fieldwork. In order to make sure that these dentists followed the standardised methods of assessing and recording problems as decided in the Manipal training, the dentists were taken to the OPD of the Sri Sai College of Dental Surgery, Vikarabad, where they were given a thorough training on clinical examinations and on assessment of dental problems.

2.8.3 Fieldwork

After the classroom and dental college training, the teams were taken to the field to make sure that they had understood the method of selection of the households, interview the individuals, fill the questionnaires and undertake clinical examination of the dental problems. Once it was found that the teams had understood all the issues and were in a position to work independently, they were sent to the field. **Annexure - 7**

Despite the extensive training, both in the class and in the field, the teams faced several initial problems. The Supervisors, who were accompanying the teams, helped them overcome these problems, acquire confidence and ensure smooth field operations.

The Supervisors were very alert to make sure that data was complete and consistent. They also ensured that all forms were scrutinised and corrected before they were submitted to the Coordinator.

In order to get cooperation from the respondents, the teams carried free samples of medicines and vitamins. These were distributed to the respondents to build the necessary equation with them. It was found that people in rural areas were more cooperative than those in the urban areas.

2.9 SCRUTINY OF DATA

As stated earlier, all efforts were made to ensure that quality of data was good. A senior-level person was moving with the teams to guide them in case of any doubts. He/ she was also responsible for scrutiny of the completed forms before the team returned from the field. It was his/ her responsibility to scrutinise the forms, if they could not be checked in the field. This scrutiny was necessary before they were submitted to the state Coordinator and then to the Central Survey Unit. The Coordinator was also responsible of scrutinising the forms, fully in the initial stages and then on sample basis before sending them to the Central Survey Unit in New Delhi.

The Central Survey Unit was particularly careful in scrutinising forms from each state. First two batches of forms from each survey team from each state were scrutinised to determine gaps in the form of blanks, wrong recording and inconsistencies. The Coordinators were immediately contacted in case such problems were spotted, both telephonically and by facsimile transmission. In such cases, the next batch again scrutinised carefully to ensure that deficiencies were not repeated. Subsequent to this initial scrutiny, the form was scrutinised on a sample basis to ensure that there had been no slackness – the fatigue factor should not affect the quality of data.

2.10 DATA ANALYSIS

In the absence of any resources for data analysis at the Dental Council of India, all the work relating to data entry, validity checks and production of desired tables (as per analysis plan) was contracted out to TNS MODE, an organisation with research experience in studies related to health. All efforts were also made to monitor work quality at this stage. The Central Survey Unit had worked out the type of tables needed, and the level (Zone or Region/ State/ Country) for which such the analysis was needed. The necessary weights were also worked out to ensure that the estimates were valid for the level to which they related. These blank tables were given to the agency (TNS MODE) to complete. In order to ensure that the values given in each cell were right, the software package developed by TNS MODE was tested in a limited number of schedules by manually checking the results.

2.11 REPORT WRITING

The Central Survey Unit, Delhi prepared two reports, for Delhi and Maharashtra, as model reports after detailed discussions on the report and tabular format. Once these reports were ready, an effort was made to identify Coordinators who could find time and resources to write reports for their own states. The idea was to conduct a report writing workshop to orient them with the chapterisation plan, data tables of their own states and share with them the style of writing adopted in the model reports (Delhi and Maharashtra). This was felt necessary to make sure that all state reports were written in a uniform style/pattern. For other states, it was decided that the Central Survey Unit, Delhi would write the reports and send it to them for their modifications, if any. The Central Survey Unit also prepared all the sections and sub-sections of Chapters 1 (Introduction) and 2 (Methodology and Data Collection), which were to be common to all reports. These chapters were also given to the Coordinators involved in the report writing workshop.

Dr. S. G. Damle, Dean, Nair Dental Hospital, Mumbai & Director, Medical Education & Public Health, Municipal Corporation of Maharashtra, co-hosted the report writing workshop in Mumbai on January 10-11, 2004 where the staff of the Central Survey Unit discussed all the issues involved in writing the reports with Coordinators from the States of Andhra Pradesh, Goa, Haryana, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Pondicherry, Punjab and Tamil Nadu. They were given two reports (models), a set of tables for their own state and even a CD containing raw data. They were told that their state report should adopt the format shown in the model reports; they could do more analysis, if needed, by using their own raw data. It was also decided and agreed that report should be ready in one month's time.

CHAPTER III

BACKGROUND CHARACTERISTICS OF THE SURVEYED POPULATION

3.1 CHARACTERISTICS OF HOUSEHOLDS

The household characteristics are shown in Table 3.1. It may be noted that about 54 per cent households were living in pucca houses, more so in urban areas than in rural areas. Only about 14 per cent households were living in kuccha houses in the state. Only 5 per cent households had kuccha houses in Rayalseema, the least among the regions.

About 56 per cent of the respondents had a monthly expenditure (proxy for household income) less than or equal to Rs. 2,500. This income level was found more among more rural respondents. While, one-third of the households belonged to the middle income group (having monthly expenditure of Rs. 2,501-5,500).

About 80 per cent households of the state were of Hindus, followed by 9 per cent of households belonging to Muslims and Christians each.

About, 51 per cent households were of Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Castes (OBCs) categories. Among the regions, South Coastal Andhra and Rayalseema had a lesser percentage of OBCs, SCs and STs.

About 61 per cent of the households cited piped/taps as their main source of drinking water, while 30 per cent were using tubewells or handpumps in the state. Piped water supply was much higher in urban areas (95 per cent) compared to rural areas (46 per cent). The supply of piped water was highest in Rayalseema (77 per cent) and South Telengana (85 per cent). In the case of South Coastal Andhra, 42 per cent got drinking water from tubewells or handpumps.

Rice was the staple food of the people. Almost 66 per cent of the households reported that they were non-vegetarians. However, in North Telengana, the opposite trend prevailed with 95 per cent of the households being vegetarians.

CHARACTERISTICS OF HOUSEHOLDS SURVEYED (SUMMING UP)

1. About 54 per cent households were living in pucca houses, more so in urban areas than in rural areas. Only about 14 per cent households had kuccha houses in the state.
2. A majority of the households had a monthly expenditure of less than or equal to Rs. 2,500.
3. About 80 per cent of the population was comprised Hindus and 9 per cent Muslims. Also, 51 per cent of households belonged to Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Castes (OBCs) categories.
4. Rice was staple food, and about 66 per cent of the people being non-vegetarians.
5. Almost 61 per cent of the subjects were getting drinking water supply was taps.

Table : 3.1 Percent distribution of the households by characteristics and geographical area. STATE : Andhra Pradesh

	Household Charactersties		REGIONS						STATE		
			1	2	3	4	5	6	R	U	T
1	**Type of household**	n=	456	519	507	449	599	709	2185	1054	3239
	Kuccha		32.2	13.3	25.3	5.2	3.6	19.4	17.1	5.5	14.2
	Semi Pucca		28.9	44.3	40.4	13.8	37.1	37.1	39.1	23.3	32.2
	Pucca		38.8	42.5	34.3	80.9	59.3	43.4	43.8	71.1	53.6
2	**Monthly expenditure (in Rs.)**										
	<= 2500		62.0	73.3	69.8	41.0	31.3	59.6	65.7	27.9	55.6
	2,501 - 5,500		26.8	23.7	27.8	44.8	54.1	34.1	31.3	48.7	35.4
	5,501 - 10,000		8.7	0.6	2.4	13.4	12.0	5.8	2.8	18.4	7.4
	10,000 +		2.5	2.3	0.0	0.8	2.6	0.5	0.2	5.0	1.6
3	**Religon**										
	Hindus		97.1	56.5	83.1	80.4	85.3	91.7	80.4	79.0	80.2
	Muslims		2.5	10.9	6.9	18.4	10.6	7.5	7.8	14.2	9.1
	Sikhs		0.0	0.8	0.7	0.0	0.4	0.0	0.3	0.3	0.4
	Christians		0.2	29.9	8.8	0.3	3.2	0.5	10.4	6.2	9.4
4	**Caste**										
	Scheduled Caste		16.8	32.9	14.4	5.9	9.4	5.4	15.0	13.5	14.7
	Scheduled Tribe		27.9	4.8	2.0	1.5	6.2	14.7	12.3	1.8	9.2
	Other Backward Classes		36.7	7.6	42.5	21.4	40.2	36.9	29.1	26.1	27.0
	Others		18.5	54.7	41.1	71.2	44.2	42.9	43.6	58.6	49.1
5	**Sources of drinking water**										
	Pipe/tap		31.2	50.3	57.7	77.2	85.3	53.7	46.4	94.9	61.2
	Tubewell/handpump		36.5	41.6	30.6	22.3	13.9	33.9	40.9	4.8	29.7
	Others		32.3	8.1	11.7	0.5	0.8	12.4	12.7	0.3	9.2
6	**Staple food**										
	Wheat		2.4	0.1	2.9	2.4	7.8	2.1	2.3	4.1	2.8
	Rice		97.6	99.5	97.2	98.0	91.1	98.1	97.5	95.9	97.1
7	**Nature of food**										
	Vegetarian		3.6	2.2	2.2	7.1	36.9	95.1	36.5	32.3	34.3
	Non-vegetarian		96.4	97.8	97.8	92.9	63.1	4.9	63.5	67.7	65.7

3.2 PROFILE OF POPULATION

3.2.2 12 years old

3.2.2.1 Educational level

About 96 percent, across both sexes & places of residence was litrate. About 91 percent across both sexes & more in rural had educational up to middle.

3.2.3 15 years old

3.2.3.1 Educational levels

The literacy level in this age group was about 94 per cent. About 33 per cent of the respondents had education up to the middle level and 62 per cent reported education up to high school and above (Table 3.2.3). The picture was similar across sexes. In Rayalseema, all respondents in this age group were literate.

3.2.3.2 Exposure to media

About 15 per cent of respondents in the 15-year age group reported reading newspapers daily but this percentage in the urban areas was higher at 22 per cent, and was more for males than females. Against this, 11 per cent rural respondents reported reading newspapers daily. Another about 28 percent more males & more in urban reported reading newspaper sometimes. About 57 percent, more females & more in rural did not have the habit of reading newspaper at all.

Exposure to radio was limited in the state – more than 74 per cent reported no exposure to radio. In contrast, only 19 per cent of the respondents reported no exposure to TV. The exposure to cinema, at least once in three months or less often, was 79 per cent. Exposure to both radio and TV was more in Nellore, Rayalseema and North Telengana.

Table 3. 2. 2 Percent distribution of 12 year olds by educational level and media exposure, sex & geographical area.

AGE: 12 yrs STATE: Andhra Pradesh

Educational level & Media Exposure		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Educational level	n=	155	164	160	151	138	155	625	298	923	144	153	134	128	131	149	596	243	839	1762
Illiterate		13.4	2.5	6.7	0.4	5.3	1.6	3.3	5.1	3.9	13.6	2.6	9.3	1.9	7.7	2.4	4.5	5.6	4.8	**4.4**
Upto middle		77.6	97.0	93.3	96.0	92.4	91.8	94.2	87.8	92.2	78.2	97.4	89.4	91.7	84.8	90.4	91.0	88.2	90.2	**91.2**
High school & above		9.0	0.4	0.0	3.6	2.4	6.7	2.5	7.0	4.0	8.2	0.0	1.3	6.4	7.5	7.2	4.5	6.2	5.0	**4.5**
2 Newspaper reading habits									NOT ASKED											
3 Radio listening habits									NOT ASKED											
4 TV watching habits									NOT ASKED											
Daily																				
Sometimes																				
Not at all																				
5 Cinema watching habits									NOT ASKED											
Once in 3 months																				
Less often																				
Not at all																				

Table 3. 2. 3 Percent distribution of 15 year olds by educational level and media exposure, sex & geographical area.

AGE: 15 yrs STATE: Andhra Pradesh

Educational level & Media Exposure		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Educational level	n=	153	167	167	148	155	164	635	319	954	146	146	136	136	129	148	596	245	841	1795
Illiterate		10.6	6.1	15.4	0.0	3.6	4.8	6.9	0.6	4.8	15.9	6.8	15.3	0.0	6.5	7.2	8.5	1.8	6.6	**5.7**
Upto middle		28.0	27.3	56.1	30.1	27.3	32.2	24.9	43.8	31.3	37.6	26.0	56.7	31.7	29.7	33.4	26.4	50.1	33.1	**32.2**
High school & above		61.4	66.6	28.5	69.9	69.1	62.9	68.1	55.5	63.9	46.5	67.3	28.0	68.3	63.9	59.5	65.1	48.2	60.3	**62.1**
2 Newspaper reading habits																				
Daily		9.8	6.0	24.1	16.5	26.0	21.3	12.8	23.8	16.6	8.7	5.9	14.0	19.3	19.6	14.9	10.9	20.9	13.8	**15.2**
Sometimes		55.6	20.5	35.9	33.1	5.9	46.4	28.6	33.9	30.4	45.0	17.7	35.6	28.5	4.8	33.7	23.6	28.8	25.1	**27.8**
Not at all		34.5	73.5	40.0	50.4	68.0	32.3	58.6	42.4	52.9	46.3	76.5	50.3	52.2	75.6	51.4	65.5	50.3	61.1	**57.0**
3 Radio listening habits																				
Daily		8.9	3.5	1.2	10.2	6.3	2.2	5.0	6.5	5.5	6.5	3.6	0.8	6.2	9.8	0.8	2.7	11.4	5.2	**5.4**
Sometimes		47.1	14.8	18.2	45.1	11.4	9.9	21.6	23.4	22.2	37.1	10.0	14.9	42.0	7.4	8.9	18.1	19.3	18.5	**20.4**
Not at all		44.0	81.7	80.7	44.7	82.3	87.9	73.4	70.1	72.3	56.4	86.4	84.3	51.8	82.7	90.3	79.2	69.3	76.3	**74.3**
4 TV watching habits																				
Daily		53.0	62.2	72.4	84.1	63.7	80.9	63.8	84.9	71.2	47.8	61.1	67.8	90.1	61.4	88.7	66.3	87.5	72.5	**71.9**
Sometimes		16.3	8.9	9.7	9.8	7.3	11.8	10.0	10.7	10.2	14.0	5.2	12.0	5.2	8.7	4.8	6.2	9.3	7.1	**8.7**
Not at all		30.7	29.0	17.9	6.1	29.0	7.3	26.2	4.4	18.6	38.2	33.6	20.3	4.7	29.9	6.4	27.5	3.1	20.4	**19.5**
5 Cinema watching habits																				
Once in 3 months		33.0	23.8	28.2	52.4	40.0	71.0	35.0	64.3	45.2	23.1	12.6	14.6	47.6	39.0	60.6	27.9	59.6	37.1	**41.2**
Less often		53.4	51.9	38.0	42.9	35.9	22.4	43.7	32.6	39.8	46.9	31.7	39.9	44.7	25.4	33.3	36.6	31.4	35.1	**37.5**
Not at all		13.5	24.3	33.8	4.7	24.1	6.6	21.4	3.0	15.0	30.0	55.7	45.5	7.6	35.6	6.0	35.5	9.0	27.8	**21.4**

3.2.4 35-44 years old

3.2.4.1 Educational level

About 34 per cent of respondents in this age group was illiterate; more females & more in the rural areas and more in North Coastal Andhra and Nellore (Table 3.2.4). More males than females in this age group had education of high school and above.

3.2.4.2 Exposure to media

About 22 per cent of respondents in this age group more males & more in urban reported reading newspapers daily (16 per cent females and 28 per cent males). Urban areas had much greater exposure than rural areas. Daily exposure to radio was just 10 per cent.

TV viewership in this population group was 66 per cent, which was much higher in urban areas. Exposure to TV was found to be higher in Rayalseema and North Telengana. Not many differences were observed between males and females. Also, not much exposure was found to cinema, with about 27 per cent reported viewing cinema once in three months. This percentage was higher in the urban areas.

Table 3. 2. 4 Percent distribution of 35-44 year olds by educational level and media exposure, sex & geographical area.

AGE: 35-44 yrs **STATE: Andhra Pradesh**

Educational level & Media Exposure		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Educational level	n=	146	161	174	136	133	150	641	259	900	162	180	146	149	153	163	635	318	953	1853
Illiterate		42.7	36.9	46.5	4.2	31.6	29.9	35.3	11.8	28.8	55.9	43.7	61.0	11.3	48.4	43.1	47.8	22.8	39.5	**34.2**
Upto middle		20.9	29.6	28.7	29.0	21.8	31.4	28.6	24.4	27.5	28.5	32.8	23.8	45.0	25.3	40.7	32.8	38.4	34.7	**31.1**
High school & above		36.4	33.5	24.9	66.8	46.5	38.7	36.1	63.8	43.7	15.7	23.5	15.2	43.7	26.3	16.2	19.3	38.8	25.8	**34.8**
2 Newspaper reading habits																				
Daily		17.8	14.9	23.5	36.8	30.1	37.3	20.7	46.6	28.3	11.6	7.4	19.8	19.8	20.8	17.0	9.9	27.7	16.0	**22.2**
Sometimes		25.5	12.8	17.5	36.4	4.3	19.7	19.5	15.4	18.3	11.7	8.6	12.1	17.6	5.3	16.3	9.5	17.1	12.1	**15.2**
Not at all		56.8	72.3	59.1	26.7	65.6	43.0	59.8	38.0	53.4	76.7	84.1	68.0	62.6	73.8	66.7	80.6	55.3	71.9	**62.7**
3 Radio listening habits																				
Daily		7.4	4.0	1.7	18.0	10.2	2.4	6.6	10.2	7.6	7.2	4.2	1.6	6.0	10.5	2.2	3.3	10.9	5.9	**6.8**
Sometimes		44.3	15.0	17.3	54.6	13.7	17.5	24.6	28.5	25.8	31.3	13.0	18.1	49.9	11.3	8.0	17.3	27.0	20.6	**23.2**
Not at all		48.4	81.0	81.0	27.4	76.0	80.1	68.8	61.4	66.6	61.4	82.8	80.3	44.1	78.2	89.9	79.4	62.1	73.4	**70.0**
4 TV watching habits																				
Daily		39.3	60.0	69.3	80.2	59.6	69.2	59.3	77.7	64.7	42.8	63.5	70.3	82.8	60.5	75.0	59.7	84.4	68.2	**66.5**
Sometimes		22.1	9.7	10.7	13.8	7.4	20.9	13.2	15.8	14.0	14.5	7.0	15.6	12.3	6.0	12.7	9.6	11.1	10.1	**12.1**
Not at all		38.6	30.3	20.1	6.1	33.0	9.9	27.5	6.5	21.3	42.7	29.5	14.1	4.9	33.5	12.3	30.7	4.6	21.7	**21.5**
5 Cinema watching habits																				
Once in 3 months		20.9	16.5	14.0	39.5	27.3	36.2	18.7	53.7	29.0	18.6	13.3	17.9	41.0	22.0	26.8	16.5	40.6	24.8	**26.9**
Less often		59.1	30.5	39.0	52.8	36.3	48.4	43.4	39.9	42.4	33.9	18.8	48.1	48.3	40.9	44.9	32.0	46.3	36.9	**39.7**
Not at all		19.9	53.0	47.0	7.7	36.5	15.4	37.9	6.4	28.6	47.5	67.9	34.0	10.7	37.1	28.3	51.5	13.2	38.3	**33.5**

3.2.5 65-74 years old

3.2.5.1 Educational levels

67 per cent of the respondents in this age group were illiterate (78 per cent females and 56 per cent males) (Table 3.2.5). As expected, literacy level was higher in the urban areas and among males. Among regions, Rayalseema had higher literacy levels.

3.2.5.2 Exposure to media

Educational levels clearly affect the reading habits of a population. Only 12 per cent of the respondents in this age group reported reading newspaper daily with more males (21 per cent) than females (4 per cent) doing so. Again, readership was higher in the urban areas than in the rural areas.

Exposure to radio was much lower than TV, especially in the rural areas where only 5 per cent females and only 8 per cent males reported listening to radio daily. Similarly, 48 per cent females and 51 per cent males had watched TV daily in the urban. Exposure to radio was the lowest in Nellore followed by North Telengana.

Exposure to cinema was very low, only about 10 per cent respondents more males & more in urban had watched cinema once in 3 months.

PROFILE OF POPULATION ACROSS AGE GROUPS (SUMMING UP)

1. About 28 per cent of the respondents across age groups were illiterate. The level of illiteracy increased with increase in age group.
2. With regard to exposure to media, TV was found to be the most utilised media. Analysis of daily habits across age groups revealed that about 65 per cent respondents watched TV while 16 per cent read newspapers and 13 per cent listened to the radio daily. About one-third of the respondents across age groups watched cinema once in 3 months.

Table 3. 2. 5 Percent distribution of 65-74 year olds by educational level and media exposure, sex & geographical area.

AGE: 65-74 yrs STATE: Andhra Pradesh

Educational level & Media Exposure		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Educational level	n=	139	157	147	139	134	146	604	258	862	175	155	167	142	139	164	637	305	942	1804
Illiterate		71.0	64.4	79.7	24.8	65.8	55.3	62.2	39.5	55.7	85.4	86.1	92.6	49.6	91.8	76.0	81.3	71.6	78.2	**67.0**
Upto middle		11.2	21.9	10.9	36.7	24.2	33.4	23.8	32.9	26.4	8.5	11.6	6.3	37.8	8.2	22.6	16.0	20.8	17.5	**22.0**
High school & above		17.8	13.7	9.4	38.5	10.0	11.2	14.0	27.6	17.9	6.1	2.4	1.1	12.7	0.0	1.5	2.7	7.6	4.2	**11.1**
2 Newspaper reading habits																				
Daily		14.6	10.6	16.6	32.2	22.9	20.4	14.6	34.7	20.5	4.1	2.1	3.8	6.6	5.1	3.3	2.6	8.0	4.3	**12.4**
Sometimes		7.4	3.2	5.0	22.7	3.0	14.8	9.2	11.8	10.0	3.0	0.5	4.6	10.6	0.0	8.0	3.6	6.6	4.6	**7.3**
Not at all		78.0	86.2	78.4	45.1	74.1	64.7	76.2	53.5	69.6	92.9	97.5	91.6	82.9	94.9	88.8	93.8	85.4	91.1	**80.4**
3 Radio listening habits																				
Daily		7.9	3.4	1.5	14.6	15.5	3.2	5.5	15.0	8.3	4.2	4.8	3.9	8.4	3.9	1.8	3.5	7.4	4.8	**6.6**
Sometimes		30.3	15.6	17.2	52.7	14.8	17.0	21.8	31.7	24.7	12.4	12.3	16.8	35.7	8.7	5.5	12.6	20.1	15.0	**19.9**
Not at all		61.9	81.0	81.3	32.6	69.6	79.7	72.6	53.3	67.0	83.3	82.8	79.2	55.8	87.4	92.7	83.8	72.6	80.3	**73.7**
4 TV watching habits																				
Daily		32.2	56.4	62.1	62.9	37.5	46.5	45.4	65.7	51.3	20.1	59.3	60.8	58.7	34.7	43.9	42.4	60.2	48.0	**49.7**
Sometimes		24.6	8.3	9.3	28.1	14.9	30.1	18.0	24.1	19.8	19.8	11.3	17.1	25.1	14.3	30.2	17.8	25.4	20.3	**20.1**
Not at all		43.3	35.3	28.6	9.0	47.6	23.3	36.6	10.2	28.9	60.0	29.4	22.1	16.2	51.0	25.9	39.8	14.4	31.7	**30.3**
5 Cinema watching habits																				
Once in 3 months		9.4	17.1	6.2	12.9	2.3	5.6	4.1	30.5	11.8	4.3	11.9	3.6	12.3	3.2	5.9	3.8	20.0	8.9	**10.4**
Less often		19.5	6.5	30.3	46.0	10.6	26.9	18.2	30.4	21.8	13.6	8.9	42.2	42.9	6.6	23.9	17.0	28.3	20.6	**21.2**
Not at all		71.1	76.4	63.5	41.1	87.1	67.5	77.6	39.1	66.4	82.1	79.2	54.1	44.8	90.1	70.2	79.2	51.7	70.5	**68.5**

CHAPTER IV

MAPPING OF FLUORIDE LEVELS

4.1 INTRODUCTION

As stated in Chapter 2 (Objectives), one of the objectives of the National Oral Health Survey was to map the fluoride levels in different parts of the country. For this purpose, the field teams were expected to collect drinking water samples from the households they visited for collection of information related to oral health practices and the current situation of oral health. This chapter presents results of the analysis of fluoride levels from such water samples.

4.2 COLLECTION OF WATER SAMPLES

The field teams were given the following instructions about collection of water samples from the households they visited:

1. Each team would carry along with it a set of sterilised plastic bottles. These bottles had been specially ordered for the purpose of the survey from a Hyderabad-based manufacturer and had the following characteristics:

   (1) A capacity of 500 ml as had been recommended by M/s Medlar Labs, Mumbai, where the water samples were to be analysed for fluoride levels. (M/s Medlar Labs have since accepted that a sample of even 200 ml would have been enough). This quantity of water was decided to take account of any possible spillage during transportation.

   (2) The plastic was of a quality able to withstand transportation pressures, first from Hyderabad to each state where the survey was being conducted, then with the field teams and then to Mumbai where the samples were sent for analysis.

   (3) The bottles were sterilised to ensure that samples did not get contaminated, and

   (4) Two corks were provided for each bottle so as to minimise any spillage and ensure the M/s Medlar Labs got sufficient quantity of water to analyse the fluoride levels.

2. Each field team was instructed to collect water samples from the first household they visited every day. Subsequent samples were to be collected only if the sources of supply were different from that in the first house. In other words, water samples were collected from all sampled households that had different sources of drinking water in the area of coverage. It means that water samples were collected from a representative sample of households of the villages/urban blocks. Since the villages and urban areas were themselves representative of the other areas of zones/states, the water samples collected were representative of all the area units of the zones/states.

3. All water sample bottles had to carry identification particulars of the household, including the state, zone and serial number given to the household for the purpose of the survey Thus, every household covered had a unique serial number within a zone. The water sample bottles were labelled with this number, thereby uniquely matching each sample with the information on oral health collected from that household.

4. This linkage of the water sample with other information from the household was done for two purposes. The first was that the collected household drinking water samples would represent the situation of water supply in rural and urban households in the zone and ultimately that of the state (after proper weights had been assigned to the rural and urban areas). This analysis would help map the fluoride levels in different areas of the state and the country. The other purpose was to try to link the fluoride levels in drinking water, with the oral health related dental practices and the actual status of oral health of the households and individuals.

4.3 ANALYSIS OF WATER SAMPLES

Since analysis of water samples for their fluoride levels requires special equipment, Dr. R. K. Bali, the President, Dental Council of India, contacted Colgate-India for help. Colgate-India, which has been very supportive of effort of the Dental Council of India in conducting the National Oral Health Survey having also provided financial assistance for it, agreed to his request and nominated M/s Medlar Labs, Mumbai for such analysis.

The methodology M/s Medlar Labs adopted for analysing the fluoride levels has been described in section 2.3.3 of the chapter on Methodology and Data Collection.

4.4 FINDINGS

The fluoride levels in different regions, rural, urban areas and total Andhra Pradesh are shown in Table 4.1. A graphical representation of prevailing fluoride levels is given in Fig. 4.01

Table 4.1 Per cent distribution of water samples by levels of fluoride in different regions, rural, urban and total Andhra Pradesh.

Levels of ppm	Regions						State		
	I	II	III	IV	V	VI	Rural	Urban	Total
0.0 –0.50	11.3	34.4	73.2	25.1	33.7	40.2	35.6	15.1	33.9
0.51–1.00	53.1	55.1	3.7	47.7	6.5	19.8	39.5	23.1	38.6
1.01–1.50	16.5	4.7	14.2	20.8	28.0	10.7	12.1	17.2	12.3
1.51–2.00	0.0	1.2	8.9	0.8	10.2	10.7	4.7	5.9	4.7
2.01- 4.00	19.1	4.6	0.0	5.6	21.6	18.6	8.0	38.7	10.4
4.01–8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.01 +	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: Andhra Pradesh has been divided into six regions. Namely (1) NorthCoastal Andhra, (2) South Coastal Andhra, (3) Nellore, (4) Rayalseema, (5) South Talangana, (6) N. Talangana. Their boundaries and districts within them may be seen in the State map.

It may be noted that about 73 per cent households used water with fluoride (ppm) levels below 1.0.

This percentage was much lower in urban areas (only 38 per cent). Also, almost 40 per cent households had fluoride levels of more than 2 00 ppm.

Large regional differentials exist in fluoride levels; almost 30 per cent of the households in regions South Telengana and North Telengana use water with fluoride levels of more than 1.50. In North Coastal Andhra, this percentage is about 20. Regions South Coastal Andhra, Nellore and Rayalseema, quite a large percentage of households have fluoride levels less than 1.0

Fig. 4.1 Drinking water levels of fluoride in Andhra Pradesh

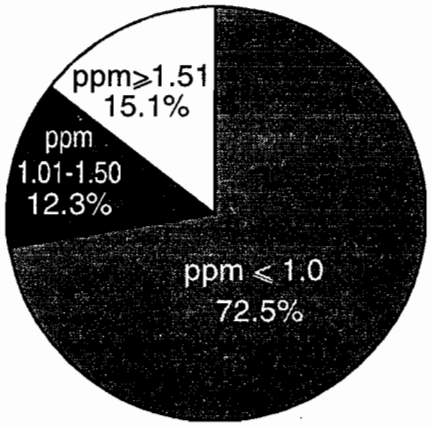
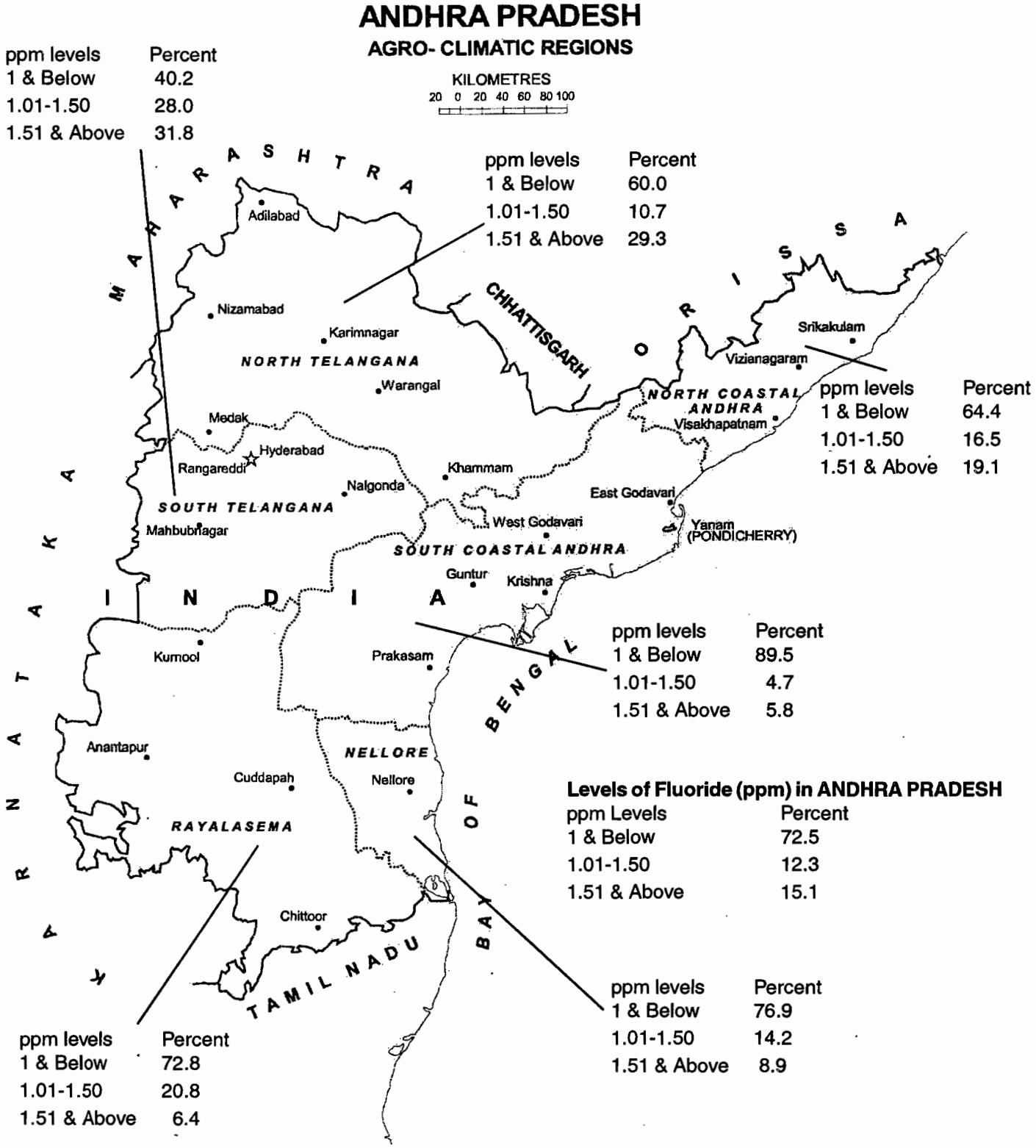


Fig. 4.2 Drinking water levels of Fluoride (ppm) in Andhra Pradesh, INDIA



CHAPTER V

ORAL HEALTH KNOWLEDGE AND PRACTICES

A series of questions were asked on food habits and other habits/practices that could affect oral health. Prevalence of each of those practices for different ages/age groups, males and females, rural and urban areas and for each Region is discussed in this chapter. These figures should help suggest appropriate educational activities to improve practices related to oral health and thus improve oral health of the population.

5.1 ABNORMAL ORAL HABITS

Five questions on abnormal habits, "breathing from mouth", "habit of sucking or biting fingers or thumb", "thrusting tongue on teeth", "biting nails, lips or objects like pencil", and "habit of grinding/gritting teeth" were enquired from each adult respondent (from his/her caretaker for a child). Responses are reported in Table 5.1.

It may be seen that prevalence of each of these practices across age groups was generally very low, But the habit of "sucking or biting fingers/thumb and "grinding and gritting teeth" five to six slightly higher across age groups. Thumb sucking habits were more prevalent among the 5-year age group, and in rural areas. Seven to nine percent of respondents irrespective of age differences across both sexes & more in rural, had the habit of "grinding/gritting teeth" in the state.

In regions, there was comparatively higher occurrence of each of abnormal habit across age group in Rayalseema region than in rest of regions.

ABNORMAL HABITS ACROSS AGE GROUPS (SUMMING UP)

- Occurrence of each of the abnormal habit, across age groups was very low.
- The occurrence of habit of "sucking or biting fingers/thumb and "grinding and gritting teeth" were slightly higher across age groups.

5.2 SUGAR-TAKING HABITS

Since sugar eating habits affect oral health, the respondents were asked how many times they had taken sugar during the last 24 hours. (Table 5.2 & Fig. 5.1)

(1) About 58 per cent respondents across age groups had not taken sugar or sweets at all in the last 24 hours. However, it was seen that sugar intake declined with increase in age in both rural and urban

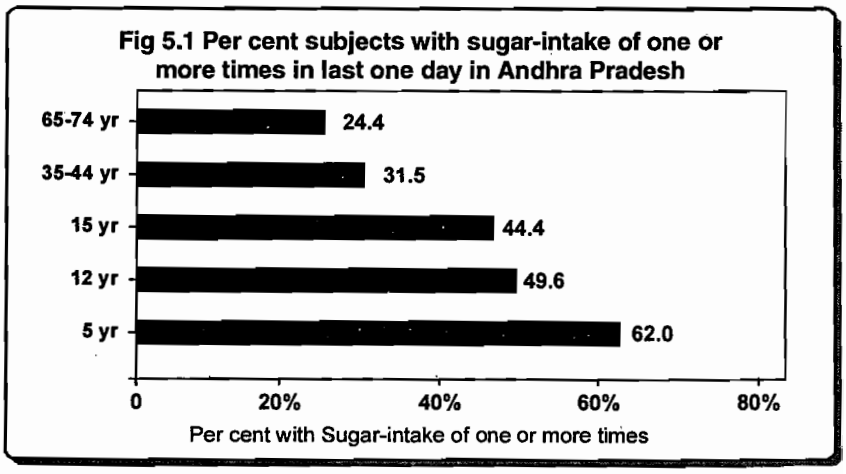


Fig 5.1 Per cent subjects with sugar-intake of one or more times in last one day in Andhra Pradesh

Table 5.1. Percent respondents by habits affecting oral health age, sex & geographical area.

AGE: 5 yrs — **STATE: Andhra Pradesh**

Habits affecting oral health		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	165	175	189	170	157	179	679	356	1035	145	149	119	142	136	140	577	254	831	1866
1 Breathing from mouth		0.7	0.0	2.4	13.4	1.7	0.3	3.0	2.8	2.9	0.0	0.0	6.8	17.5	0.0	0.0	4.1	1.0	3.2	3.1
2 Sucking or biting fingers/thumb		37.6	0.7	26.9	20.0	4.8	12.1	13.2	10.5	12.3	30.9	0.0	30.3	21.5	2.6	20.4	14.7	8.3	12.8	12.6
3 Thrusting tongue on teeth		12.4	0.0	0.6	8.5	0.5	1.4	3.9	1.7	3.1	7.4	0.0	0.0	8.6	0.0	4.6	3.9	1.7	3.2	3.2
4 Biting nails/lips/objects like pencil		41.0	0.0	3.7	16.3	1.9	8.6	11.0	6.5	9.4	37.7	0.0	2.9	15.7	0.0	11.6	10.5	7.1	9.4	9.4
5 Grinding / gritting teeth		0.7	0.4	0.6	26.7	2.5	14.1	9.6	5.9	8.3	1.5	0.0	1.0	28.3	2.4	13.3	10.4	2.9	8.2	8.3

AGE: 12 yrs — **STATE: Andhra Pradesh**

Habits affecting oral health		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	160	168	167	166	152	160	642	331	973	145	157	139	144	144	153	615	267	882	1855
1 Breathing from mouth		0.5	0.0	1.4	6.0	0.9	0.0	1.0	2.4	1.4	0.0	0.0	1.6	8.4	2.9	0.8	2.1	2.4	2.2	1.8
2 Sucking or biting fingers/thumb		5.6	0.0	0.7	6.0	1.8	3.0	2.1	4.3	2.9	7.0	0.7	0.8	7.9	0.0	3.1	3.0	3.2	3.1	3.0
3 Thrusting tongue on teeth		8.3	0.0	0.7	4.3	0.0	0.0	1.7	1.7	1.7	5.1	0.0	0.0	2.7	0.0	0.8	0.8	2.3	1.3	1.5
4 Biting nails/lips/objects like pencil		35.5	0.0	3.5	7.6	5.4	10.2	7.9	10.3	8.7	33.5	0.0	3.2	11.7	3.4	9.4	8.4	8.4	8.4	8.6
5 Grinding / gritting teeth		3.2	0.0	0.7	15.0	4.2	17.0	9.6	2.1	7.0	1.5	0.0	2.4	15.0	2.3	12.8	6.9	3.5	5.9	6.5

AGE: 15 yrs — **STATE: Andhra Pradesh**

Habits affecting oral health		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	157	171	168	165	157	165	643	340	983	148	151	136	142	132	150	604	255	859	1842
1 Breathing from mouth		0.0	0.0	1.4	2.7	0.0	0.4	0.4	1.1	0.6	1.3	0.0	1.7	1.7	0.0	0.0	0.4	1.0	0.5	0.6
2 Sucking or biting fingers/thumb		1.7	0.0	0.0	2.9	0.0	1.5	0.9	1.5	1.1	2.0	0.0	0.5	0.8	0.0	0.8	0.6	0.3	0.5	0.8
3 Thrusting tongue on teeth		6.2	0.0	0.0	0.4	0.0	0.0	0.6	1.0	0.8	1.8	0.0	0.0	1.3	0.0	1.6	0.8	0.9	0.8	0.8
4 Biting nails/lips/objects like pencil		7.9	0.0	2.8	4.1	3.5	5.2	2.9	4.7	3.5	11.0	0.0	8.4	3.8	7.4	3.9	3.2	8.0	4.6	4.1
5 Grinding / gritting teeth		5.3	0.0	2.5	11.3	2.0	14.7	7.1	4.0	6.0	6.5	0.0	5.9	13.9	4.2	17.3	9.3	3.9	7.7	6.9

AGE: 35-44 yrs — **STATE: Andhra Pradesh**

Habits affecting oral health		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	147	165	174	149	143	147	649	276	925	167	183	149	163	161	169	650	342	992	1917
1 Breathing from mouth		17.0	0.0	1.3	15.5	2.0	0.0	5.2	4.0	4.8	2.7	0.0	0.0	3.3	2.2	0.0	1.0	1.9	1.3	3.1
2 Sucking or biting fingers/thumb		1.3	0.0	0.7	0.8	0.0	0.0	0.3	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
3 Thrusting tongue on teeth		3.3	0.0	0.7	0.0	0.0	0.0	0.3	0.5	0.4	0.7	0.0	0.8	0.0	0.5	0.0	0.3	0.0	0.2	0.3
4 Biting nails/lips/objects like pencil		0.5	0.0	3.3	0.0	0.0	2.4	0.8	0.2	0.7	0.7	0.0	3.2	0.7	0.0	0.7	0.6	0.0	0.4	0.6
5 Grinding / gritting teeth		17.6	0.0	13.7	19.4	2.9	15.4	10.8	5.6	9.3	8.2	0.0	9.0	18.6	3.4	18.5	10.4	5.0	8.6	9.0

AGE: 65-74 yrs — **STATE: Andhra Pradesh**

Habits affecting oral health		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	138	162	152	148	137	147	620	264	884	174	159	167	158	138	167	652	311	963	1847
1 Breathing from mouth		22.6	0.0	2.2	13.6	4.3	0.0	5.6	5.1	5.5	5.9	0.0	4.2	10.6	1.0	0.4	3.0	3.3	3.0	4.3
2 Sucking or biting fingers/thumb		0.0	0.0	0.8	2.3	0.0	0.0	0.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
3 Thrusting tongue on teeth		1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
4 Biting nails/lips/objects like pencil		0.6	0.0	0.0	0.8	0.0	2.4	0.9	0.3	0.7	0.6	0.0	1.4	0.0	0.0	0.7	0.4	0.0	0.3	0.5
5 Grinding / gritting teeth		12.7	0.0	15.1	10.1	2.5	18.1	9.0	5.2	7.9	8.1	0.9	12.9	11.0	0.6	19.6	9.1	5.7	8.1	8.0

Table 5.2 Percent respondents by pattern of sugar in take, age, sex & geographical area.

AGE: 5 yrs — **STATE: Andhra Pradesh**

Pattern of Sugar intake in last one day		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	166	175	189	170	159	177	681	355	1036	146	149	120	142	137	140	579	255	834	1870
1 Not taken		74.6	38.0	29.1	18.6	57.7	22.7	43.8	24.3	37.0	59.2	45.4	31.0	18.7	60.3	27.4	45.9	23.5	39.1	38.1
2 Taken one time		15.0	23.7	20.0	28.6	28.3	26.5	18.5	41.0	26.4	14.3	17.8	16.1	30.9	27.9	31.5	19.5	39.7	25.6	26.0
3 Taken two times		7.2	37.8	27.3	38.8	12.3	39.4	31.0	27.7	29.9	19.3	35.1	21.4	35.9	9.8	31.9	27.9	27.8	27.9	28.9
4 Taken 2+ times		3.1	0.4	23.6	14.1	1.7	11.5	6.7	7.1	6.8	7.2	1.7	31.5	14.5	2.0	9.1	6.6	9.0	7.4	7.1

AGE: 12 yrs — **STATE: Andhra Pradesh**

Pattern of Sugar intake in last one day		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	161	168	167	167	152	160	644	331	975	145	157	141	144	144	153	617	267	884	1859
1 Not taken		65.5	62.3	45.8	23.2	69.4	32.5	56.4	32.2	48.2	59.0	70.9	53.3	23.6	71.3	41.7	60.9	34.3	52.9	50.6
2 Taken one time		16.5	22.7	18.7	34.0	24.3	34.3	20.4	43.0	28.1	21.3	16.0	19.6	33.9	23.9	25.7	17.7	40.9	24.7	26.4
3 Taken two times		12.6	15.0	26.3	37.7	6.4	26.8	20.3	20.6	20.4	17.7	12.1	15.4	34.8	4.2	28.8	18.5	20.7	19.2	19.8
4 Taken 2+ times		5.5	0.0	9.3	5.1	0.0	6.4	2.9	4.2	3.4	2.0	0.9	11.7	7.8	0.6	3.9	2.9	4.1	3.3	3.4

AGE: 15 yrs — **STATE: Andhra Pradesh**

Pattern of Sugar intake in last one day		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	157	171	168	164	156	165	642	339	981	150	151	136	143	132	150	605	257	862	1843
1 Not taken		67.6	74.9	54.9	27.7	68.7	35.0	62.9	35.3	53.4	62.1	81.4	60.7	26.6	74.6	45.5	66.2	37.8	57.9	55.7
2 Taken one time		16.2	20.5	17.0	34.9	24.7	36.8	20.6	42.4	28.2	24.7	16.2	15.9	33.1	20.8	28.6	18.4	41.2	25.0	26.6
3 Taken two times		12.4	4.1	20.9	30.3	6.0	24.2	13.7	18.4	15.3	9.0	1.4	17.2	32.8	4.6	22.7	12.7	17.2	14.0	14.7
4 Taken 2+ times		3.8	0.4	7.3	7.1	0.5	4.0	2.7	3.9	3.1	4.2	0.9	6.2	7.4	0.0	3.1	2.7	3.8	3.0	3.1

AGE: 35-44 yrs — **STATE: Andhra Pradesh**

Pattern of Sugar intake in last one day		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	148	166	174	150	144	147	651	278	929	166	184	149	161	161	169	649	341	990	1919
1 Not taken		79.4	80.3	78.1	43.5	77.4	70.5	79.0	45.7	69.2	76.7	79.3	67.6	54.6	72.6	63.8	79.0	46.9	67.9	68.6
2 Taken one time		14.2	18.6	15.2	36.8	19.1	26.3	15.8	45.9	24.7	15.3	17.6	26.0	31.2	23.1	29.3	16.1	41.9	25.0	24.9
3 Taken two times		4.9	1.1	6.1	17.0	3.5	2.8	4.5	7.7	5.4	7.4	3.1	5.4	10.8	3.8	6.9	4.0	10.8	6.3	5.9
4 Taken 2+ times		1.5	0.0	0.7	2.7	0.0	0.4	0.8	0.7	0.7	0.7	0.0	0.9	3.4	0.5	0.0	0.9	0.4	0.7	0.7

AGE: 65-74 yrs — **STATE: Andhra Pradesh**

Pattern of Sugar intake in last one day		MALE									FEMALE									State Total
		Regions						State			Regions						State			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
	n=	139	161	152	149	137	147	621	264	885	175	159	168	157	139	167	652	313	965	1850
1 Not taken		89.0	77.9	89.3	67.5	83.0	70.3	82.9	56.4	75.2	89.0	77.4	75.2	72.2	80.9	73.2	83.3	60.5	76.0	75.6
2 Taken one time		9.6	21.2	8.6	25.1	16.4	25.3	14.0	41.3	21.9	7.4	17.8	22.5	18.3	16.3	22.5	13.1	30.6	18.7	20.3
3 Taken two times		0.6	0.9	2.1	5.1	0.6	4.0	2.4	1.9	2.3	3.6	3.9	2.3	4.3	2.2	3.6	2.0	7.9	3.9	3.1
4 Taken 2+ times		0.8	0.0	0.0	2.3	0.0	0.4	0.7	0.4	0.6	0.0	0.9	0.0	5.2	0.6	0.7	1.6	1.0	1.4	1.0

areas. In the urban areas, the percentage of subjects who had taken sweets was 48 per cent compared to 50 per cent in the rural areas.

(2) Males were found to have slightly more sugar/sweets intake than females.

EATING HABITS ACROSS AGE GROUPS (SUMMING UP)

1. 58 percent respondents across all age groups did not take sugar in last one day
2. Sugar intake declined with increase in age in rural as well as in urban area.

5.3 ORAL HYGIENE PRACTICES

A series of questions were asked about oral hygiene practices, like how teeth are cleaned, what material is used to clean them, whether this is fluoridated or not, how often teeth are cleaned and whether and how often mouth is rinsed after meals. The responses to these questions are shown in Tables 5.3.1 to 5.3.5 and Fig. 5.2 are discussed in the sections below by age group of the respondents.

5.3.1 5 year olds

A majority of children in this age group reported the use of toothbrush in the state (about 59 per cent in rural areas and 92 per cent in urban areas) (Table 5.3.1). Usage was slightly more in males. Usage was also found to be more in Rayalseema. While more respondents in urban areas reported changing their toothbrush once in three months, in the rural areas, they change tooth brushes mostly between three and six months.

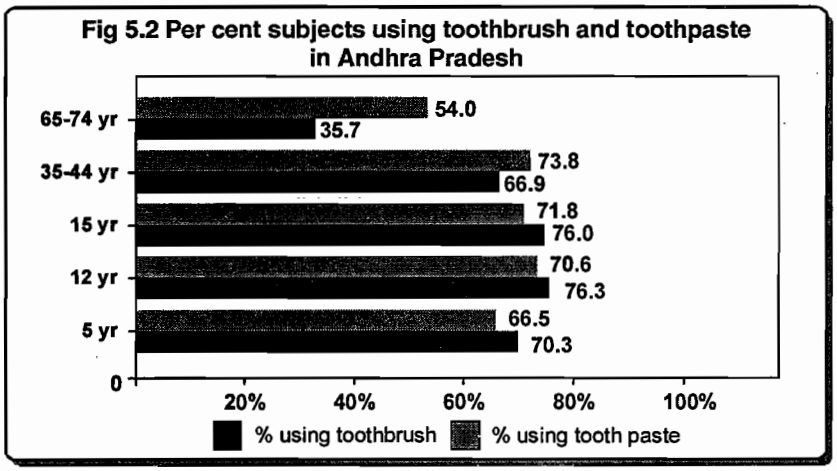


Fig 5.2 Per cent subjects using toothbrush and toothpaste in Andhra Pradesh

It was encouraging to note that almost everybody reported cleaning their teeth daily—about 99 per cent once a day. There were no significant differences between rural and urban areas, or among regions.

About 67 percent of the children reported the use of tooth paste and other about 29 percent reported using tooth powder. However, more subjects in urban areas had used toothpaste (90 per cent) than in the rural areas (55 per cent). The situation was similar across both sexes. Fluoridated toothpaste/powder was used by only 6 per cent subjects in the rural areas and 28 per cent in the urban areas.

On rinsing practices, about 40 per cent reported doing so after every meal – there were no significant rural/urban differentials or between sexes. Less than one-third (22 per cent) rinsed their mouth "sometimes". Also, the practice of rinsing one's mouth always was less prevalent in Rayalseema.

Table 5.3.1 Percent 5 year olds by oral hygiene practices, sex & geographical area.

AGE: 5 yrs

STATE: Andhra Pradesh

Oral Hygiene Practices		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Clean teeth with	n=	165	175	186	169	159	179	678	355	1033	146	147	121	142	137	139	578	254	832	1865
With finger		29.6	29.6	35.8	19.7	22.3	18.0	31.1	6.9	22.7	25.7	39.4	35.8	14.6	22.9	29.3	35.3	6.0	26.5	**24.6**
With brush		46.6	70.4	54.5	79.6	71.8	73.7	60.9	92.4	71.8	56.2	60.6	49.4	85.4	72.0	62.3	58.0	93.2	68.7	**70.3**
With datun		23.1	0.0	6.6	0.7	4.0	8.3	7.5	0.2	5.0	18.2	0.0	12.0	0.0	3.5	8.4	6.4	0.1	4.5	**4.8**
Others		0.7	0.0	3.1	0.0	1.9	0.0	0.5	0.5	0.5	0.0	0.0	2.9	0.0	1.6	0.0	0.3	0.7	0.4	**0.5**
2 Frequency of cleaning teeth	n=	129	175	170	168	148	167	605	352	957	122	147	105	142	129	129	522	252	774	1731
Once a day		97.6	99.6	96.6	98.6	95.8	97.4	98.4	97.0	97.9	94.1	99.2	100.0	100.0	98.8	100.0	98.8	99.5	99.0	**98.5**
Twice a day		0.6	0.4	3.4	0.7	4.2	0.4	0.5	3.0	1.4	0.6	0.8	0.0	0.0	1.2	0.0	0.6	0.3	0.5	**1.0**
After every meal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
3 Material used for cleaning teeth																				
Tooth paste		54.5	72.3	51.9	66.8	59.6	67.2	56.6	86.6	67.5	59.7	65.4	59.6	69.4	62.2	56.6	52.4	93.6	65.4	**27.8**
Tooth powder		21.1	27.0	45.2	31.4	21.8	30.9	34.7	12.3	26.5	23.6	34.6	39.3	29.0	21.0	38.9	39.6	6.4	29.1	**0.0**
Type of toothpaste/ powder	n=	103	174	167	166	115	165	541	349	890	104	147	105	140	103	124	469	254	723	1613
Flouridated		3.5	0.8	52.7	1.4	41.7	15.6	6.1	27.4	14.3	1.9	1.2	44.9	2.9	42.8	12.4	5.2	29.4	13.3	**13.8**
Non flouridated		93.3	94.9	44.5	82.5	34.6	76.1	81.7	66.0	75.7	94.3	95.4	51.7	81.0	34.5	73.7	82.0	63.3	75.7	**75.7**
4 Change of toothbrush once in	n=	84	128	110	137	105	138	377	325	702	86	94	65	123	91	93	321	231	552	1254
1-3 months		55.8	32.2	43.4	17.0	57.0	65.4	40.7	48.0	44.0	54.6	28.7	43.2	18.3	51.3	63.7	35.5	50.2	41.5	**42.8**
4-6 months		24.2	35.9	23.2	38.4	27.6	30.4	37.3	24.2	31.4	15.1	42.1	17.7	41.8	28.2	28.2	39.8	21.1	32.1	**31.8**
6 + months		19.9	30.9	31.2	40.6	14.0	2.8	19.5	27.3	23.0	27.6	29.2	37.1	38.1	16.4	6.7	23.2	26.4	24.5	**23.8**
5 Rinse mouth after eating	n=	165	175	186	169	159	179	678	355	1033	146	147	121	142	137	139	578	254	832	1865
Sometimes		45.7	10.7	30.8	33.4	12.1	15.5	21.1	19.4	20.5	51.2	15.4	26.2	33.4	14.6	23.5	25.9	20.8	24.3	**22.4**
Always		17.2	68.7	21.6	4.9	65.4	31.4	43.3	35.1	40.4	12.9	72.0	20.1	3.2	66.4	23.0	40.9	35.7	39.3	**39.9**

5.3.2 12 and 15 year olds

About 76 per cent of children in this age group reported the use of toothbrush in the state – about 66 per cent in rural areas and 96 per cent in urban areas. (Tables 5.3.2 and 5.3.3). In the rural areas, they changed their toothbrushes mostly in four to six months time while this period in the urban areas was more often – about 43 per cent in the first three months and another 25 per cent in 4-6 months.

Toothpaste was used by about 71 per cent in both the age groups. Toothpaste was however more popular in urban areas where about 89 per cent reported using the same. Use of fluoridated toothpaste/tooth powder was low in the rural areas and slightly higher in the urban areas, where also only about 20 per cent of the respondents reported its use. Interestingly, use of fluoridated toothpaste was little more among females.

About 99 per cent reported cleaning their teeth once a day – this was lower at 96 per cent for females in urban areas.

About 44 per cent of the respondents reported rinsing their mouth after every meal, both in the urban and rural areas. Another 31 per cent rinsed their mouth only "sometimes". The practice of always rinsing the mouth after eating was more common in South Coastal Andhra and South Telengana.

5.3.3 35-44 year olds

About 67 per cent of the respondents in this age group reported the use of toothbrush to clean their teeth – about 55 per cent in rural areas and 94 per cent in urban areas (Table 5.3.4). A large percentage of the users in the rural areas replaced their toothbrushes in four to six months, or after more than six months. In urban areas, replacement was mostly done in one to three months. There was not much difference between males and females. Among regions, use of toothbrush was more common in Rayalseema.

A high 97 per cent of the respondents said they cleaned their teeth once a day. Not much difference was noticed between males and females in this regard. Region-wise, more people in North Coastal Andhra cleaned their teeth twice a day.

The use of toothpaste was reported by about 74 per cent (66 per cent in the rural areas against 86 per cent in the urban areas. The others reported using tooth powder. Not much difference was noticed between the genders. Among regions, usage of toothpaste was reported more in North Coastal Andhra and South Coastal Andhra. The use of fluoridated toothpaste was quite low – about 7 per cent in rural areas and 22 per cent in urban areas.

About 53 per cent of the respondents reported rinsing their mouth after every meal and there was no difference between urban and rural areas. This practice was found to be most prevalent in South Coastal Andhra followed by South Telengana.

Table 5.3.2 Percent 12 year olds by oral hygiene practices, sex & geographical area.

AGE: 12 yrs **STATE: Andhra Pradesh**

Oral Hygiene Practices		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Clean teeth with	n=	**161**	**168**	**167**	**167**	**152**	**159**	**644**	**330**	**974**	**144**	**156**	**141**	**143**	**144**	**153**	**616**	**265**	**881**	**1855**
finger		2.1	29.2	25.7	11.0	18.6	7.6	21.5	2.8	15.1	1.8	31.1	24.3	13.1	20.8	11.3	23.0	4.2	17.4	**16.3**
brush		67.1	70.1	64.1	87.6	76.2	79.9	67.9	96.9	77.7	72.2	68.9	49.1	86.1	73.0	72.7	65.9	95.4	74.8	**76.3**
datun		30.8	0.7	9.5	1.4	4.7	12.5	10.5	0.3	7.0	26.0	0.0	17.7	0.8	5.6	16.0	10.5	0.4	7.5	**7.3**
others		0.0	0.0	0.7	0.0	0.5	0.0	0.2	0.0	0.1	0.0	0.0	8.9	0.0	0.6	0.0	0.6	0.0	0.4	**0.3**
2 Frequency of cleaning teeth	n=	**116**	**167**	**152**	**165**	**142**	**142**	**556**	**328**	**884**	**110**	**156**	**108**	**142**	**133**	**132**	**517**	**264**	**781**	**1665**
Once a day		96.9	100.0	96.1	97.9	99.4	98.7	98.7	99.1	98.8	96.4	99.5	96.7	99.2	96.9	96.3	98.6	96.2	97.8	**98.3**
Twice a day		1.4	0.0	3.9	1.4	0.6	0.4	0.8	0.7	0.7	3.6	0.5	3.3	0.8	2.0	0.9	0.6	3.1	1.4	**1.1**
After every meal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.9	0.3	0.7	0.4	**0.2**
3 Material used for cleaning teeth																				
Tooth paste		82.1	70.8	57.4	73.4	65.2	74.4	63.1	90.8	73.2	70.9	66.3	59.7	71.4	61.9	64.3	58.4	87.9	68.0	**70.6**
Tooth powder		16.9	29.2	39.8	24.8	21.5	23.9	32.3	8.8	23.7	27.0	33.7	35.3	27.8	19.5	32.0	35.3	12.1	27.7	**25.7**
4 Type of toothpaste/ powder	n=	**115**	**167**	**148**	**162**	**118**	**141**	**524**	**327**	**851**	**109**	**156**	**103**	**142**	**102**	**129**	**478**	**263**	**741**	**1592**
Flouridated		3.5	0.0	50.9	1.4	24.6	15.8	5.3	19.5	10.6	1.8	1.6	57.6	0.5	37.9	16.7	6.1	26.0	12.9	**11.8**
Non flouridated		94.4	96.5	47.5	81.3	48.4	75.0	81.6	73.7	78.6	98.2	95.2	41.2	83.3	40.3	69.0	81.1	68.8	77.0	**77.8**
5 Change of toothbrush once in	n=	**112**	**124**	**113**	**148**	**108**	**132**	**422**	**315**	**737**	**107**	**111**	**75**	**124**	**96**	**117**	**383**	**247**	**630**	**1367**
1-3 months		55.9	4.5	41.8	15.9	52.1	62.0	28.9	44.6	35.5	56.5	4.1	47.1	17.9	47.4	54.0	25.8	45.6	33.4	**34.5**
4-6 months		23.4	63.2	23.2	48.3	33.4	29.0	50.5	26.3	40.2	22.5	69.8	19.0	39.0	30.7	41.2	51.5	28.2	42.6	**41.4**
6 + months		18.9	32.3	32.8	34.5	13.8	7.1	19.2	28.6	23.2	20.0	23.0	32.2	42.2	21.9	4.3	21.0	25.8	22.8	**23.0**
6 Rinse mouth after eating	n=	**161**	**168**	**167**	**167**	**152**	**159**	**644**	**330**	**974**	**144**	**156**	**141**	**143**	**144**	**153**	**616**	**265**	**881**	**1855**
Sometimes		75.5	16.7	25.1	47.2	12.8	30.2	30.6	33.3	31.5	75.8	14.1	19.1	35.2	15.6	37.3	29.7	30.4	29.9	**30.7**
Always		18.7	71.5	26.4	1.9	63.0	37.9	43.9	38.6	42.1	22.1	73.4	26.8	3.8	67.8	30.8	45.6	38.2	43.4	**42.8**

Table 5.3.3 Percent 15 year olds by oral hygiene practices, sex & geographical area.

AGE: 15 yrs

STATE: Andhra Pradesh

Oral Hygiene Practices		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Clean teeth with	n=	155	171	168	163	157	165	640	339	979	149	150	135	141	132	150	602	255	857	1836
finger		1.5	25.4	18.5	11.0	18.1	4.4	18.7	3.1	13.2	1.5	27.8	27.4	13.7	22.0	14.5	23.0	3.5	17.3	**15.3**
brush		71.4	69.9	59.1	85.7	74.8	78.3	66.8	96.3	77.0	68.0	71.5	60.3	84.7	73.0	71.3	66.2	96.4	75.0	**76.0**
datun		27.1	4.7	17.5	2.9	6.6	17.3	14.2	0.4	9.4	30.4	0.7	10.7	1.6	3.7	14.2	10.5	0.1	7.5	**8.5**
others		0.0	0.0	4.9	0.4	0.5	0.0	0.4	0.3	0.3	0.0	0.0	1.7	0.0	1.2	0.0	0.4	0.0	0.2	**0.3**
2 Frequency of cleaning teeth	n=	117	164	135	158	143	141	523	335	858	108	149	120	139	124	132	518	254	772	1630
Once a day		94.3	100.0	98.2	99.3	99.5	97.3	98.9	98.1	98.6	96.7	99.5	98.1	99.2	96.5	97.7	98.8	96.8	98.1	**98.4**
Twice a day		5.7	0.0	1.8	0.7	0.5	2.2	1.1	1.6	1.3	2.2	0.0	1.9	0.8	3.5	1.4	0.9	2.6	1.4	**1.4**
After every meal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
3 Material used for cleaning teeth		79.3	69.9	62.8	74.7	70.1	76.4	64.5	90.4	74.4	77.5	70.6	61.2	71.4	57.5	64.8	60.8	87.2	69.1	**71.8**
Tooth paste		20.1	29.4	34.0	24.6	15.7	20.9	30.4	8.8	22.1	20.4	28.9	35.9	27.8	24.8	29.7	32.9	12.3	26.4	**24.3**
Tooth powder																				
4 Type of toothpaste/ powder	n=	116	163	132	159	117	138	493	332	825	107	148	117	138	97	126	480	253	733	1558
Flouridated		0.7	0.5	52.1	1.9	33.2	16.3	5.8	22.2	12.2	3.0	2.0	55.3	0.5	28.7	18.3	6.7	22.8	11.9	**12.1**
Non flouridated		95.9	95.5	46.1	81.6	41.7	77.8	82.3	70.5	77.7	94.8	95.2	43.7	82.7	48.0	66.6	80.9	69.7	77.2	**77.5**
5 Change of toothbrush once in	n=	114	126	106	141	108	134	410	319	729	105	111	86	122	90	113	384	243	627	1356
1-3 months		49.9	4.7	41.2	11.6	55.2	64.8	30.4	41.4	35.2	49.8	4.8	50.2	18.7	43.4	59.3	27.4	42.4	33.0	**34.1**
4-6 months		30.4	61.2	23.0	41.3	32.7	29.6	48.5	27.1	39.2	22.6	69.0	20.5	37.9	33.0	29.1	47.3	29.2	40.5	**39.9**
6 + months		19.0	33.1	35.8	46.2	12.0	5.2	20.5	31.0	25.1	24.3	24.1	27.8	39.9	23.6	9.3	22.4	28.1	24.5	**24.8**
6 Rinse mouth after eating	n=	155	171	168	163	157	165	640	339	979	149	150	135	141	132	150	602	255	857	1836
Sometimes		66.1	21.1	13.8	56.8	13.6	30.9	32.2	33.9	32.8	65.2	14.4	11.7	52.8	12.3	33.3	30.1	32.7	30.9	**31.9**
Always		32.4	68.6	40.8	4.8	65.0	46.3	48.7	42.1	46.4	30.7	78.1	34.6	0.9	69.6	45.1	50.5	42.8	48.3	**47.4**

Table 5.3.4 Percent 35-44 year olds by oral hygiene practices, sex & geographical area.

AGE: 35-44 yrs **STATE: Andhra Pradesh**

Oral Hygiene Practices		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Clean teeth with	n=	146	165	174	149	144	149	651	276	927	167	183	152	162	161	169	654	340	994	1921
finger		3.6	7.2	24.1	13.3	20.0	4.3	12.3	3.5	9.7	1.8	31.3	24.4	18.2	23.8	11.9	25.9	5.4	18.9	**14.3**
brush		53.7	60.8	53.9	76.0	67.6	61.7	54.6	93.7	66.0	58.5	62.0	58.7	74.6	67.8	64.9	54.3	93.7	67.7	**66.9**
datun		42.7	32.0	19.3	10.7	10.3	33.9	32.8	2.0	23.8	39.6	6.8	12.4	7.1	7.9	23.2	19.5	0.9	13.1	**18.5**
others		0.0	0.0	2.6	0.0	2.1	0.0	0.4	0.7	0.5	0.0	0.0	4.6	0.0	0.5	0.0	0.3	0.0	0.2	**0.4**
2 Frequency of cleaning teeth	n=	89	117	140	135	123	105	441	268	709	107	172	129	151	144	137	505	335	840	1549
Once a day		91.3	100.0	95.8	98.6	97.8	94.6	98.3	95.1	97.1	92.1	99.3	98.2	98.3	97.6	94.8	98.0	95.8	97.2	**97.2**
Twice a day		8.7	0.0	3.4	0.5	1.1	4.2	1.0	4.2	2.2	7.9	0.0	1.8	1.7	2.4	1.4	0.6	4.2	2.0	**2.1**
After every meal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
3 Material used for cleaning teeth																				
Tooth paste		84.8	87.9	63.0	72.0	62.2	80.4	72.1	86.1	77.4	84.8	71.7	56.9	68.9	58.6	68.0	60.1	85.9	70.2	**73.8**
Tooth powder		13.0	12.1	32.3	21.5	21.5	17.2	20.1	13.2	17.5	13.3	27.0	38.0	25.5	22.0	29.2	31.0	13.9	24.3	**20.9**
4 Type of toothpaste/ powder	n=	88	118	135	127	99	105	406	266	672	106	170	123	146	109	134	453	335	788	1460
Flouridated		0.0	1.0	54.0	1.5	34.3	21.5	8.9	22.6	14.3	3.1	0.9	53.3	1.0	32.9	12.5	4.1	22.2	11.6	**13.0**
Non flouridated		93.5	93.7	46.0	79.0	41.5	69.6	77.5	67.9	73.7	93.5	95.3	44.8	81.8	47.0	76.8	83.6	71.1	78.4	**76.1**
5 Change of toothbrush once in	n=	83	106	101	116	88	99	340	253	593	103	120	95	124	97	119	345	313	658	1251
1-3 months		54.5	5.8	44.5	16.8	47.9	47.8	26.5	36.5	30.7	58.6	4.2	40.7	15.2	53.0	45.5	25.0	39.1	31.7	**31.2**
4-6 months		17.8	66.6	31.0	28.1	32.6	33.1	46.9	26.9	38.6	16.0	66.0	25.5	31.1	32.2	44.4	50.2	30.3	40.8	**39.7**
6 + months		24.8	27.6	23.3	52.8	19.5	16.6	25.1	35.9	29.6	24.3	29.2	33.8	50.2	13.4	10.0	23.2	29.9	26.4	**28.0**
6 Rinse mouth after eating	n=	146	165	174	149	144	149	651	276	927	167	183	152	162	161	169	654	340	994	1921
Sometimes		53.0	25.5	6.4	61.6	11.3	36.6	33.1	36.2	34.0	46.4	21.1	10.8	61.6	10.2	29.6	30.5	29.5	30.1	**32.1**
Always		43.5	67.5	46.9	18.6	65.8	49.2	52.2	48.5	51.1	49.3	72.8	49.0	16.0	70.4	49.4	54.1	55.1	54.4	**52.8**

5.3.4 65-74 year olds

About 36 per cent of the respondents in this age group used toothbrush (about 26 per cent in rural areas and 59 per cent in urban areas (Table 5.3.5). While people in the rural areas changed their toothbrushes mostly in four to six months or after six months, in urban areas a majority did so between one and three months and between four and six months. There was not much difference between males and females in this regard. People in North Coastal Andhra and South Telengana tended to change their toothbrushes more often than in the other regions.

About 99 per cent of the subjects reported cleaning their teeth once a day. In the rural areas more people cleaned their teeth once a day. Comparatively, more males reported cleaning their teeth twice a day. More people cleaned their teeth twice a day in North Coastal Andhra.

About 54 per cent of the respondents in this age group reported using toothpaste. In the rural areas, 45 per cent people reported using toothpaste for cleaning their teeth while 70 per cent did so in the urban areas. The use of fluoridated toothpaste/tooth powder was much less in the rural areas (3 per cent) than in the urban areas (13 per cent). A large percentage of respondents were unaware whether they were using fluoridated or non-fluoridated toothpaste/powder.

Only 56 per cent respondents reported that they had the habit of rinsing their mouth always after the meals while one-third reported rinsing "sometimes" in the state.

ORAL HYGIENE PRACTICES ACROSS AGE GROUPS (SUMMING UP)

1. The practice of cleaning teeth was universal.
2. About 47 per cent across all age groups and across both sexes and more subjects in urban areas reported the use of toothbrush to clean their teeth.
3. About 99 per cent, across both sexes and more people in rural areas cleaned their teeth once a day. In urban areas, more people reported cleaning teeth twice a day.
4. About 66 per cent, across ages and sexes, and more in the urban areas reported the use of toothpaste. Usage was more in North Coastal Andhra and South Coastal Andhra.
5. About 87 per cent, across all ages and both sexes, and more in rural areas reported the use of non-fluoridated toothpaste/powder. Greater use of fluoridated toothpaste/powder was reported in Nellore and South Telengana.
6. About 30 per cent, across all ages, more males and more in urban areas changed their toothbrushes once in 1-3 months. The change was less frequent in rural areas – four to six months or even after six months. Change in toothbrush was less frequent in Rayalseema.
7. About 48 per cent of the respondents, across all ages and both sexes, and more people in rural areas reported rinsing their mouth after every meal. The practice was more prevalent with increase in age. This percentage was also higher in South Coastal Andhra and South Telengana

Table 5.3.5 Percent 65-74 year olds by oral hygiene practices, sex & geographical area.

AGE: 65-74 yrs STATE: Andhra Pradesh

Oral Hygiene Practices		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Clean teeth with	n=	139	159	149	146	136	145	618	256	874	175	158	166	157	138	163	647	310	957	1831
finger		10.7	20.3	26.3	34.0	50.2	19.4	28.7	20.2	26.3	17.7	44.3	31.6	56.6	49.0	38.6	45.8	31.8	41.4	**33.9**
brush		27.4	38.0	38.1	38.3	24.7	36.0	26.1	62.6	36.4	22.1	46.2	47.9	27.8	22.6	33.0	25.8	54.9	35.0	**35.7**
datun		61.2	41.7	25.0	17.6	11.4	41.4	41.8	5.9	31.6	57.9	7.4	14.5	7.1	13.0	24.6	24.1	2.6	17.3	**24.5**
others		0.8	0.0	10.6	10.1	13.7	3.2	3.4	11.3	5.7	2.3	2.1	6.0	8.4	15.4	3.7	4.3	10.6	6.3	**6.0**
2 Frequency of cleaning teeth	n=	61	98	99	108	104	87	340	217	557	77	144	134	134	101	125	438	277	715	1272
Once a day		89.9	94.8	95.3	100.0	98.6	95.6	97.0	95.4	96.4	88.9	99.2	99.1	99.1	94.9	94.3	96.9	96.7	96.8	**96.6**
Twice a day		2.9	0.8	2.4	0.0	0.0	2.2	0.6	1.8	1.0	3.7	0.0	0.0	0.0	0.0	1.0	0.5	0.5	0.5	**0.8**
After every meal		1.5	0.0	0.0	0.0	0.0	0.7	0.0	0.8	0.3	1.1	0.0	0.0	0.0	0.0	0.5	0.0	0.6	0.2	**0.3**
3 Material used for cleaning teeth																				
Tooth paste		63.5	75.5	52.3	52.1	25.0	59.1	46.4	75.7	57.3	57.2	61.6	57.1	43.3	28.4	47.1	43.1	64.0	50.6	**54.0**
Tooth powder		24.5	19.3	41.1	33.7	22.7	29.2	33.3	10.6	24.8	18.7	37.6	31.2	30.7	19.0	39.4	37.1	20.8	31.2	**28.0**
4 Type of toothpaste/ powder	n=	55	93	94	94	49	77	265	197	462	62	144	121	105	47	109	338	250	588	1050
Flouridated		5.0	0.8	51.8	4.0	15.0	4.9	3.0	14.4	7.5	4.2	1.0	54.8	1.2	16.7	5.9	3.6	11.7	6.6	**7.1**
Non flouridated		76.6	97.6	46.9	76.9	46.7	81.8	81.2	76.7	79.5	85.3	93.4	44.2	77.4	38.6	78.6	81.4	75.4	79.2	**79.4**
5 Change of toothbrush once in	n=	45	67	62	59	30	59	155	167	322	44	80	86	47	28	59	163	181	344	666
1-3 months		46.5	9.8	37.2	13.8	34.8	46.1	24.1	28.9	26.4	45.8	1.0	39.1	20.2	43.1	41.7	24.3	22.0	23.2	**24.8**
4-6 months		19.3	45.6	22.3	24.5	20.7	47.2	43.9	23.9	34.2	21.3	61.3	22.0	29.9	24.1	41.5	53.0	28.5	40.8	**37.5**
6 + months		32.2	37.9	34.4	58.5	33.2	4.4	26.4	42.9	34.4	27.2	37.7	37.4	36.1	21.1	11.2	16.7	45.5	31.0	**32.7**
6 Rinse mouth after eating	n=	139	159	149	146	136	145	618	256	874	175	158	166	157	138	163	647	310	957	1831
Sometimes		46.9	22.8	8.6	36.6	9.9	30.4	25.5	31.3	27.2	51.2	26.6	15.2	38.7	9.8	30.9	30.1	28.0	29.5	**28.4**
Always		48.2	71.5	50.2	48.5	63.7	53.8	61.0	52.0	58.4	42.3	68.6	49.9	44.5	58.5	50.5	54.2	55.6	54.6	**56.5**

5.4 DENTAL PROBLEMS AND TREATMENT PRACTICES

The respondents were asked whether they had any dental problem in the last one year and whom they consulted for this. Furthermore, they were asked about the access they had to dental facilities. They were also asked if they over had problems like hypertension, diabetes, epilepsy, jaundice or asthma. Responses on all these aspects are shown in Tables 5.4.1 to 5.4.5.

5.4.1 5 year olds

About 8 per cent of the respondents in this age group, more males and more in urban areashad oral health problems in the last one year. The problem mostly reported was dental decay (about 97 per cent) in state as well as in each region.

None of them, who reported dental problems, consulted trained dentists. Only about 23 percent across both sexes & more in urban were aware of Govt. Dental care facility in their areas. But 99 percent of them were aware of the time required to reach dental care facility. About 44 percent across both sexes & more in urban reported less than half and hour. Other 56 percent, across both sexes & more in rural reported half to more than an hour to reach dental care facility.

5.4.2 12 year olds

About 11 per cent of the respondents in this age group, across both sexes reported oral health problems in the last one year. There were significant rural/urban differentials among females (8 per cent in rural areas against 18 per cent in urban areas). Higher number of respondents reported dental problems in Rayalseema region.

Most of those who had reported problems reported dental decay (84 per cent) followed by bleeding gums (11 per cent). Also, about 43 per cent of respondents who had faced problems, across both sexes and more in rural, did not consult anybody. The consultation was lower in urban areas.

About 25 percent across both sexes, more in urban were aware of Govt. dental care facility. But twice there were aware of Pvt. dental facility. As regards time required to reach dental care facility, 45 percent, more males & more in urban reported less than half hour. Another about 52 percent more females & more in rural reported half to more than an hour to reach facility.

Table 5.4.1 Percent 5 year olds by reported nature of dental problems and treatment related aspects, sex & geographical area.

AGE: 5 yrs STATE: Andhra Pradesh

Nature of Dental Problems and Treatment related aspects		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Suffered from oral health	n=	**165**	**175**	**187**	**167**	**158**	**179**	**676**	**355**	**1031**	**147**	**148**	**120**	**141**	**137**	**139**	**577**	**255**	**832**	**1863**
problems in last one year		5.0	0.0	4.4	22.7	14.4	5.5	6.1	14.4	9.0	9.0	0.0	8.8	20.8	5.2	5.0	6.4	9.1	7.2	**8.1**
2 Type of oral health problems	n=	**10**	**0**	**8**	**37**	**18**	**12**	**41**	**44**	**85**	**15**	**0**	**10**	**29**	**6**	**7**	**41**	**26**	**67**	**152**
Dental decay		100.0	0.0	86.1	100.0	90.5	81.2	93.8	94.5	94.2	100.0	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**97.1**
Gum disease		0.0	0.0	0.0	0.0	7.0	0.0	4.1	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.9**
Foul breath		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Bleeding gums		0.0	0.0	0.0	0.0	0.0	12.6	3.5	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.8**
Others		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
3 Consulted (out of those suffered)																				
None		22.4	0.0	50.0	45.5	30.9	75.0	54.6	32.7	42.4	53.5	0.0	67.3	57.4	61.3	41.6	62.8	38.5	53.5	**48.0**
Trained dentist		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
4 Availaibility of dental facility	n=	**165**	**175**	**187**	**167**	**158**	**179**	**676**	**355**	**1031**	**147**	**148**	**120**	**141**	**137**	**139**	**577**	**255**	**832**	**1863**
None		34.5	1.7	47.6	23.2	31.0	9.0	22.8	4.8	16.6	35.3	1.7	53.3	22.8	28.9	15.1	23.3	4.3	17.5	**17.1**
Govt. facility		33.9	16.9	3.7	59.2	8.2	10.4	21.5	25.3	22.8	29.9	14.7	3.8	59.5	7.0	13.0	20.6	27.7	22.8	**22.8**
Pvt. facility		15.6	66.9	45.2	27.9	46.6	29.7	37.9	51.1	42.5	15.4	72.7	42.3	26.3	42.8	28.9	38.7	52.7	42.9	**42.7**
Do not know		22.9	12.6	3.1	6.4	20.2	55.5	21.7	27.0	23.6	23.0	8.2	0.6	4.5	21.9	47.7	19.5	21.5	20.1	**21.9**
5 Time taken to reach the facility	n=	**76**	**138**	**92**	**122**	**59**	**60**	**323**	**224**	**547**	**66**	**123**	**55**	**102**	**46**	**49**	**275**	**166**	**441**	**988**
Less than 1/2 hr.		30.1	25.5	36.0	34.6	81.4	55.9	18.6	84.9	44.9	28.0	25.1	40.1	28.6	89.0	48.1	18.4	86.0	42.5	**43.7**
1/2 - 1 hr.		61.6	51.3	24.6	53.5	13.1	24.1	57.2	12.3	39.3	58.1	52.5	18.3	59.9	11.0	21.2	56.4	13.6	41.2	**40.3**
> 1 hr.		4.6	22.7	35.4	11.0	0.0	18.1	22.7	0.0	13.7	7.2	22.4	35.4	9.2	0.0	23.6	22.3	0.0	14.4	**14.1**
Cannot say		3.7	0.5	4.0	1.0	2.0	2.0	1.5	1.3	1.4	3.1	0.0	6.3	2.3	0.0	4.7	2.0	0.4	1.4	**1.4**
6 Ever suffered from	n=	**165**	**175**	**187**	**167**	**158**	**179**	**676**	**355**	**1031**	**147**	**148**	**120**	**141**	**137**	**139**	**577**	**255**	**832**	**1863**
Hypertension		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Diabetes		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Epilepsy		0.0	0.0	1.0	0.0	0.0	0.3	0.0	0.3	0.1	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**
Jaundice		0.5	0.0	0.0	0.0	0.0	0.7	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**
Asthma		0.0	0.0	0.0	0.0	0.0	0.7	0.2	0.0	0.1	0.0	0.0	1.9	0.5	1.2	0.8	0.6	0.3	0.5	**0.3**

Table 5.4.2 Percent 12 year olds by reported nature of dental problems and treatment related aspects, sex & geographical area.

AGE: 12 yrs STATE: Andhra Pradesh

Nature of Dental Problems and Treatment related aspects		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Suffered from oral health	**n=**	**160**	**168**	**166**	**167**	**151**	**160**	**639**	**333**	**972**	**145**	**156**	**140**	**142**	**143**	**153**	**613**	**266**	**879**	**1851**
problems in last one year		9.6	0.4	17.7	34.0	4.6	7.2	10.3	10.9	10.5	9.1	0.5	11.2	24.1	15.0	8.9	7.8	18.0	10.9	**10.7**
2 Type of oral health problems	**n=**	**17**	**1**	**31**	**55**	**6**	**12**	**73**	**49**	**122**	**16**	**1**	**15**	**34**	**18**	**15**	**53**	**46**	**99**	**221**
Dental decay		95.0	100.0	44.7	97.6	100.0	73.8	93.8	82.8	89.9	94.2	100.0	62.4	87.4	70.4	69.5	82.8	75.1	78.9	**84.4**
Gum disease		0.0	0.0	6.3	5.3	0.0	0.0	3.8	3.0	3.5	0.0	0.0	0.0	0.0	7.6	0.0	3.4	0.0	1.7	**2.6**
Foul breath		0.0	0.0	0.0	2.0	0.0	0.0	1.7	0.0	1.1	0.0	0.0	0.0	0.0	6.4	0.0	0.0	3.8	1.9	**1.5**
Bleeding gums		0.0	0.0	50.6	8.2	0.0	21.1	15.3	1.5	10.4	8.3	0.0	44.9	2.0	6.4	34.9	15.6	6.4	11.0	**10.7**
Others		0.0	0.0	0.0	0.0	0.0	15.8	2.2	2.6	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.2**
3 Consulted (out of those suffered)																				
None		31.5	0.0	70.9	45.3	22.7	57.9	49.7	33.9	44.1	33.9	100.0	47.9	46.1	38.2	47.8	54.1	30.4	42.3	**43.2**
Trained dentist		0.0	0.0	4.0	0.0	0.0	15.8	2.5	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.3**
4 Availaibility of dental facility	**n=**	**160**	**168**	**166**	**167**	**151**	**160**	**639**	**333**	**972**	**145**	**156**	**140**	**142**	**143**	**153**	**613**	**266**	**879**	**1851**
None		36.4	1.3	46.3	20.0	35.3	8.0	23.1	4.1	16.6	37.0	0.7	51.9	25.2	35.5	10.9	23.9	3.8	17.8	**17.2**
Govt. facility		40.3	17.4	3.5	65.0	10.0	12.1	23.1	32.5	26.3	36.1	17.9	3.2	57.8	8.7	12.9	21.4	29.5	23.8	**25.1**
Pvt. facility		17.0	71.9	48.7	27.9	48.3	48.8	43.2	59.5	48.8	20.2	72.1	41.9	23.4	40.8	36.9	39.6	56.5	44.7	**46.8**
Do not know		14.6	8.3	2.1	0.7	12.1	37.1	14.5	13.4	14.1	17.1	8.6	2.1	3.4	18.7	46.3	18.1	20.3	18.8	**16.5**
5 Time taken to reach the facility	**n=**	**86**	**144**	**86**	**129**	**61**	**91**	**347**	**250**	**597**	**72**	**135**	**63**	**102**	**46**	**68**	**300**	**186**	**486**	**1083**
Less than 1/2 hr.		31.5	31.0	37.5	34.0	82.7	56.5	22.2	85.4	47.7	32.9	26.3	36.4	34.6	76.6	46.2	19.4	82.8	42.2	**45.0**
1/2 - 1 hr.		54.1	46.4	26.8	53.2	12.9	16.9	51.3	12.1	35.5	59.4	51.7	23.0	54.9	14.6	26.4	56.8	12.2	40.7	**38.1**
> 1 hr.		5.5	22.1	30.9	11.9	0.0	19.7	23.2	0.0	13.8	4.9	21.2	39.6	10.5	0.0	23.7	22.8	0.0	14.6	**14.2**
Cannot say		6.5	0.5	3.5	0.0	1.0	5.6	2.5	0.8	1.8	1.1	0.0	1.1	0.0	2.2	3.6	0.4	2.3	1.1	**1.5**
6 Ever suffered from	**n=**	**160**	**168**	**166**	**167**	**151**	**160**	**639**	**333**	**972**	**145**	**156**	**140**	**142**	**143**	**153**	**613**	**266**	**879**	**1851**
Hypertension		0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.7	0.2	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.7	0.2	**0.2**
Diabetes		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Epilepsy		0.0	0.0	4.9	0.0	0.5	1.5	0.8	0.0	0.6	0.0	0.0	1.6	0.0	0.0	0.4	0.1	0.4	0.2	**0.4**
Jaundice		2.1	0.0	0.0	0.0	0.0	1.5	0.8	0.0	0.5	0.8	0.0	0.0	0.0	0.0	1.6	0.6	0.0	0.4	**0.5**
Asthma		0.0	0.0	0.0	0.4	0.5	0.8	0.4	0.3	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.4	0.1	**0.2**

5.4.3 15 year olds

In this age group, 16 per cent of the respondents, more females & more in urban, reported that they had dental problems. (Table 5.4.3). Most of them reported problems of dental decay (83 per cent), followed by bleeding gums (12 per cent). There was little difference in the prevalence of the problems between males and females. Bleeding gums were reported more from Nellore and North Telengana. More than 39 per cent respondents in rural areas and 27 per cent in urban areas did not consult any dentist for their problems. Only 1 per cent said they had consulted a trained dentist.

About 24 per cent of the respondents in rural areas reported no dental facility compared to only 4 per cent in the urban areas. 26 percent, across both sexes & more in urban, were aware of Govt. dental care facility. While 51 percent, more males & more in urban were aware of Pvt. dental care facility in their areas. Access to government facilities was reported more in urban areas. Majority of the respondents reported less than half-an-hour as the time to reach these facilities. Better access was reported in South Telengana.

Table 5.4.3 Percent 15 year olds by reported nature of dental problems and treatment related aspects, sex & geographical area.

AGE: 15 yrs **STATE: Andhra Pradesh**

Nature of Dental Problems and Treatment related aspects		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Suffered from oral health	**n=**	**156**	**171**	**168**	**163**	**157**	**164**	**640**	**339**	**979**	**149**	**150**	**135**	**141**	**130**	**150**	**601**	**254**	**855**	**1834**
problems in last one year		22.8	1.7	37.9	37.3	6.9	11.1	15.2	13.2	14.5	18.5	6.0	28.7	47.4	7.1	12.2	16.4	19.5	17.3	**15.9**
2 Type of oral health problems	**n=**	**37**	**4**	**61**	**58**	**10**	**17**	**128**	**59**	**187**	**31**	**10**	**38**	**66**	**9**	**18**	**111**	**61**	**172**	**359**
Dental decay		91.6	100.0	56.6	93.6	72.6	73.4	85.7	81.7	84.4	97.2	92.2	43.9	90.9	66.7	61.3	83.3	80.6	82.4	**83.4**
Gum disease		3.1	0.0	1.8	5.7	7.4	0.0	5.3	0.0	3.6	13.6	7.8	0.0	7.1	33.3	3.2	6.4	15.1	9.2	**6.4**
Foul breath		0.0	0.0	0.0	0.0	0.0	6.7	1.5	0.0	1.0	0.0	0.0	0.0	3.4	0.0	6.5	3.7	0.0	2.5	**1.8**
Bleeding gums		2.2	0.0	39.7	5.7	0.0	40.1	17.5	1.9	12.6	0.0	0.0	66.0	6.1	15.3	25.9	13.9	7.1	11.7	**12.2**
Others		0.0	0.0	1.8	1.1	0.0	0.0	0.2	2.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.4**
3 Consulted (out of those suffered)																				
None		21.8	50.0	60.9	32.1	34.8	56.7	43.7	21.5	36.7	25.7	31.2	69.4	31.9	45.0	35.5	35.2	33.5	34.6	**35.7**
Trained dentist		0.0	0.0	0.0	3.8	0.0	0.0	2.3	0.0	1.6	0.0	12.2	0.0	0.0	0.0	0.0	1.7	0.0	1.1	**1.4**
4 Availaibility of dental facility	**n=**	**156**	**171**	**168**	**163**	**157**	**164**	**640**	**339**	**979**	**149**	**150**	**135**	**141**	**130**	**150**	**601**	**254**	**855**	**1834**
None		38.9	0.4	46.1	20.4	37.9	3.7	23.0	3.1	16.1	38.2	0.5	55.5	26.6	41.1	11.0	24.8	5.3	19.2	**17.7**
Govt. facility		46.0	17.8	4.2	67.0	7.8	11.5	23.2	32.5	26.4	38.5	19.3	3.4	62.1	8.2	15.7	23.9	32.0	26.3	**26.4**
Pvt. facility		24.0	72.9	46.1	29.6	46.5	61.9	46.4	65.6	53.0	19.7	72.2	39.4	25.5	41.9	51.3	42.4	62.8	48.3	**50.7**
Do not know		3.6	8.1	1.8	0.0	11.2	28.8	11.3	10.3	11.0	10.7	5.7	1.7	0.5	14.0	27.5	12.2	9.4	11.4	**11.2**
5 Time taken to reach the facility	**n=**	**96**	**150**	**83**	**131**	**59**	**117**	**364**	**272**	**636**	**82**	**133**	**58**	**104**	**44**	**96**	**318**	**199**	**517**	**1153**
Less than 1/2 hr.		31.8	29.7	35.6	37.3	84.4	52.5	21.3	85.4	47.7	30.5	25.1	39.5	29.7	84.4	54.1	20.5	84.5	43.3	**45.5**
1/2 - 1 hr.		55.9	47.2	24.8	52.1	10.4	19.1	52.0	10.7	35.0	55.1	50.7	26.9	55.9	11.8	24.6	53.3	14.6	39.5	**37.3**
> 1 hr.		12.3	21.4	38.7	10.0	0.0	20.7	24.3	0.0	14.3	11.6	23.4	31.6	13.3	1.4	18.6	24.3	0.0	15.6	**15.0**
Cannot say		0.0	0.9	0.8	0.0	0.0	6.5	1.7	1.7	1.7	1.4	0.8	2.0	0.0	0.0	2.7	1.4	0.0	0.9	**1.3**
6 Ever suffered from	**n=**	**156**	**171**	**168**	**163**	**157**	**164**	**640**	**339**	**979**	**149**	**150**	**135**	**141**	**130**	**150**	**601**	**254**	**855**	**1834**
Hypertension		0.5	0.0	0.0	0.0	0.9	0.0	0.0	0.7	0.3	1.8	0.5	0.0	0.0	0.0	0.0	0.1	1.1	0.4	**0.4**
Diabetes		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	**0.1**
Epilepsy		0.0	0.0	4.3	0.0	0.0	0.4	0.2	0.4	0.3	0.7	0.5	1.7	0.5	0.6	0.8	0.6	0.9	0.7	**0.5**
Jaundice		1.4	0.0	0.7	0.0	0.0	0.7	0.5	0.0	0.3	0.0	0.0	0.8	0.0	0.0	1.6	0.5	0.0	0.4	**0.4**
Asthma		0.0	0.0	0.7	1.1	0.0	0.0	0.2	0.3	0.2	1.5	0.0	0.0	0.8	0.0	0.0	0.4	0.0	0.3	**0.3**

5.4.4 35-44 and 65-74 year olds

As expected, the reporting of problems and their treatment by these two age groups (35-44 and 65-74 years) were similar (Tables 5.4.4 and 5.4.5). Hence clubbed together.

More than half the respondents in these two age groups (55 per cent) reported dental problems in the last one year. 44 percent of respondents aged 35-44 years & 66 percent aged 65-74 years dental problems in last one year.

About 41 per cent males and 46 per cent females in the 35-44 age group reported dental problems in the last year. While 65 percent aged 65-74 years. Reporting was found to be much higher in Rayalseema region.

Most of the respondents reported problems of dental decay, gum disease and bleeding gums in the state. The problem of bleeding gums in these age groups was reported by more people in Rayalseema and North Telengana regions.

Like in the previous age groups a few had gone for consulting trained dentist. Only 2 per cent said they had consulted a trained dentist.

The reporting on availability of dental facilities was also similar to that reported by respondents in the earlier age groups—more people in urban areas reported access to private and government facilities, and reported less than half-an-hour to reach such places.

The problem of hypertension and diabetes was reported by respondents of these age groups. Nearly 33 per cent respondents in the 65-74 age group reported ever suffered from hypertension while 20 per cent had diabetes – there were no significant rural/urban differentials or among sexes. Even asthma was reported by about 5 per cent respondents in this age group. Reporting of all these diseases was seen to be higher in North Coastal Andhra, South Coastal Andhra and Rayalseema regions.

DENTAL PROBLEMS AND TREATMENT ASPECTS ACROSS AGE GROUPS (SUMMING UP)

1. Around 11 per cent of 15-year olds & below and about 55 per cent of 35-years age & above group reported suffered from dental problems in the last one year. This was the case across sexes and more in rural areas and was reported more in Rayalseema region.
2. The most common problem reported across age groups was dental decay. In addition, the problem of gum disease was reported by about 14 per cent. About 14 per cent also reported problems of bleeding gums.
3. Only about 2 per cent, across all ages, consulted trained dentists. More than half did not consult anybody. There were no significant differences among regions. However, about 27 per cent subjects, across all ages and both sexes, but more in urban areas reported the availability of governmental dental care facility. But, more respondents were aware of private dental care facilities.
4. Most respondents reported that it took half-an-hour to one hour to reach the dental care facilities. This was especially so in urban areas. About 13 per cent even reported more than one hour to reach the dental care facility.

Table 5.4.4 Percent 35-44 year olds by reported nature of dental problems and treatment related aspects, sex & geographical area.

AGE: 35-44 yrs STATE: Andhra Pradesh

Nature of Dental Problems and Treatment related aspects		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Suffered from oral health	**n=**	**148**	**165**	**172**	**149**	**143**	**149**	**648**	**278**	**926**	**166**	**183**	**150**	**161**	**159**	**170**	**650**	**339**	**989**	**1915**
problems in last one year		55.4	29.5	47.2	77.0	26.4	28.9	38.1	49.0	41.3	59.2	37.3	51.3	76.0	40.9	27.7	40.6	57.3	46.3	**43.8**
2 Type of oral health problems	**n=**	**84**	**55**	**84**	**114**	**38**	**42**	**267**	**150**	**417**	**100**	**77**	**81**	**123**	**68**	**51**	**291**	**209**	**500**	**917**
Dental decay		79.0	89.6	89.9	82.0	75.7	74.0	83.6	76.9	81.2	79.7	95.8	90.0	81.1	68.4	54.5	81.7	74.6	78.7	**80.0**
Gum disease		7.4	13.1	5.0	43.7	27.1	11.0	23.8	22.0	23.2	18.0	8.4	3.0	29.8	33.0	30.0	24.5	18.9	22.1	**22.7**
Foul breath		14.6	4.4	0.0	8.6	2.2	2.7	6.8	5.9	6.5	14.5	2.1	0.0	7.3	8.5	0.0	6.6	5.2	6.0	**6.3**
Bleeding gums		11.5	4.4	8.4	21.5	6.6	19.2	16.8	6.4	13.1	11.2	2.1	5.4	34.6	10.2	27.4	20.5	11.8	16.8	**15.0**
Others		4.1	0.0	2.2	1.2	3.7	13.7	3.2	4.3	3.6	2.2	0.0	3.9	0.6	4.5	7.8	2.3	2.4	2.4	**3.0**
3 Consulted (out of those suffered)																				
None		33.5	7.3	50.9	18.5	65.2	53.4	34.7	19.2	29.3	36.1	11.6	38.5	20.2	52.2	59.8	36.8	21.8	30.5	**29.9**
Trained dentist		2.7	4.4	1.4	3.0	0.0	2.7	2.6	3.3	2.8	0.0	1.1	0.9	2.5	0.0	0.0	0.8	1.3	1.0	**1.9**
4 Availaibility of dental facility	**n=**	**148**	**165**	**172**	**149**	**143**	**149**	**648**	**278**	**926**	**166**	**183**	**150**	**161**	**159**	**170**	**650**	**339**	**989**	**1915**
None		36.5	0.0	54.0	21.2	48.9	11.9	26.2	3.1	19.4	36.2	0.0	44.5	18.0	45.4	8.7	24.2	3.7	17.2	**18.3**
Govt. facility		48.5	24.5	5.3	65.6	10.2	17.0	24.6	44.8	30.5	50.4	25.9	3.1	67.4	10.5	15.5	25.0	42.1	30.8	**30.7**
Pvt. facility		23.0	74.6	40.7	25.5	42.0	69.9	48.9	64.6	53.5	21.7	74.1	51.1	36.6	48.9	59.2	47.6	69.1	55.0	**54.3**
Do not know		0.7	0.0	0.7	0.0	1.7	12.3	3.9	0.4	2.8	3.1	0.4	2.0	0.0	2.0	23.5	7.9	0.9	5.5	**4.2**
5 Time taken to reach the facility	**n=**	**98**	**163**	**79**	**118**	**54**	**117**	**386**	**243**	**629**	**107**	**183**	**79**	**136**	**67**	**123**	**391**	**304**	**695**	**1324**
Less than 1/2 hr.		30.9	31.2	37.6	36.6	72.9	46.1	20.1	86.4	44.3	25.5	30.5	35.1	35.5	77.8	55.5	19.7	81.7	46.1	**45.2**
1/2 - 1 hr.		45.2	46.7	21.2	50.8	16.5	20.1	49.7	9.8	35.1	58.2	50.0	24.0	52.9	14.9	20.1	54.5	15.3	37.8	**36.5**
> 1 hr.		21.5	22.2	38.8	10.0	3.2	26.4	26.9	1.3	17.5	15.2	19.0	35.8	10.7	0.9	18.5	23.6	0.0	13.5	**15.5**
Cannot say		0.0	0.0	2.3	0.0	1.2	7.4	2.5	0.1	1.6	1.1	0.4	5.1	0.9	0.0	4.9	1.8	0.8	1.4	**1.5**
6 Ever suffered from	**n=**	**148**	**165**	**172**	**149**	**143**	**149**	**648**	**278**	**926**	**166**	**183**	**150**	**161**	**159**	**170**	**650**	**339**	**989**	**1915**
Hypertension		2.8	5.2	0.0	7.5	2.1	0.8	1.8	9.7	4.1	4.2	5.9	0.9	7.7	6.9	2.5	3.1	11.1	5.8	**5.0**
Diabetes		1.0	3.7	3.4	2.8	1.6	1.2	1.1	6.4	2.6	2.7	5.1	6.3	1.9	0.0	1.8	1.2	6.6	3.1	**2.9**
Epilepsy		2.0	0.7	3.3	0.0	0.0	1.6	1.1	0.2	0.8	1.1	0.0	5.1	0.4	0.0	0.0	0.3	0.5	0.4	**0.6**
Jaundice		3.9	0.4	0.0	2.3	0.0	0.4	0.6	2.3	1.1	2.9	0.4	3.1	0.4	0.0	1.4	0.7	1.6	1.0	**1.1**
Asthma		0.5	0.7	4.0	3.1	4.0	1.2	2.3	0.6	1.8	4.5	0.0	1.6	6.7	4.3	3.6	3.4	2.9	3.2	**2.5**

Table 5.4.5 Percent 65-74 year olds by reported nature of dental problems and treatment related aspects, sex & geographical area.

AGE: 65-74 yrs STATE: Andhra Pradesh

Nature of Dental Problems and Treatment related aspects		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Suffered from oral health	n=	**138**	**161**	**150**	**147**	**134**	**147**	**617**	**260**	877	**173**	**158**	**165**	**155**	**136**	**167**	**644**	**310**	954	**1831**
problems in last one year		72.5	67.0	53.2	85.4	61.9	49.8	66.3	64.2	65.7	68.9	72.7	50.7	83.7	57.3	51.8	67.0	63.4	65.9	**65.8**
2 Type of oral health problems	n=	**101**	**110**	**79**	**125**	**88**	**73**	**408**	**168**	**576**	**120**	**117**	**86**	**130**	**85**	**87**	**421**	**204**	**625**	**1201**
Dental decay		74.7	93.9	87.2	63.8	58.9	35.5	72.2	60.0	68.8	71.8	93.9	89.4	60.9	59.9	35.0	71.4	58.7	67.5	**68.2**
Gum disease		32.0	9.4	7.9	60.7	51.5	67.0	42.6	30.8	39.3	27.2	5.7	13.6	59.1	46.4	68.5	39.9	30.8	37.1	**38.2**
Foul breath		6.1	4.0	1.4	14.9	10.4	4.9	7.3	9.7	8.0	4.4	2.5	1.4	18.6	13.7	2.8	7.8	8.3	8.0	**8.0**
Bleeding gums		17.8	3.3	14.2	24.4	19.7	19.4	16.9	10.3	15.1	13.3	2.5	8.6	21.9	17.9	14.7	14.2	8.5	12.5	**13.8**
Others		3.4	0.0	1.4	0.9	14.7	13.7	4.1	8.8	5.4	11.0	1.0	2.8	2.0	16.5	7.0	4.4	9.9	6.0	**5.7**
3 Consulted (out of those suffered)																				
None		43.1	6.4	54.2	14.6	66.9	75.0	37.3	24.9	33.8	42.8	6.3	37.1	12.8	64.7	73.5	38.0	20.2	32.6	**33.2**
Trained dentist		3.4	1.3	1.4	3.6	10.4	0.0	3.7	1.8	3.1	1.8	0.6	3.6	5.4	2.1	1.4	2.7	0.9	2.2	**2.7**
4 Availaibility of dental facility	n=	**138**	**161**	**150**	**147**	**134**	**147**	**617**	**260**	**877**	**173**	**158**	**165**	**155**	**136**	**167**	**644**	**310**	**954**	**1831**
None		36.8	0.4	53.6	23.0	60.8	9.7	27.4	3.8	20.7	36.6	0.0	45.2	16.3	50.0	11.6	25.7	2.9	18.4	**19.6**
Govt. facility		49.8	27.1	6.0	65.7	7.8	17.3	24.5	49.9	31.7	49.6	25.8	5.7	69.5	4.7	15.2	26.3	40.2	30.7	**31.2**
Pvt. facility		21.3	71.8	40.3	30.3	32.1	59.3	45.3	60.5	49.7	15.7	72.3	47.3	27.9	43.1	47.7	40.0	64.3	47.7	**48.7**
Do not know		0.8	0.4	0.8	0.0	3.2	21.3	6.6	1.7	5.2	5.7	0.9	3.3	1.2	3.6	31.2	10.6	4.6	8.7	**7.0**
5 Time taken to reach the facility	n=	**89**	**159**	**70**	**116**	**38**	**105**	**347**	**230**	**577**	**107**	**155**	**85**	**128**	**47**	**102**	**362**	**262**	**624**	**1201**
Less than 1/2 hr.		28.3	33.2	38.4	36.3	75.3	49.2	21.5	83.6	44.5	27.1	32.4	33.1	36.4	68.7	55.6	19.8	81.6	45.0	**44.8**
1/2 - 1 hr.		51.0	45.9	25.7	50.9	19.0	20.9	50.7	13.6	36.9	49.1	47.1	21.1	48.1	19.7	22.5	51.8	15.3	36.9	**36.9**
> 1 hr.		19.8	20.2	32.6	10.2	0.0	27.5	26.1	0.6	16.6	21.6	20.4	40.2	14.0	1.3	18.0	26.3	0.0	15.6	**16.1**
Cannot say		0.0	0.7	3.3	0.0	0.0	2.4	1.2	0.0	0.8	1.1	0.0	5.6	0.9	1.3	3.9	1.9	0.1	1.2	**1.0**
6 Ever suffered from	n=	**138**	**161**	**150**	**147**	**134**	**147**	**617**	**260**	**877**	**173**	**158**	**165**	**155**	**136**	**167**	**644**	**310**	**954**	**1831**
Hypertension		35.1	33.2	12.4	45.6	39.5	27.3	32.3	41.9	35.1	24.0	36.9	5.5	41.6	28.1	25.4	29.0	36.4	31.3	**33.2**
Diabetes		33.7	12.3	31.1	34.8	9.5	19.2	16.8	32.3	21.2	30.4	10.1	32.3	32.8	5.9	13.4	15.5	23.4	18.0	**19.6**
Epilepsy		1.6	0.4	5.0	0.8	0.0	0.0	0.6	0.6	0.6	0.6	0.5	4.7	0.4	0.0	0.7	0.6	0.8	0.6	**0.6**
Jaundice		3.8	1.1	1.5	13.6	6.4	4.0	5.6	3.8	5.1	6.5	0.9	1.8	17.0	4.8	3.3	6.3	3.6	5.5	**5.3**
Asthma		1.1	1.4	2.3	3.6	15.2	8.8	6.0	4.7	5.6	2.6	0.7	2.1	5.7	10.9	8.7	5.5	4.8	5.3	**5.5**

5.5 AWARENESS OF DENTAL HEALTH PROBLEMS

The respondents were asked three questions on their awareness of dental health problems. The first was about the common dental problems, the second about the major factors responsible for such problems and the third about how these problems could be prevented. Their responses are shown in Tables 5.5.2 to 5.5.3 and are discussed below:

5.5.1 12 year olds

All the respondents (100 per cent) in this age group, across both sexes and places of residence reported knowledge of dental health problems (Table 5.5.2). Most of them reported dental decay (64 per cent), and gum disease (7 per cent) in the state as well as regions except Nellore region.

Only 9 per cent of the respondents, across both sexes, & more in urban, reported no knowledge of factors that cause oral health problems. Awareness was less in North Coastal Andhra and North Telengana. The most-often cited factors that cause dental problems were "not brushing regularly" (65 per cent) and "eating sweets/ice cream/chocolates" (39 per cent). The other cause cited by about 2 per cent respondents was "not rinsing". There were no significant differences among regions.

When asked about the preventive measures, about 37 per cent of the respondents across both sexes & places of residence, reported no knowledge. Over half (54 per cent) cited cleaning of teeth regularly as a preventive measure. Other preventive measures reported were "avoid sweet items" (12 per cent), and "not consuming tobacco" (5 per cent). Awareness of preventive measures was much lower in Nellore region.

5.5.2 15 year olds

All the respondents (100 per cent) of this age group, across sexes, reported knowledge of oral health problems (Table 5.5.2). There were no significant rural/urban differences. Most of them knew about dental decay (73 per cent), gum disease (10 per cent) and bad smell (6 per cent).

Like in the earlier age group, about 8 per cent of the respondents of this age group did not know about the factors affecting oral health— this was more in urban areas (11 per cent) than in rural areas (6 per cent) and more in North Telengana. The most-often reported factor causing oral health problems was "not brushing regularly" (69 per cent), "eating sweets/ ice cream/chocolates" (40 per cent), not rinsing (4 per cent) and "consuming tobacco" (2 per cent).

About one-third of the respondents of this age group reported lack of knowledge of preventive measures. There was not much difference across sexes or between rural and urban areas. The four main preventive measures reported were "cleaning teeth" regularly (61 per cent), "avoid sweets" (13 per cent), "not consuming tobacco" (about 6 per cent), and "visiting dentist regularly" (3 per cent). Awareness of preventive measures was found to be low in Nellore and North Telengana region.

Table 5.5.2 Percent 12 year olds by reported awareness of oral health problems, their causes & preventive measures, sex & geographical area.

AGE: 12 yrs STATE: Andhra Pradesh

Awareness of Oral Health Problems, Causes and Preventive Measures		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Awareness of Oral Health Problems	n=	162	168	169	170	157	161	652	335	987	149	157	142	145	147	154	625	269	894	1881
No knowledge		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Tooth decay		53.3	87.7	17.8	92.6	51.7	33.8	63.3	66.7	64.5	50.9	89.5	18.3	86.6	54.9	30.8	61.7	67.8	63.5	**64.0**
Gum disease		2.7	0.7	2.1	27.8	4.1	0.8	7.3	4.8	6.4	3.0	0.7	0.0	32.4	5.2	1.5	7.1	8.3	7.5	**7.0**
Bad smell		0.5	0.0	0.0	7.9	0.5	2.6	2.7	0.7	2.1	0.7	0.0	0.8	10.4	2.0	3.1	3.5	1.3	2.8	**2.5**
Stained teeth		0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.6	0.2	0.0	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.1	**0.2**
Others		46.0	10.9	77.4	4.6	39.2	63.6	33.0	30.8	32.2	45.9	9.8	79.3	7.1	35.8	66.1	34.2	28.3	32.4	**32.3**
2 Factors that cause Oral Health Problems																				
Eating sweets/ice cream		13.4	11.3	30.9	70.0	50.2	41.0	26.7	60.2	39.1	14.8	6.8	33.7	70.6	64.1	41.4	27.1	63.7	39.0	**39.1**
Not brushing regularly		79.6	79.2	31.2	65.6	66.3	34.9	74.5	49.2	65.2	81.0	86.1	41.9	63.7	49.0	33.1	73.8	46.9	65.1	**65.2**
Not rinsing		3.5	0.0	0.0	5.8	1.7	1.6	2.4	1.9	2.2	3.3	0.0	5.8	8.5	1.9	1.7	3.1	2.2	2.8	**2.5**
Consuming tobacco		0.0	0.0	0.0	1.9	0.0	0.8	0.3	1.4	0.7	0.0	0.0	0.0	4.4	0.0	0.0	1.3	0.4	1.0	**0.9**
Do not know		12.8	8.3	3.8	1.1	0.0	26.4	6.0	13.2	8.6	9.9	7.2	0.0	3.6	0.0	28.9	6.7	13.6	8.9	**8.8**
3 Reported Preventive Measures																				
Not consuming Tobacco		0.5	1.5	0.7	24.6	0.9	0.7	4.9	6.7	5.5	1.0	0.5	0.0	31.1	0.9	0.0	5.4	7.0	5.9	**5.7**
Cleaning teeth regularly		45.9	79.7	6.7	81.7	48.5	21.8	57.9	50.0	55.2	44.8	83.2	7.0	74.2	41.2	19.3	54.8	47.9	52.7	**54.0**
Visiting dentist regularly		2.1	0.4	0.0	7.4	0.0	0.0	1.7	1.8	1.7	2.1	0.0	0.8	7.7	1.7	0.0	1.9	2.0	1.9	**1.8**
Using flouride paste / powder		0.0	0.0	0.0	1.1	0.0	0.4	0.2	0.6	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.2**
Avoid sweet items		2.1	3.0	5.2	24.3	19.9	9.3	6.4	23.8	12.4	3.3	2.7	4.1	23.0	17.3	10.0	6.9	21.9	11.4	**11.9**
Do not know		52.9	15.3	85.0	1.5	43.7	68.1	35.8	36.0	35.9	52.4	12.9	86.9	6.1	48.8	68.7	37.3	37.8	37.5	**36.7**

Table 5. 5.3 Percent 15 year olds by reported awareness of oral health problems, their causes & preventive measures, sex & geographical area.

AGE: 15 yrs **STATE: Andhra Pradesh**

Awareness of Oral Health Problems, Causes and Preventive Measures		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Awareness of Oral Health Problems	n=	160	171	170	167	165	168	655	346	1001	150	151	138	153	135	150	618	259	877	1878
No knowledge		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Tooth decay		79.9	93.3	33.9	88.9	65.4	50.5	74.3	74.6	74.4	74.9	93.2	29.4	84.6	65.6	43.9	71.4	73.0	71.9	**73.2**
Gum disease		9.8	0.0	1.5	35.4	8.9	4.0	9.5	11.1	10.1	19.0	0.0	4.6	32.6	5.7	3.1	9.7	11.1	10.1	**10.1**
Bad smell		12.2	0.0	2.1	10.3	6.5	5.1	5.8	4.9	5.5	14.9	0.0	2.5	12.9	2.7	7.9	6.7	5.2	6.3	**5.9**
Stained teeth		0.0	0.0	0.0	0.7	0.0	0.7	0.2	0.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.2**
Others		16.4	6.7	60.5	3.9	25.6	41.5	21.0	18.6	20.2	23.1	5.6	62.3	3.4	30.5	47.8	22.6	22.9	22.7	**21.5**
2 Factors that cause Oral Health Problems																				
Eating sweets/ice cream		18.2	9.7	45.4	73.6	57.6	49.6	29.9	63.3	42.0	18.7	6.8	35.6	65.4	60.6	46.8	27.6	63.0	38.2	**40.1**
Not brushing regularly		88.3	80.9	43.7	70.3	63.2	53.2	79.0	52.1	69.3	92.9	84.8	51.6	66.8	64.7	39.4	75.3	54.5	69.0	**69.2**
Not rinsing		8.0	0.0	1.9	8.7	2.6	2.3	3.7	3.4	3.6	3.8	0.0	2.3	13.9	5.9	3.8	5.8	3.0	5.0	**4.3**
Consuming tobacco		5.8	0.0	0.0	6.6	0.0	2.3	2.7	1.7	2.4	5.7	0.0	0.0	2.4	0.0	1.3	1.2	2.1	1.4	**1.9**
Do not know		4.7	9.0	0.0	3.7	0.0	21.0	6.0	12.1	8.3	2.1	6.3	2.3	2.4	0.0	20.0	5.2	10.7	6.9	**7.6**
3 Reported Preventive Measures																				
Not consuming Tobacco		5.6	0.9	0.0	32.3	1.0	0.7	7.0	6.8	6.9	3.0	0.5	0.8	24.6	1.0	0.0	4.8	7.0	5.4	**6.2**
Cleaning teeth regularly		68.2	81.4	17.9	82.6	51.6	35.8	64.0	58.0	61.9	69.1	86.1	21.9	79.5	47.8	28.3	63.6	54.7	61.0	**61.5**
Visiting dentist regularly		7.3	0.4	2.2	9.6	1.3	1.4	3.2	3.3	3.3	6.3	0.0	0.0	7.5	1.2	1.6	2.7	2.8	2.7	**3.0**
Using flouride paste / powder		0.5	0.0	0.0	1.8	0.0	0.0	0.3	0.4	0.4	0.0	0.0	0.0	0.7	0.0	0.0	0.2	0.0	0.1	**0.3**
Avoid sweet items		9.7	2.6	11.9	28.2	22.7	18.0	10.0	28.6	16.5	8.1	1.9	13.0	31.4	25.7	13.7	10.2	30.8	16.2	**16.4**
Do not know		26.2	14.8	65.3	1.8	40.4	51.7	28.2	28.8	28.4	29.1	10.8	62.7	1.9	43.9	62.8	29.9	30.5	30.1	**29.3**

5.5.3 35-44 and 65-74 years old

The responses of subjects on awareness of oral health problems and their causes and preventive measures were more or less similar in cause of both these age groups (35-44 and 65-74 years) (Tables 5.5.4 and 5.5.5). Thus, their responses have been clubbed.

All the respondents (100 per cent of these two age groups more in urban reported awareness of oral health problems in the state. Most of them reported problems such as dental decay (73 per cent), gum disease (23 per cent), bad smell (11 per cent) and stained teeth (2 per cent). Awareness was found to be higher in South Coastal Andhra and Rayalseema regions.

About 10 per cent respondents in these age groups reported no knowledge of the factors that cause oral health problems. This was more in urban areas than in the rural. The factors most reported causing problems were "not brushing regularly" (75 per cent in both age groups), "eating sweets/ ice cream/chocolates" (38 per cent in 35-44 age group and 35 per cent in 65-74 age group), "consuming tobacco" (12 per cent) and "not rinsing" (7 per cent). Awareness of factors causing oral health problems was higher in Nellore and South Telengana regions.

About preventive measures in regard to oral health problems, 34 per cent reported no knowledge. Their percentage was slightly more in rural areas as compared to urban areas. Of those with knowledge of preventive measures, about 58 per cent said "regular cleaning teeth" regularly was one such measure. Other three measures cited were "avoid sweets items" (15 per cent), "not consuming tobacco" (8 per cent), and "visiting dentist regularly" (7 per cent). Awareness of preventive measures was the lowest in Nellore region.

AWARENESS OF DENTAL HEALTH PROBLEMS ACROSS AGE GROUPS (SUMMING UP)

1. All the subjects across ages and both sexes were aware of oral health problems in the state.
2. About 9 per cent of respondents were not aware of the factors that cause oral health problems.
3. Of those who were aware, most of them reported "not brushing regularly" (70 per cent), followed by "eating sweets/ice cream" (39 per cent) as two important factors.
4. About preventive measures in regard to oral health problems, one-third of subjects across all ages and sexes reported no knowledge.

Table 5.5.4 Percent 35-44 year olds by reported awareness of oral health problems, their causes & preventive measures, sex & geographical area.

AGE: 35-44 yrs STATE: Andhra Pradesh

Awareness of Oral Health Problems, Causes and Preventive Measures		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Awareness of Oral Health Problems	n=	149	166	177	153	148	151	663	281	944	167	184	152	163	162	171	656	343	999	1943
No knowledge		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Tooth decay		83.8	95.2	39.6	87.5	79.8	50.2	76.2	83.8	78.4	83.9	96.1	43.3	88.7	71.0	46.2	75.2	80.0	76.8	**77.6**
Gum disease		32.5	2.8	2.8	58.0	22.3	10.5	18.8	26.7	21.1	33.7	3.5	5.9	56.3	22.0	7.8	16.0	30.5	21.0	**21.1**
Bad smell		30.0	2.1	1.0	24.7	12.3	11.7	11.4	17.0	13.1	29.5	0.8	2.7	30.9	7.4	7.2	11.3	12.7	11.7	**12.4**
Stained teeth		0.0	0.0	0.0	0.0	2.9	1.9	0.4	2.4	1.0	0.7	0.0	0.0	0.0	0.8	2.1	0.3	1.6	0.8	**0.9**
Others		10.4	2.6	54.7	4.3	12.9	41.3	17.5	11.1	15.6	11.9	3.9	50.0	7.1	20.4	48.1	20.7	15.7	19.0	**17.3**
2 Factors that cause Oral Health Problems																				
Eating sweets/ice cream		27.2	7.6	45.9	63.8	52.9	41.2	25.9	59.2	36.6	31.7	7.5	31.6	64.4	62.4	51.9	25.6	64.2	40.3	**38.5**
Not brushing regularly		76.8	89.5	43.6	85.1	73.2	59.3	82.5	69.6	78.4	81.5	89.2	59.3	84.0	79.1	52.7	84.2	70.2	78.8	**78.6**
Not rinsing		16.3	0.0	3.3	13.6	11.9	2.6	7.9	4.2	6.7	19.0	0.4	6.2	12.6	7.1	2.0	8.1	2.8	6.1	**6.4**
Consuming tobacco		21.5	0.4	0.0	13.7	1.4	11.0	7.5	6.9	7.3	28.1	0.0	0.0	6.9	0.0	0.7	4.5	5.0	4.7	**6.0**
Do not know		9.5	4.0	0.0	4.5	2.8	27.1	6.6	12.9	8.6	4.6	6.2	0.0	6.0	0.0	26.7	6.4	11.5	8.3	**8.5**
3 Reported Preventive Measures																				
Not consuming Tobacco		22.3	0.0	0.0	37.4	2.9	3.9	9.7	12.1	10.4	14.7	0.0	0.0	24.9	0.0	0.0	5.3	7.1	5.9	**8.2**
Cleaning teeth regularly		63.8	89.9	17.6	76.1	58.6	33.4	62.3	70.2	64.6	66.8	87.0	19.9	75.4	59.7	30.8	62.0	67.7	63.9	**64.3**
Visiting dentist regularly		12.2	0.4	1.0	28.8	1.0	3.1	6.8	9.1	7.5	12.6	1.2	2.9	29.9	0.8	2.9	6.9	9.6	7.8	**7.7**
Using flouride paste / powder		0.0	0.0	0.0	0.7	0.0	0.0	0.2	0.0	0.1	1.6	0.0	0.0	0.4	0.0	0.4	0.1	0.9	0.4	**0.3**
Avoid sweet items		21.7	0.9	7.8	31.1	25.5	12.4	10.1	32.2	16.6	20.1	0.8	7.6	39.3	32.7	15.7	12.1	34.8	19.9	**18.3**
Do not know		21.2	8.1	72.1	2.1	35.8	62.3	29.8	20.3	27.0	20.6	11.0	70.9	5.6	36.6	63.2	31.6	22.4	28.5	**27.8**

Table 5.5.5 Percent 65-74 year olds by reported awareness of oral health problems, their causes & preventive measures, sex & geographical area.

AGE: 65-74 yrs STATE: Andhra Pradesh

Awareness of Oral Health Problems, Causes and Preventive Measures		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Awareness of Oral Health Problems	n=	140	162	153	149	138	149	625	266	891	177	159	168	160	142	167	656	317	973	1864
No knowledge		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Tooth decay		79.5	97.8	31.5	81.1	62.8	40.8	69.8	79.5	72.6	69.3	92.1	31.9	76.6	48.4	31.5	63.6	62.8	63.3	**68.0**
Gum disease		34.9	5.8	8.0	67.4	18.7	18.6	22.2	34.0	25.6	25.8	8.7	8.0	65.2	15.2	14.4	20.3	31.5	23.9	**24.8**
Bad smell		17.8	1.8	3.7	28.4	13.7	7.9	11.8	10.9	11.5	13.7	2.7	2.1	26.8	7.6	3.6	9.5	9.0	9.3	**10.4**
Stained teeth		3.2	0.0	0.0	1.2	5.9	3.6	1.4	5.1	2.5	4.1	0.0	0.0	0.4	3.9	2.5	0.8	4.5	2.0	**2.3**
Others		15.2	2.2	59.5	7.4	30.5	50.8	23.9	15.8	21.6	22.8	7.0	60.2	12.1	46.5	56.5	29.5	29.8	29.6	**25.6**
2 Factors that cause Oral Health Problems																				
Eating sweets/ice cream		15.9	10.0	25.6	64.1	56.3	43.4	25.7	56.2	35.8	21.1	8.7	21.6	60.8	62.1	40.3	26.9	52.6	35.3	**35.6**
Not brushing regularly		64.1	83.7	51.1	82.5	64.4	55.8	79.8	60.6	73.4	59.2	90.2	48.7	67.5	54.6	61.3	76.4	61.0	71.4	**72.4**
Not rinsing		13.9	0.0	7.8	12.6	15.3	3.9	7.5	4.7	6.6	15.8	0.5	10.5	18.9	10.8	0.0	9.8	4.0	7.9	**7.3**
Consuming tobacco		25.9	1.4	0.0	16.4	5.6	4.7	7.3	11.0	8.5	24.8	1.1	3.5	17.5	0.0	0.8	8.5	8.1	8.3	**8.4**
Do not know		16.0	7.7	3.0	8.7	2.2	33.4	10.5	16.3	12.5	18.8	5.4	0.0	10.9	0.0	31.1	10.3	16.8	12.4	**12.5**
3 Reported Preventive Measures																				
Not consuming Tobacco		20.8	1.6	0.0	33.3	2.1	3.6	8.6	13.6	10.0	12.3	0.5	0.7	29.0	1.0	0.4	6.7	8.2	7.2	**8.6**
Cleaning teeth regularly		43.9	82.8	16.1	76.4	32.6	26.2	53.4	57.5	54.6	37.6	80.5	10.4	61.6	25.6	24.6	47.8	46.5	47.4	**51.0**
Visiting dentist regularly		6.0	0.4	0.7	27.6	1.1	1.6	5.9	7.5	6.4	3.0	1.2	3.2	19.9	1.0	0.4	4.5	5.0	4.6	**5.5**
Using flouride paste / powder		0.0	0.0	0.0	2.3	0.0	0.0	0.5	0.0	0.4	0.0	0.0	0.0	1.5	0.0	0.0	0.4	0.0	0.2	**0.3**
Avoid sweet items		8.9	0.9	5.2	34.5	15.8	11.1	9.8	21.8	13.3	10.3	1.4	2.9	36.0	10.4	8.3	10.6	14.8	12.0	**12.7**
Do not know		37.8	14.3	77.7	6.9	62.8	68.3	39.4	31.9	37.3	45.8	17.6	82.5	14.3	68.7	71.7	43.1	45.4	43.8	**40.6**

5.6 TOBACCO SMOKING AND CHEWING HABITS

As smoking habits and chewing tobacco have special affects on oral health, a set of questions on these aspects were asked. These questions related to smoking habits, chewing pan with tobacco and drinking alcohol. This section summarises findings on these questions for the age groups 35-44 years and 65-74 years since these age groups were considered more relevant for these questions. The findings are shown in Tables 5.6.4 and 5.6.5

5.6.4 35-44 year olds

About 24 per cent of respondents had the habit of smoking tobacco in the state, more in rural areas (Table 5.6.4). About 43 per cent males and 5 per cent females reported smoking tobacco. The percentage of smokers was the highest (39 per cent) in North Coastal Andhra.

As regard nature of smoking, about 40 per cent of the respondents more females & more in rural areas reported smoking. In the urban areas, almost 44 per cent smoked cigarettes while in the rural areas, 30 per cent, 20 per cent and about 40 per cent smoked Bidis, cigarettes and cigars, respectively. When asked about frequency of smoking, almost everybody (86 per cent) reported smoking less than 10 times in a day.

The practice of chewing pan masala or tobacco was lower; only about 5 per cent men and 2 per cent women reported this habit. There were no significant rural/urban differentials or among regions. A majority of those who chewed tobacco or pan masala with tobacco said they have been using it for less than 5 years.

About 68 per cent of them were chewing tobacco less than 5 times in a day. Also, 26 per cent males and 1 per cent females reported taking alcohol. Most of them said were taking it occasionally.

5.6.5 65-74 year olds

About 27 per cent in this age group (45 per cent males and 10 per cent females) reported the habit of smoking tobacco. These were more males as well as more females in rural areas (Table 5.6.5). A majority (63 per cent) were smoking cigars followed by Bidis (24 per cent) and cigarettes (6 per cent). The frequency of smoking bidis and cigarettes was mostly less than 10 times a day. Among regions, the habit was reported more in North Coastal Andhra.

In the state, about 8 per cent (7 per cent males and 8 per cent females) of this age group reported chewing pan masala with tobacco. About 90 per cent of them said they were chewing it less than 10 times a day. About 63 per cent men said they had this habit for less than 10 years.

About 12 per cent (mostly males) reported taking alcohol. Most of them were taking this occasionally and their number was more in the rural areas. More people with this habit were reported from North Coastal Andhra and South Telengana regions.

Table 5.6.4 Percent 35-44 year olds by reported smoking, chewing pan & pan masala and alcohol taking habits, sex & geographical area.

AGE: 35-44 yrs STATE: Andhra Pradesh

Tobacco Smoking or Chewing with Pan masala and Alcohol taking habits		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Smoking Habits	n=	148	164	172	145	141	143	637	276	913	165	184	151	154	158	167	644	335	979	1892
Subjects smoking tobacco		55.9	26.8	54.6	59.8	41.4	47.3	45.9	36.3	43.0	22.8	2.8	2.3	2.0	1.5	5.2	5.9	3.1	4.9	**24.0**
2 Nature of Smoking	n=	80	45	94	86	62	64	319	112	431	35	6	3	3	3	8	48	10	58	**489**
Chillum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.9	0.0	0.0	0.0	0.0	4.3	0.0	3.4	**1.7**
Hookah		0.0	1.6	1.2	0.0	5.2	0.0	0.7	3.4	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.7**
Cigars		63.3	13.8	6.8	5.3	0.0	19.3	17.8	14.5	16.9	93.0	56.1	0.0	0.0	0.0	42.9	64.1	60.8	63.4	**40.2**
Cigarettes		19.4	43.6	36.1	52.0	31.8	44.6	36.6	54.6	41.1	2.0	0.0	0.0	22.7	66.7	14.1	4.3	33.0	10.5	**25.8**
Bidis		15.4	36.8	54.7	35.7	57.8	34.3	42.1	19.1	36.3	0.0	21.9	66.7	38.7	33.3	28.6	18.2	0.0	14.3	**25.3**
3 Number of times Smoking in a day																				
< 10 times		78.4	71.5	69.5	92.7	78.9	83.3	78.6	91.8	81.9	93.0	78.1	66.7	100.0	100.0	85.7	89.6	87.5	89.1	**85.5**
10-20 times		18.0	21.8	21.3	1.3	12.7	9.7	14.0	4.9	11.7	2.9	0.0	0.0	0.0	0.0	14.3	5.4	0.0	4.3	**8.0**
20 + times		0.0	5.1	4.9	2.6	1.4	1.8	3.1	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**1.2**
4 Chewing pan/pan masala habits	n=	147	161	170	139	142	139	629	269	898	161	180	148	150	157	164	632	328	960	1858
Chew pan or pan masala with		2.0	1.8	4.8	4.9	6.9	8.1	4.4	5.6	4.7	0.0	0.0	8.6	4.5	1.5	3.7	1.9	2.5	2.1	**3.4**
5 Number of years of chewing pan or pan masala with Tobacco	n=	3	3	8	6	9	12	28	13	41	0	0	11	7	3	8	20	9	29	**70**
Less than 5 years		37.1	75.8	27.9	83.3	45.8	10.4	43.6	38.4	41.8	0.0	0.0	63.6	44.9	100.0	19.9	51.4	33.3	44.2	**43.0**
5 - 10 years		62.9	0.0	16.4	0.0	31.4	63.2	35.0	32.7	34.2	0.0	0.0	27.3	37.7	0.0	50.3	37.6	32.6	35.6	**34.9**
> 10 years		0.0	0.0	27.9	16.7	14.4	15.8	11.2	19.2	14.0	0.0	0.0	9.1	0.0	0.0	29.8	1.9	34.0	14.8	**14.4**
6 Number of times of chewing tobacco in a day																				
Less than 5 times		74.2	75.8	27.9	83.3	62.7	47.3	68.1	44.9	59.9	0.0	0.0	72.7	47.9	66.7	100.0	60.5	100.0	76.4	**68.2**
5 - 10 times		0.0	0.0	30.3	16.7	28.8	26.3	15.6	34.3	22.2	0.0	0.0	27.3	52.1	0.0	0.0	32.9	0.0	19.7	**21.0**
> 10 times		0.0	0.0	13.9	0.0	0.0	0.0	0.9	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.3**
7 Alcohol consumption habits	n=	146	165	172	144	138	140	631	274	905	163	181	144	150	156	163	624	333	957	1862
Consumption of alcohol		53.3	3.9	27.5	27.4	38.2	31.1	26.4	23.4	25.5	6.8	0.4	0.8	0.9	1.5	0.8	1.7	0.9	1.4	**13.5**
8 Frequency of alcohol consumption	n=	76	8	46	39	56	41	199	67	266	10	1	1	2	3	1	15	3	18	**284**
Daily		3.8	0.0	9.6	2.9	0.0	11.0	5.6	1.1	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**2.2**
3 times a week		12.4	11.0	12.1	10.9	14.1	5.5	11.6	7.7	10.6	10.0	0.0	0.0	0.0	100.0	0.0	29.4	0.0	22.6	**16.6**
Occasionally		61.5	67.1	52.1	62.5	54.5	46.5	62.1	34.6	54.6	80.0	100.0	100.0	100.0	0.0	0.0	51.1	100.0	62.4	**58.5**

Table 5.6.5 Percent 65-74 year olds by reported smoking, chewing pan & pan masala and alcohol taking habits, sex & geographical area.

AGE: 65-74 yrs STATE: Andhra Pradesh

Tobacco Smoking or Chewing with Pan masala and Alcohol taking habits		MALES									FEMALES									STATE TOTAL
		REGIONS						STATE			REGIONS						STATE			
		1	2	3	4	5	6	R	U	T	1	2	3	4	5	6	R	U	T	
1 Smoking Habits	n=	140	161	148	141	134	139	603	260	863	174	158	165	147	138	161	634	309	943	1806
Subjects smoking tobacco		71.6	23.4	36.6	63.1	42.2	56.7	51.7	28.2	44.8	43.9	3.0	5.4	4.1	1.2	13.3	12.4	4.8	9.9	27.4
2 Nature of Smoking	n=	96	39	51	86	65	73	331	79	410	72	6	8	6	2	18	97	15	112	522
Chillum		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hookah		0.0	0.0	0.0	0.0	1.5	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Cigars		77.5	51.8	58.6	12.9	13.1	64.7	45.4	36.9	43.8	92.3	76.2	13.2	19.3	0.0	88.6	82.3	76.6	81.4	62.6
Cigarettes		5.8	10.8	4.2	20.7	1.5	14.3	9.8	23.2	12.3	0.0	0.0	13.2	0.0	0.0	0.0	0.3	0.0	0.3	6.3
Bidis		15.6	35.5	33.0	61.6	79.4	15.8	41.3	32.7	39.7	3.8	0.0	52.7	50.0	100.0	0.0	8.0	11.1	8.5	24.1
3 Number of times Smoking in a day																				
< 10 times		87.6	71.3	78.7	89.0	65.8	85.7	80.0	89.5	81.7	90.5	76.2	73.6	88.7	50.0	94.3	89.2	88.9	89.1	85.4
10-20 times		10.5	23.8	15.0	7.2	23.6	3.8	12.9	7.6	11.9	5.7	0.0	13.2	0.0	50.0	0.0	4.8	0.0	4.1	8.0
20 + times		0.0	3.0	2.1	2.6	1.5	0.0	1.6	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
4 Chewing pan/pan masala habits	n=	139	158	148	144	131	139	602	257	859	171	157	159	147	137	160	630	301	931	1790
Chew pan or pan masala with		3.2	0.5	8.9	17.9	7.5	6.0	5.6	9.8	6.8	0.6	0.0	23.1	36.1	4.4	2.7	9.2	6.4	8.3	7.6
5 Number of years of chewing pan or pan masala with Tobacco	n=	4	1	12	25	8	11	40	21	61	1	0	32	52	6	4	75	20	95	156
Less than 5 years		25.0	0.0	34.5	30.0	0.0	7.1	21.7	15.3	19.0	100.0	0.0	38.5	22.1	13.5	0.0	19.4	34.0	23.0	21.0
5 - 10 years		0.0	100.0	5.1	44.4	53.1	14.4	40.5	30.0	36.1	0.0	0.0	17.9	61.9	27.0	0.0	56.3	20.4	47.6	41.9
> 10 years		75.0	0.0	51.8	18.5	38.3	35.7	27.0	35.0	30.3	0.0	0.0	43.6	11.3	46.0	85.9	20.8	30.7	23.2	26.8
6 Number of times of chewing tobacco in a day																				
Less than 5 times		50.0	100.0	60.4	45.9	85.2	35.7	47.6	64.0	54.4	0.0	0.0	51.9	56.9	63.5	57.3	53.1	70.2	57.3	55.9
5 - 10 times		25.0	0.0	13.7	51.4	14.8	21.5	44.0	16.3	32.5	0.0	0.0	38.5	41.0	23.0	28.6	41.1	24.6	37.1	34.8
> 10 times		0.0	0.0	17.3	0.0	0.0	0.0	1.4	0.0	0.8	0.0	0.0	6.4	0.0	0.0	0.0	0.8	0.0	0.6	0.7
7 Alcohol consumption habits	n=	137	160	148	142	129	140	596	260	856	170	159	159	142	137	160	626	301	927	1783
Consumption of alcohol		37.9	3.7	18.4	29.2	36.4	20.9	23.2	15.4	20.9	12.8	0.5	0.7	2.4	1.2	3.1	3.9	0.5	2.8	11.9
8 Frequency of alcohol consumption	n=	51	6	26	42	54	29	161	47	208	20	1	1	3	2	4	30	1	31	239
Daily		11.8	0.0	12.5	2.8	1.8	8.2	4.9	8.5	5.7	5.0	0.0	0.0	33.3	0.0	0.0	7.4	0.0	7.0	6.4
3 times a week		15.9	0.0	16.7	12.0	35.0	10.2	16.8	24.8	18.5	25.0	0.0	0.0	0.0	50.0	0.0	17.0	0.0	16.1	17.3
Occasionally		61.3	81.1	59.2	58.8	61.4	36.7	57.2	52.8	56.3	65.0	100.0	100.0	33.3	0.0	0.0	41.0	100.0	44.3	50.3

TOBACCO SMOKING AND CHEWING HABITS ACROSS AGE GROUPS (SUMMING UP)

1. About 26 per cent in the 35-44 and 65-74 age groups had the habit of smoking in the state. The habit was more prevalent among males and in rural areas. Higher percentages were reported from North Coastal Andhra. More than half of them, more females and more from rural areas, smoked cigars. Cigarette smokers were next, and they were more in the urban areas. Fortunately, 85 per cent of smokers, across both sexes and place of residence, were smoking less than 10 times in a day.

2. About 6 per cent, across all ages and place of residence, but more males in the 35-44 age group and more females in 65-74 age group said they chewed pan or pan masala with tobacco. Around 59 per cent of them, across all ages and both sexes and place of residence, were chewing it for more than five years.

3. About 13 per cent, across all ages, but more males and more in rural areas, said they were taking alcohol.

CHAPTER VI

ORAL HEALTH STATUS

6.0 CLINICAL FINDINGS

The clinical findings are presented under the following broad heads:

1. Dental Caries status & Treatment Need
2. Periodontal Disease status
3. Malocclusion status
4. Oral Cancers and other oral mucosal lesions
5. Dental Fluorosis status
6. Other conditions:

   Extra Oral Lesions; TMJ Assessment; Enamel Opacities and Hypoplasia; Prosthetic Status & Need; and Community need for immediate Care and Referrals.

6.1 DENTAL CARIES STATUS

This section presents a review of data for both coronal (crown) caries and root caries. The coronal caries is of interest in all index age groups and reported using a) the conventional dmft/ DMFT Index for primary and permanent teeth and b) the Significant Caries Index (SIC). The Significant Caries Index (SIC) helps identify the one third of the population with the highest caries (mean DMFT value) and the mean DMFT for this group. The root caries develops in the higher age groups and is therefore assessed for the age groups of 35-44 and 65-74 years subjects; its greatest significance lies in the aging population in the 50-60 years or higher age groups.

6.1.1 Coronal caries

Tables 6.01 and Figure 6.01 present the prevalence proportion of subjects by age and sex who were caries-free and those with caries experience using a range of dmft (deft)/ DMFT values. The range of values has been grouped in such a way as to provide some indication of the proportion of dentition affected with caries out of the normally present (28 or 32) in an average mouth.

Table 6.02 and Figure 6.02 present the mean number of teeth decayed, missing and filled (mean dmft and mean DMFT) in the surveyed population and includes the Significant

Fig 6.01. Percent subjects with caries experience in Andhra Pradesh

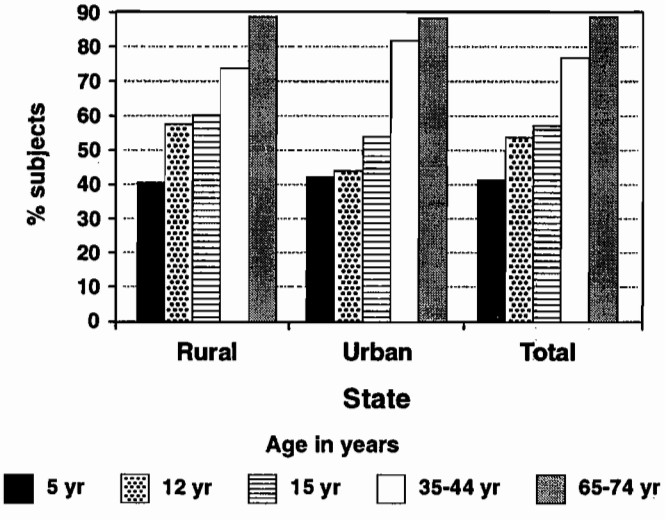


Table 6.01 Percent subjects (with permanent teeth) with caries and with dmft/ DMFT values by age, sex and geographical area.

State: Andhra Pradesh

Decayed, Missing, Filled Teeth		5 years			Decayed, Missing, Filled Teeth		12 years			15 years			35-44 years			65-74 years		
		M	F	T			M	F	T	M	F	T	M	F	T	M	F	T
Region 1	**n=**	**166**	**145**	***311***	**Region 1**	**n=**	**162**	**149**	***311***	**160**	**150**	***310***	**149**	**167**	***316***	**140**	**177**	***317***
With caries experience		52.4	48.3	***50.4***	With caries experience		73.5	62.4	***68.0***	86.9	78.7	***82.8***	89.9	89.8	***89.9***	93.6	96.0	***94.8***
dmft value 1-3		33.3	27.9	***30.6***	DMFT value 1-3		50.0	38.9	***44.5***	51.9	50.0	***51.0***	25.5	18.0	***21.8***	8.6	8.5	***8.6***
dmft value 4-5		7.7	9.5	***8.6***	DMFT value 4-7; 4-8		23.5	21.5	***22.5***	32.5	25.3	***28.9***	45.0	53.3	***49.2***	17.1	14.1	***15.6***
dmft value 6-10		10.7	8.2	***9.5***	DMFT value 8-14; 9-16		0.0	2.0	***1.0***	2.5	3.3	***2.9***	18.1	16.8	***17.5***	29.3	27.1	***28.2***
dmft value 11-15		0.6	2.0	***1.3***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.3	1.2	***1.3***	13.6	13.6	***13.6***
dmft value 16 or more		0.0	0.7	***0.4***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	3.6	6.8	***5.2***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.6	***0.3***	21.4	26.0	***23.7***
Region 2	**n=**	**175**	**150**	***325***	**Region 2**	**n=**	**168**	**157**	***325***	**171**	**151**	***322***	**166**	**184**	***350***	**162**	**159**	***321***
With caries experience		21.7	21.3	***21.5***	With caries experience		44.0	39.5	***41.8***	43.9	53.0	***48.5***	75.3	81.0	***78.2***	94.4	98.1	***96.3***
dmft value 1-3		14.3	19.3	***16.8***	DMFT value 1-3		42.3	37.6	***40.0***	37.4	42.4	***39.9***	38.6	38.6	***38.6***	16.0	17.0	***16.5***
dmft value 4-5		5.1	1.3	***3.2***	DMFT value 4-7; 4-8		1.8	1.9	***1.9***	6.4	9.9	***8.2***	34.3	34.8	***34.6***	51.9	49.1	***50.5***
dmft value 6-10		1.7	0.7	***1.2***	DMFT value 8-14; 9-16		0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.4	7.1	***4.8***	19.1	20.1	***19.6***
dmft value 11-15		0.6	0.0	***0.3***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.7	***0.4***	0.0	0.5	***0.3***	3.7	5.0	***4.4***
dmft value 16 or more		0.0	0.0	***0.0***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.2	0.6	***0.9***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.5	6.3	***4.4***
Region 3	**n=**	**185**	**123**	***308***	**Region 3**	**n=**	**169**	**142**	***311***	**169**	**138**	***307***	**177**	**152**	***329***	**153**	**168**	***321***
With caries experience		45.8	39.2	***42.5***	With caries experience		58.6	54.2	***56.4***	53.3	57.2	***55.3***	72.9	84.9	***78.9***	74.5	75.6	***75.1***
dmft value 1-3		23.7	20.8	***22.3***	DMFT value 1-3		44.4	38.0	***41.2***	33.1	40.6	***36.9***	34.5	33.6	***34.1***	16.3	11.9	***14.1***
dmft value 4-5		13.2	5.6	***9.4***	DMFT value 4-7; 4-8		11.8	16.2	***14.0***	19.5	13.0	***16.3***	29.4	40.8	***35.1***	23.5	23.8	***23.7***
dmft value 6-10		7.9	10.4	***9.2***	DMFT value 8-14; 9-16		2.4	0.0	***1.2***	0.6	3.6	***2.1***	7.9	10.5	***9.2***	15.0	23.8	***19.4***
dmft value 11-15		0.5	2.4	***1.5***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.1	0.0	***0.6***	6.5	7.1	***6.8***
dmft value 16 or more		0.5	0.0	***0.3***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.0	1.8	***1.9***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	11.1	7.1	***9.1***
Region 4	**n=**	**169**	**144**	***313***	**Region 4**	**n=**	**170**	**145**	***315***	**167**	**153**	***320***	**153**	**163**	***316***	**149**	**160**	***309***
With caries experience		80.7	81.3	***81.0***	With caries experience		75.3	73.1	***74.2***	75.4	83.7	***79.6***	86.3	92.6	***89.5***	98.0	95.6	***96.8***
dmft value 1-3		28.7	25.0	***26.9***	DMFT value 1-3		34.1	35.2	***34.7***	41.3	48.4	***44.9***	25.5	32.5	***29.0***	9.4	9.4	***9.4***
dmft value 4-5		31.0	41.0	***36.0***	DMFT value 4-7; 4-8		38.8	35.2	***37.0***	31.7	31.4	***31.6***	41.2	37.4	***39.3***	15.4	16.9	***16.2***
dmft value 6-10		18.1	13.9	***16.0***	DMFT value 8-14; 9-16		2.4	2.8	***2.6***	2.4	3.9	***3.2***	19.6	20.2	***19.9***	29.5	29.4	***29.5***
dmft value 11-15		2.9	1.4	***2.2***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	2.5	***1.3***	21.5	14.4	***18.0***
dmft value 16 or more		0.0	0.0	***0.0***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	4.0	3.8	***3.9***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	18.1	21.9	***20.0***
Region 5	**n=**	**162**	**141**	***303***	**Region 5**	**n=**	**157**	**147**	***304***	**165**	**135**	***300***	**148**	**162**	***310***	**138**	**142**	***280***
With caries experience		28.4	23.9	***26.2***	With caries experience		26.1	32.0	***29.1***	32.1	25.9	***29.0***	49.3	55.6	***52.5***	80.4	84.5	***82.5***
dmft value 1-3		13.0	9.2	***11.1***	DMFT value 1-3		16.6	19.7	***18.2***	12.7	9.6	***11.2***	22.3	24.7	***23.5***	10.1	8.5	***9.3***
dmft value 4-5		7.4	7.7	***7.6***	DMFT value 4-7; 4-8		8.9	12.2	***10.6***	15.8	12.6	***14.2***	22.3	24.7	***23.5***	11.6	13.4	***12.5***
dmft value 6-10		6.2	4.9	***5.6***	DMFT value 8-14; 9-16		0.6	0.0	***0.3***	3.6	3.7	***3.7***	3.4	3.1	***3.3***	6.5	8.5	***7.5***
dmft value 11-15		1.9	2.1	***2.0***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.4	0.6	***1.0***	8.0	2.8	***5.4***
dmft value 16 or more		0.0	0.0	***0.0***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.7	4.9	***2.8***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	2.5	***1.3***	43.5	46.5	***45.0***

Decayed, Missing, Filled Teeth		5 years			Decayed, Missing, Filled Teeth		12 years			15 years			35-44 years			65-74 years		
		M	F	T			M	F	T	M	F	T	M	F	T	M	F	T
Region 6	**n=**	**179**	**141**	***320***	**Region 6**	**n=**	**161**	**154**	***315***	**168**	**150**	***318***	**151**	**171**	***322***	**149**	**167**	***316***
With caries experience		32.8	21.8	***27.3***	With caries experience		43.5	53.9	***48.7***	50.0	52.0	***51.0***	65.6	76.0	***70.8***	85.9	87.4	***86.7***
dmft value 1-3		19.4	12.0	***15.7***	DMFT value 1-3		26.1	33.1	***29.6***	31.0	28.0	***29.5***	25.8	28.7	***27.3***	13.4	15.6	***14.5***
dmft value 4-5		11.1	4.2	***7.7***	DMFT value 4-7; 4-8		15.5	16.2	***15.9***	16.7	21.3	***19.0***	30.5	35.7	***33.1***	24.8	21.6	***23.2***
dmft value 6-10		2.2	5.6	***3.9***	DMFT value 8-14; 9-16		1.9	4.5	***3.2***	2.4	2.7	***2.6***	9.3	11.1	***10.2***	24.2	28.1	***26.2***
dmft value 11-15		0.0	0.0	***0.0***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	9.4	6.6	***8.0***
dmft value 16 or more		0.0	0.0	***0.0***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.6	***0.3***	3.4	3.0	***3.2***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	10.7	12.6	***11.7***
State Rural	**n=**	**685**	**590**	***1275***	**State Rural**	**n=**	**652**	**625**	***1277***	**654**	**618**	***1272***	**663**	**656**	***1319***	**625**	**656**	***1281***
With caries experience		43.2	39.1	***41.2***	With caries experience		57.5	56.8	***57.2***	58.6	61.5	***60.1***	71.0	78.0	***74.5***	87.8	89.8	***88.8***
dmft value 1-3		20.8	17.7	***19.3***	DMFT value 1-3		37.1	35.2	***36.2***	33.8	37.9	***35.9***	26.8	29.4	***28.1***	14.7	13.3	***14.0***
dmft value 4-5		14.0	12.3	***13.2***	DMFT value 4-7; 4-8		18.9	19.4	***19.2***	22.8	20.9	***21.9***	32.7	35.5	***34.1***	23.4	21.5	***22.5***
dmft value 6-10		7.4	7.4	***7.4***	DMFT value 8-14; 9-16		1.5	2.2	***1.9***	2.0	2.6	***2.3***	10.6	11.9	***11.3***	21.1	23.8	***22.5***
dmft value 11-15		0.9	1.5	***1.2***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.2	***0.1***	0.9	0.6	***0.8***	10.9	9.0	***10.0***
dmft value 16 or more		0.1	0.2	***0.2***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.7	3.5	***3.1***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.6	***0.3***	15.0	18.8	***16.9***
State Urban	**n=**	**351**	**254**	***605***	**State Urban**	**n=**	**335**	**269**	***604***	**346**	**259**	***605***	**281**	**343**	***624***	**266**	**317**	***583***
With caries experience		44.4	39.7	***42.1***	With caries experience		46.6	42.0	***44.3***	53.2	53.3	***53.3***	78.6	83.7	***81.2***	88.0	89.3	***88.7***
dmft value 1-3		24.6	22.2	***23.4***	DMFT value 1-3		33.1	30.5	***31.8***	35.8	34.7	***35.3***	34.2	29.4	***31.8***	7.1	8.8	***8.0***
dmft value 4-5		10.1	10.1	***10.1***	DMFT value 4-7; 4-8		12.8	11.5	***12.2***	15.6	15.1	***15.4***	35.9	42.0	***39.0***	27.8	26.5	***27.2***
dmft value 6-10		8.4	6.6	***7.5***	DMFT value 8-14; 9-16		0.6	0.0	***0.3***	1.7	3.5	***2.6***	8.5	10.5	***9.5***	19.5	22.1	***20.8***
dmft value 11-15		1.4	0.8	***1.1***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	1.2	***0.6***	9.0	7.3	***8.2***
dmft value 16 or more		0.0	0.0	***0.0***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.3	***0.2***	1.9	3.5	***2.7***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.3	***0.2***	22.6	21.1	***21.9***
State Total	**n=**	**1036**	**844**	***1880***	**State Total**	**n=**	**987**	**894**	***1881***	**1000**	**877**	***1877***	**944**	**999**	***1943***	**891**	**973**	***1864***
With caries experience		43.6	39.3	***41.5***	With caries experience		53.8	52.3	***53.1***	56.7	59.1	***57.9***	73.3	80.0	***76.7***	87.9	89.6	***88.8***
dmft value 1-3		22.1	19.1	***20.6***	DMFT value 1-3		35.8	33.8	***34.8***	34.5	36.9	***35.7***	29.0	29.4	***29.2***	12.5	11.8	***12.2***
dmft value 4-5		12.6	11.6	***12.1***	DMFT value 4-7; 4-8		16.8	17.0	***16.9***	20.3	19.2	***19.8***	33.7	37.7	***35.7***	24.7	23.1	***23.9***
dmft value 6-10		7.7	7.2	***7.5***	DMFT value 8-14; 9-16		1.2	1.6	***1.4***	1.9	2.9	***2.4***	10.0	11.4	***10.7***	20.7	23.2	***22.0***
dmft value 11-15		1.1	1.3	***1.2***	DMFT value 15-21; 17-24		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.6	0.8	***0.7***	10.3	8.4	***9.4***
dmft value 16 or more		0.1	0.1	***0.1***	DMFT value 22-28; 25-28		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***	2.5	3.5	***3.0***
					DMFT value 29 or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.5	***0.3***	17.3	19.5	***18.4***

Note : The categories of DMFT values of 4-7, 8-14, 15-21 and 22-28 have been computed and apply to subjects aged 12 and 15 years only. In age groups 35-44 yr and 65-74 yr, the 'M' (Missing) component includes both missing due to caries and missing due to other reasons. Associated Tables : **6.02 and 6.03.**

Caries (SIC) Index. The table also gives the mean number of teeth present in the mouth and the per cent subjects who were edentulous.

Table 6.03 presents the breakup of the per cent subjects with missing teeth, due to caries and due to other reasons. This is presented for age groups 35-44 and 65-74 years.

The prevalence of caries experience (Fig 6.01) was high in the state in all age groups and in both primary and permanent teeth. In 5 year olds, 41.5 per cent children had experienced caries in the primary teeth. Of these, the dmft value of 1-3 was most prevalent (20.6 per cent). The dmft value

Table 6.02 Mean number of teeth decayed, missng, filled by age, sex and geographical area. **State: Andhra Pradesh**

Decayed, Missing, Filled Teeth		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	166	145	*311*	161	147	*308*	158	149	*307*	148	164	*312*	136	175	*311*
Mean no. of teeth present (mnt/MNT)		19.7	19.6	*19.7*	28.0	28.0	*28.0*	27.9	27.9	*27.9*	30.2	30.1	*30.2*	19.7	17.7	*18.7*
Mean dmft and Mean DMFT		1.8	1.9	*1.85*	2.0	2.0	*2.0*	2.9	2.5	*2.7*	5.5	5.7	*5.6*	15.2	16.8	*16.0*
Mean no. of Decayed teeth (dt/DT)		1.8	1.9	*1.85*	1.9	1.9	*1.9*	2.7	2.4	*2.55*	3.6	3.8	*3.7*	2.9	2.5	*2.7*
Mean no. of Missing teeth (mt/MT)		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.1	0.1	*0.1*	1.8	1.9	*1.9*	12.3	14.3	*13.3*
Mean no. of Filled teeth (ft/FT)		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.1	0.1	*0.1*	0.1	0.1	*0.1*	0.1	0.0	*0.05*
SIC Index		4.5	5.0	*4.8*	4.3	4.5	*4.4*	5.2	4.9	*5.1*	10.1	10.1	*10.1*	28.6	30.4	*29.5*
No. of subjects edentulous		0	0	*0*	0	0	*0*	0	0	*0*	0	1	*1*	19	27	*46*
Region 2	n=	175	150	*325*	168	157	*325*	171	151	*322*	165	184	*349*	160	159	*319*
Mean no. of teeth present (mnt/MNT)		19.9	19.9	*19.9*	28.0	28.0	*28.0*	28.0	28.0	*28.0*	31.5	31.4	*31.5*	28.2	27.0	*27.6*
Mean dmft and Mean DMFT		0.6	0.4	*0.5*	0.8	0.8	*0.8*	0.9	1.3	*1.1*	2.8	3.4	*3.1*	7.4	8.7	*8.1*
Mean no. of Decayed teeth (dt/DT)		0.6	0.4	*0.5*	0.8	0.8	*0.8*	0.9	1.2	*1.1*	2.3	2.8	*2.6*	3.6	3.7	*3.7*
Mean no. of Missing teeth (mt/MT)		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.5	0.6	*0.6*	3.8	5.0	*4.4*
Mean no. of Filled teeth (ft/FT)		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*
SIC Index		1.9	1.4	*1.65*	2.0	2.0	*2.0*	2.5	3.2	*2.9*	5.7	6.9	*6.3*	13.9	16.8	*15.4*
No. of subjects edentulous		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	2	4	*6*
Region 3	n=	185	123	*308*	167	139	*306*	163	134	*297*	175	149	*324*	149	165	*314*
Mean no. of teeth present (mnt/MNT)		19.9	19.9	*19.9*	27.9	27.9	*27.9*	27.9	27.9	*27.9*	30.5	30.2	*30.4*	24.0	24.4	*24.2*
Mean dmft and Mean DMFT		1.9	1.8	*1.9*	1.7	1.6	*1.7*	1.7	1.8	*1.8*	3.4	4.1	*3.8*	9.0	8.7	*8.9*
Mean no. of Decayed teeth (dt/DT)		1.9	1.7	*1.8*	1.6	1.5	*1.6*	1.6	1.6	*1.6*	1.8	2.0	*1.9*	1.0	1.1	*1.1*
Mean no. of Missing teeth (mt/MT)		0.0	0.1	*0.1*	0.0	0.0	*0.0*	0.1	0.1	*0.1*	1.5	1.8	*1.7*	8.0	7.6	*7.8*
Mean no. of Filled teeth (ft/FT)		0.0	0.0	*0.0*	0.1	0.1	*0.1*	0.1	0.1	*0.1*	0.1	0.3	*0.2*	0.0	0.0	*0.0*
SIC Index		4.9	4.7	*4.8*	3.8	3.7	*3.8*	4.1	4.1	*4.1*	7.4	7.9	*7.7*	21.6	19.1	*20.4*
No. of subjects edentulous		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	15	8	*23*
Region 4	n=	169	144	*313*	169	145	*314*	165	151	*316*	145	163	*308*	146	158	*304*
Mean no. of teeth present (mnt/MNT)		19.9	19.9	*19.9*	27.9	27.9	*27.9*	27.9	27.8	*27.9*	29.4	29.3	*29.4*	18.3	17.3	*17.8*
Mean dmft and Mean DMFT		3.6	3.4	*3.5*	2.8	2.6	*2.7*	2.6	2.8	*2.7*	5.1	5.8	*5.5*	15.8	16.1	*16.0*
Mean no. of Decayed teeth (dt/DT)		3.6	3.4	*3.5*	2.7	2.6	*2.7*	2.5	2.7	*2.6*	2.5	2.9	*2.7*	2.1	1.4	*1.8*
Mean no. of Missing teeth (mt/MT)		0.1	0.0	*0.1*	0.1	0.0	*0.1*	0.1	0.1	*0.1*	2.6	2.7	*2.7*	13.7	14.7	*14.2*
Mean no. of Filled teeth (ft/FT)		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.1	0.1	*0.1*	0.0	0.0	*0.0*
SIC Index		6.7	5.9	*6.3*	5.1	4.9	*5.0*	5.3	5.5	*5.4*	9.5	10.7	*10.1*	27.2	29.1	*28.2*
No. of subjects edentulous		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	23	35	*58*
Region 5	n=	162	141	*303*	157	146	*303*	165	134	*299*	146	160	*306*	138	140	*278*
Mean no. of teeth present (mnt/MNT)		19.7	20.0	*19.9*	28.0	28.0	*28.0*	27.9	28.0	*28.0*	31.4	30.6	*31.0*	13.7	12.5	*13.1*
Mean dmft and Mean DMFT		1.4	1.2	*1.3*	0.9	1.2	*1.1*	1.7	1.3	*1.5*	2.3	3.0	*2.7*	18.6	19.9	*19.3*
Mean no. of Decayed teeth (dt/DT)		1.3	1.2	*1.3*	0.9	1.0	*1.0*	1.5	1.2	*1.4*	1.7	1.6	*1.7*	0.3	0.4	*0.4*
Mean no. of Missing teeth (mt/MT)		0.1	0.0	*0.1*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.6	1.4	*1.0*	18.3	19.5	*18.9*
Mean no. of Filled teeth (ft/FT)		0.0	0.0	*0.0*	0.0	0.2	*0.1*	0.1	0.0	*0.1*	0.0	0.0	*0.0*	0.0	0.0	*0.0*
SIC Index		3.8	3.4	*3.6*	2.3	2.9	*2.6*	4.3	3.2	*3.8*	5.8	7.4	*6.6*	32.0	32.0	*32.0*
No. of subjects edentulous		0	0	*0*	0	0	*0*	0	0	*0*	0	4	*4*	54	60	*114*

Decayed, Missing, Filled Teeth		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 6	n=	179	141	***320***	160	153	***313***	166	149	***315***	147	170	***317***	149	166	***315***
Mean no. of teeth present (mnt/MNT)		20.0	20.0	***20.0***	28.0	28.0	***28.0***	28.0	28.0	***28.0***	31.6	31.1	***31.4***	23.8	23.0	***23.4***
Mean dmft and Mean DMFT		1.0	0.8	***0.9***	1.5	2.0	***1.8***	1.8	2.0	***1.9***	3.4	4.0	***3.7***	10.4	10.9	***10.7***
Mean no. of Decayed teeth (dt/DT)		1.0	0.8	***0.9***	1.5	2.0	***1.8***	1.8	2.0	***1.9***	2.9	3.0	***3.0***	2.2	1.9	***2.1***
Mean no. of Missing teeth (mt/MT)		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.9	***0.7***	8.2	9.0	***8.6***
Mean no. of Filled teeth (ft/FT)		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
SIC Index		3.2	2.4	***2.8***	3.8	4.6	***4.2***	4.3	4.6	***4.5***	7.2	8.4	***7.8***	22.2	22.8	***22.5***
No. of subjects edentulous		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	13	14	***27***
State Rural	n=	**685**	**590**	***1275***	**650**	**623**	***1273***	**650**	**613**	***1263***	**652**	**651**	***1303***	**618**	**650**	***1268***
Mean no. of teeth present (mnt/MNT)		19.9	20.0	***20.0***	28.0	28.0	***28.0***	28.0	27.9	***28.0***	30.9	30.6	***30.8***	22.8	21.2	***22.0***
Mean dmft and Mean DMFT		1.4	1.4	***1.4***	1.6	1.8	***1.7***	1.9	2.0	***2.0***	3.6	4.0	***3.8***	11.3	12.8	***12.1***
Mean no. of Decayed teeth (dt/DT)		1.4	1.4	***1.4***	1.6	1.7	***1.7***	1.8	1.9	***1.9***	2.5	2.7	***2.6***	2.2	2.0	***2.1***
Mean no. of Missing teeth (mt/MT)		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***	1.1	1.4	***1.3***	9.2	10.8	***10.0***
Mean no. of Filled teeth (ft/FT)		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
SIC Index		4.7	4.6	***4.7***	4.1	4.3	***4.2***	4.6	4.6	***4.6***	8.1	8.9	***8.5***	25.1	27.0	***26.1***
No. of subjects edentulous		0	0	***0***	0	0	***0***	0	0	***0***	0	4	***4***	78	97	***175***
State Urban	n=	**351**	**254**	***605***	**332**	**264**	***596***	**338**	**255**	***593***	**274**	**339**	***613***	**260**	**313**	***573***
Mean no. of teeth present (mnt/MNT)		19.8	19.9	***19.9***	28.0	28.0	***28.0***	27.9	28.0	***28.0***	31.1	30.7	***30.9***	20.0	19.4	***19.7***
Mean dmft and Mean DMFT		1.7	1.4	***1.6***	1.2	1.2	***1.2***	1.7	1.6	***1.7***	3.5	4.3	***3.9***	14.6	14.8	***14.7***
Mean no. of Decayed teeth (dt/DT)		1.6	1.4	***1.5***	1.1	1.0	***1.1***	1.5	1.6	***1.6***	2.4	2.8	***2.6***	2.6	2.2	***2.4***
Mean no. of Missing teeth (mt/MT)		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.9	1.3	***1.1***	12.0	12.6	***12.3***
Mean no. of Filled teeth (ft/FT)		0.0	0.0	***0.0***	0.0	0.2	***0.1***	0.1	0.0	***0.1***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
SIC Index		4.5	4.0	***4.3***	3.3	3.1	***3.2***	4.0	4.0	***4.0***	7.3	8.9	***8.1***	28.1	27.8	***28.0***
No. of subjects edentulous		0	0	***0***	0	0	***0***	0	0	***0***	0	1	***1***	48	51	***99***
State Total	n=	**1036**	**844**	***1880***	**982**	**887**	***1869***	**988**	**868**	***1856***	**926**	**990**	***1916***	**878**	**963**	***1841***
Mean no. of teeth present (mnt/MNT)		19.9	19.9	***19.9***	28.0	28.0	***28.0***	27.9	27.9	***27.9***	30.9	30.7	***30.8***	22.1	20.6	***21.4***
Mean dmft and Mean DMFT		1.5	1.4	***1.5***	1.6	1.7	***1.7***	1.9	2.0	***2.0***	3.6	4.1	***3.9***	12.2	13.4	***12.8***
Mean no. of Decayed teeth (dt/DT)		1.5	1.4	***1.5***	1.5	1.6	***1.6***	1.8	1.9	***1.9***	2.5	2.7	***2.6***	2.3	2.0	***2.2***
Mean no. of Missing teeth (mt/MT)		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***	1.1	1.3	***1.2***	9.9	11.4	***10.7***
Mean no. of Filled teeth (ft/FT)		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.1	0.0	***0.1***	0.1	0.0	***0.1***	0.0	0.0	***0.0***
SIC Index		4.6	4.5	***4.6***	3.8	4.0	***3.9***	4.5	4.5	***4.5***	7.9	8.9	***8.4***	26.1	27.3	***26.7***
No. of subjects edentulous		0	0	***0***	0	0	***0***	0	0	***0***	0	5	***5***	126	148	***274***

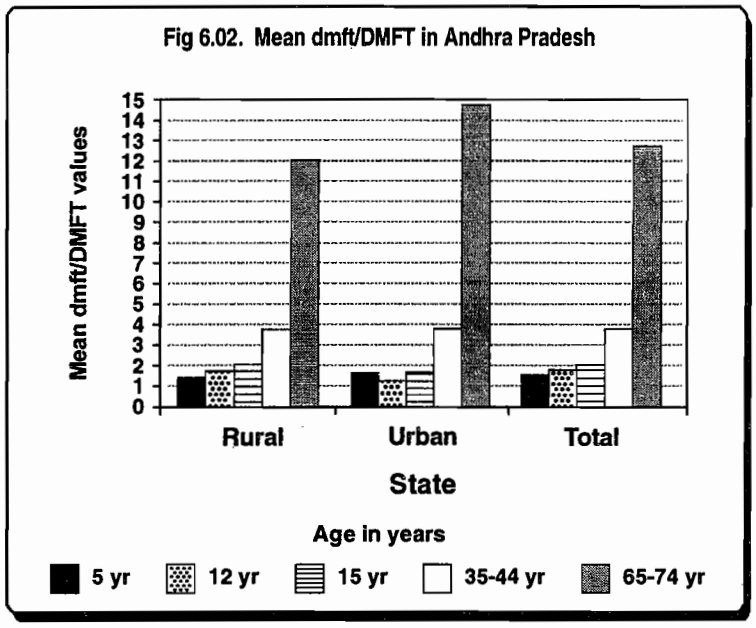
Note: In age groups 35-44 yr and 65-74 yr, the 'MT' (Missing Teeth) component includes both missing due to caries and missing due to other reasons. For detailed breakup, please refer to and co-relate with Table No. 6.03. Assocaited Tables **6.01 and 6.03.**

of 4-5 (12.1 per cent) was next highest in prevalence followed by dmft value 6-10 (7.5 per cent). The mean dmft value for this age group was 1.5 (Table 6.02) which was contributed completely by the decayed teeth (dt) component. The Significant Caries (SIC) Index, which gives the mean of the one third of the subjects with the highest dmft/DMFT levels, was 4.6 or three times the dmft value for 5 year olds, indicating a significant high risk group (Table 6.02).

While the prevalence of caries was high in both rural and urban areas, it appeared that the per cent subjects with caries experience was marginally higher in the urban population (42.1 per cent) compared to the rural population (41.2 per cent). The mean dmft was also marginally higher in the urban population although the SiC Index was marginally higher in the rural population. Males were more affected than females. There were marked regional variations. Guntur, Rangareddy, Khammam had low caries experience, Vishakapatnam and Nellore have moderate experience. Chittoor district has the highest caries experience (81 per cent).

The caries experience in permanent teeth increased as age advanced (Table 6.01). The percentage of subjects in the state with caries experience (permanent teeth), having one or more decayed, missing or filled teeth (DMFT>0), was 53.1 in 12 year olds; 57.9 in 15 year olds and 76.7 in 35-44 year olds. The proportion of subjects with caries experience peaked in the 65-74 year age group (88.8 per cent). The DMFT value of 1-3 was most prevalent in 12 and 15 year old subjects followed by the next higher DMFT value of 4-7 or 4-8 teeth.

The mean number of teeth having decayed, missing and/or filled teeth (DMF teeth) was 1.7 (12 year olds); 2.0 (15 year olds); 3.9 (35-44 year olds) and 12.8 (65-74 year olds). The decayed teeth (DT) component accounted for the whole of DMFT in 12 and 15 year old subjects. In 35-44 year old subjects, decayed teeth component was higher than the missing teeth component. In the 65-74 year old subjects, the missing teeth component was significantly much higher (110.7) than the decayed teeth (2.2) component. In all cases, almost all teeth missing were due to caries, except in the highest age group of 65-74 years, where the majority of missing teeth were due to reasons other than caries (Table 6.03).



The percentage of females with caries was marginally higher than their male counterparts, except in 5 year olds. There were no marked rural and urban differentials. There were wide regional variations.

None of the 5 years olds and males of the 12 years group have any teeth filled. This is a disturbing fact. In fact none of the middle aged and elderly have also any teeth filled. Except for a sporadic filling, none of the people of A.P. surveyed have any restorations in their mouths. This speaks of either utter lack of awareness, facilities or affordability for dental care.

Mean number of teeth filled both for rural and urban people of A. P. is nil which again is contrary to the general belief that urban people have better dental care than rural people.

About 14.8 per cent subjects in the age group of 65-74 years age group were edentulous or without natural teeth. Overall, the mean number of teeth present in the mouth of individuals surveyed decreased as age advanced (Table 6.02). More females than males, and more rural residents than

Table 6.03 Mean number of teeth missng due to caries or other reasons by age, sex and geographical area. STATE : Andhra Pradesh

Missing Teeth		12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	161	147	*308*	158	149	*307*	148	164	*312*	136	175	*311*
Mean no. of teeth missing due to caries		0.0	0.0	*0.0*	0.1	0.1	*0.1*	1.1	0.9	*1.0*	3.2	2.9	*3.1*
Mean no. of teeth missing due to other reasons		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.7	1.0	*0.9*	9.0	11.4	*10.2*
Region 2	n=	168	157	*325*	171	151	*322*	165	184	*349*	160	159	*319*
Mean no. of teeth missing due to caries		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.5	0.6	*0.6*	2.7	3.9	*3.3*
Mean no. of teeth missing due to other reasons		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	1.1	1.1	*1.1*
Region 3	n=	167	139	*306*	163	134	*297*	175	149	*324*	149	165	*314*
Mean no. of teeth missing due to caries		0.0	0.0	*0.0*	0.1	0.1	*0.1*	1.1	1.2	*1.2*	3.4	4.6	*4.0*
Mean no. of teeth missing due to other reasons		0.1	0.0	*0.1*	0.0	0.0	*0.0*	0.3	0.6	*0.5*	4.6	3.1	*3.9*
Region 4	n=	169	145	*314*	165	151	*316*	145	163	*308*	146	158	*304*
Mean no. of teeth missing due to caries		0.1	0.0	*0.1*	0.1	0.1	*0.1*	1.6	1.7	*1.7*	1.1	1.9	*1.5*
Mean no. of teeth missing due to other reasons		0.0	0.0	*0.0*	0.0	0.0	*0.0*	1.0	1.1	*1.1*	12.6	12.8	*12.7*
Region 5	n=	157	146	*303*	165	134	*299*	146	160	*306*	138	140	*278*
Mean no. of teeth missing due to caries		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.5	0.6	*0.6*	0.2	0.2	*0.2*
Mean no. of teeth missing due to other reasons		0.0	0.0	*0.0*	0.1	0.0	*0.1*	0.2	0.8	*0.5*	18.0	19.3	*18.7*
Region 6	n=	160	153	*313*	166	149	*315*	147	170	*317*	149	166	*315*
Mean no. of teeth missing due to caries		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.2	0.6	*0.4*	1.3	1.2	*1.3*
Mean no. of teeth missing due to other reasons		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.2	0.3	*0.3*	6.9	7.8	*7.4*
State Rural	n=	650	623	*1273*	650	613	*1263*	652	651	*1303*	618	650	*1268*
Mean no. of teeth missing due to caries		0.0	0.0	*0.0*	0.0	0.1	*0.1*	0.7	0.8	*0.8*	2.1	2.7	*2.4*
Mean no. of teeth missing due to other reasons		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.3	0.5	*0.4*	7.1	8.1	*7.6*
State Urban	n=	332	264	*596*	338	255	*593*	274	339	*613*	260	313	*573*
Mean no. of teeth missing due to caries		0.0	0.0	*0.0*	0.1	0.0	*0.1*	0.7	0.8	*0.8*	1.1	1.3	*1.2*
Mean no. of teeth missing due to other reasons		0.0	0.0	*0.0*	0.1	0.0	*0.1*	0.3	0.5	*0.4*	10.9	11.3	*11.1*
State Total	n=	982	887	*1869*	988	868	*1856*	926	990	*1916*	878	963	*1841*
Mean no. of teeth missing due to caries		0.0	0.0	*0.0*	0.0	0.1	*0.1*	0.7	0.8	*0.8*	1.9	2.3	*2.1*
Mean no. of teeth missing due to other reasons		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.3	0.5	*0.4*	8.0	9.1	*8.6*

Note: In age groups 35-44 yr and 65-74 yr, the 'M' (Missing) component includes both missing due to caries and missing due to other reasons.
Associated Tables : **6.01 and 6.02.**

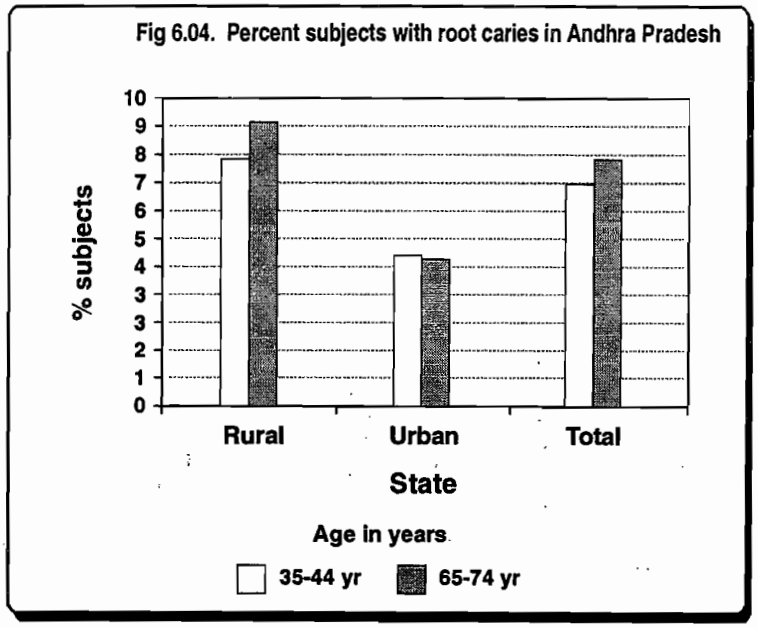
urban residents, had edentulousness. In the age group of 65-74 years, the mean number of teeth present was 21.4 indicating a loss about 11 out of the normally present 32 teeth (about one third of the dentition) in an average mouth.

These findings suggest the cumulative high tooth mortality due to caries, but also probably due to other contributing causes such as periodontal disease, orthodontic or other reasons. The higher prevalence seen in middle aged and elderly is compounded by a large percentage of missing teeth which do not give a decisive picture about dental decay.

6.1.2 Root caries

Table 6.04 and Figure 6.04 present the per cent subjects with root caries and fillings, if any, and the mean number of teeth with root caries and fillings, if any.

Only two advanced age groups are listed in the table as root caries is essentially a sequelae of recession which is usually seen in older age groups.



35-44 years

Considering the whole state, about 7 per cent reported root caries. No marked differentials between males and females were noticed. Rural subjects had more root caries than urban subjects (7.9 : 4.3 per cent)

Root caries was highest in Vishakapatnam (34.7 per cent) and in other regions it varied from 0.7 to 3.2 per cent. The high root caries prevalence in region I is observed with almost equal frequency in both sexes. Such high prevalence in region I i.e 34.7 per cent and 0.7 per cent in region IV defies logic and is not easy to explain

65-74 years

The prevalence for the whole state is 7.9 per cent. No marked differentials between males and females. Rural subjects had more root caries than urban subjects. Root caries was highest (nearly 40 per cent) in region I whereas it is very low in other regions (0.0 to 1.8 per cent)

The high root caries prevalence in region I is observed with almost equal frequency in both sexes. Such high prevalence in region I and low prevalence in region IV is seen in the 35-44 group also and needs attention

Less than one tooth on an average (0.4) was affected by root caries for the whole state. Rural subjects had higher mean number of root caries (0.6) compared to urban subjects (0.15)

Region I had highest mean number of teeth with root caries (2.9 for males and 2.3 for females) compared to lesser values in other regions (0.0 to 0.1)

Table 6.04 Percent subjects and mean no. of teeth with root caries and fillings by age, sex and geographical area. **State: Andhra Pradesh**

Root Caries		35-44 years			65-74 years		
		M	F	T	M	F	T
Region 1	**n=**	**149**	**167**	***316***	**140**	**177**	***317***
% Subjects with Root caries		34.7	34.6	***34.7***	40.2	39.1	***39.7***
Mean nos of teeth with Root Caries		1.2	0.9	***1.1***	2.9	2.3	***2.6***
% Subjects with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 2	**n=**	**166**	**184**	***350***	**162**	**159**	***321***
% Subjects with Root caries		1.1	1.2	***1.2***	0.7	0.0	***0.4***
Mean nos of teeth with Root Caries		0.0	0.0	***0.0***	0.0	0.0	***0.0***
% Subjects with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 3	**n=**	**177**	**152**	***329***	**153**	**168**	***321***
% Subjects with Root caries		3.2	3.1	***3.2***	1.5	1.4	***1.5***
Mean nos of teeth with Root Caries		0.0	0.1	***0.1***	0.0	0.1	***0.1***
% Subjects with Root fillings		0.0	0.8	***0.4***	0.0	0.7	***0.4***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 4	**n=**	**153**	**163**	***316***	**149**	**160**	***309***
% Subjects with Root caries		0.7	1.2	***1.0***	2.4	1.6	***2.0***
Mean nos of teeth with Root Caries		0.0	0.0	***0.0***	0.0	0.0	***0.0***
% Subjects with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 5	**n=**	**148**	**162**	***310***	**138**	**142**	***280***
% Subjects with Root caries		1.0	2.2	***1.6***	0.0	0.0	***0.0***
Mean nos of teeth with Root Caries		0.0	0.0	***0.0***	0.0	0.0	***0.0***
% Subjects with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 6	**n=**	**151**	**171**	***322***	**149**	**167**	***316***
% Subjects with Root caries		0.8	1.1	***1.0***	2.8	1.8	***2.3***
Mean nos of teeth with Root Caries		0.0	0.0	***0.0***	0.0	0.0	***0.0***
% Subjects with Root fillings		0.8	0.0	***0.4***	0.0	0.0	***0.0***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	**n=**	**663**	**656**	***1319***	**625**	**656**	***1281***
% Subjects with Root caries		7.5	8.2	***7.9***	8.5	9.6	***9.1***
Mean nos of teeth with Root Caries		0.2	0.2	***0.2***	0.6	0.6	***0.6***
% Subjects with Root fillings		0.2	0.2	***0.2***	0.0	0.2	***0.1***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Urban	**n=**	**281**	**343**	***624***	**266**	**317**	***583***
% Subjects with Root caries		3.7	4.8	***4.3***	4.4	3.9	***4.2***
Mean nos of teeth with Root Caries		0.1	0.1	***0.1***	0.2	0.1	***0.2***
% Subjects with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Total	**n=**	**944**	**999**	***1943***	**891**	**973**	***1864***
% Subjects with Root caries		6.6	7.3	***7.0***	7.6	8.1	***7.9***
Mean nos of teeth with Root Caries		0.2	0.2	***0.2***	0.4	0.4	***0.4***
% Subjects with Root fillings		0.1	0.1	***0.1***	0.0	0.1	***0.1***
Mean nos of teeth with Root fillings		0.0	0.0	***0.0***	0.0	0.0	***0.0***

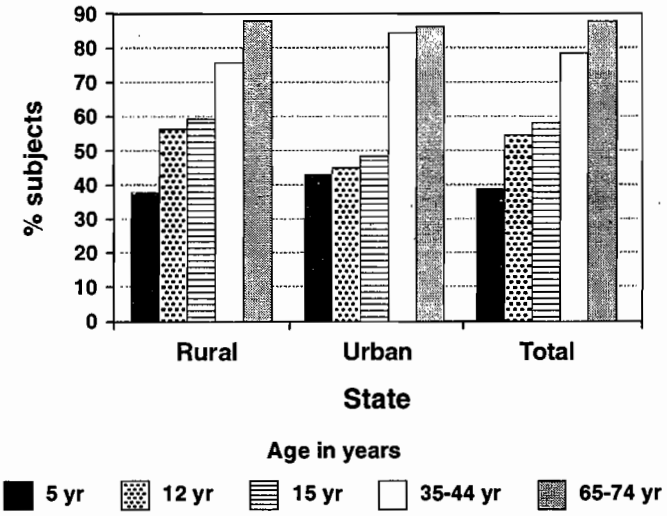
1943 subjects in 35-44 age group and 1864 subjects in 65-74 group were examined. Only 0.1 per cent each in 35-44 and 65-74 group had root fillings. In other words, it is only one or two cases out of nearly 2000 subjects examined who had root fillings. The solitary case of root filling was recorded in region VI.

Mean number of teeth with root fillings is nil in view of practically nil filling done in the state. Recording of root caries and doing root fillings is still a novelty both for the people of A.P. and for the dental profession.

6.1.3 Treatment need

Table 6.05 and Figure 6.05 present the per cent subjects requiring preventive and treatment care by type of treatment needed and Table 6.06 and Figure 6.06 present the mean number of teeth requiring treatment, by type of treatment

Fig 6.05. Percent subjects with treatment need in Andhra Pradesh



The subjects were clinically assessed for their need for both preventive and treatment care, based on their caries experience and dentition status. Preventive care need included caries arresting care and fissure sealing. Treatment need included the need for one, two or more surface fillings, extraction of teeth, pulp care and veneers.

This is one of the most important tables which throws light on dental treatment needs of population and a pointer towards improvement of dental treatment facilities and a guide for the planners and health administrators

Out of 9461 subjects examined, 39 to 87 per cent needed dental treatment. The treatment need was age based and ranged from 39.1 per cent for 5 years olds to 87.2 per cent for 65-74 group. In other words as the age advanced the need for dental treatment increased.

The need for treatment was almost the same between rural (38 – 87 per cent) and urban (41 – 85 per cent) subjects.

The need for fillings (both one surface and two or more surfaces) was the most common treatment needed. The need for one surface filling from around 36.5 per cent at 5 years steadily rose to about 62.6 per cent at 35-44 and showed a decline at 65-74. When both one surface and more than two surface fillings are considered the need is till higher. It indicates the imperative need of the population about the basic dental treatment i.e. fillings.

About 29.7 to 45.4 per cent of the middle aged and elderly of Andhra Pradesh need some dental extraction or other. Urban people need extraction more often than rural people

There was a significant proportion of subjects in higher age groups 35-44 and 65-74 years who were indicated for other, but unspecified treatment care. 63.9 per cent of the state's subjects need other care also. The other care would be in the form of scaling, extraction of wisdom teeth etc. There are no differences between rural and urban subjects regarding need for other care

1.6 per cent of the whole survey subjects needed pulp care and the need is same in rural and urban areas. The need for pulp care is felt more in 15 year age group of both rural and urban subjects.

A small proportion of state's subjects needed crowns and veneers (0.1 to 1.5 per cent)

Table 6.05 Percent subjects with treatment need by age, sex and geographical area. **State: Andhra Pradesh**

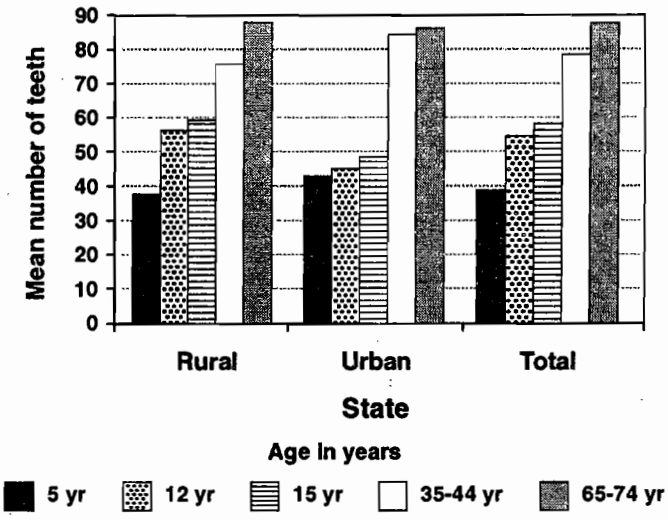
Treatment Need		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	168	147	315	162	149	311	160	150	310	149	167	316	140	177	317
Treatment needed		53.5	54.0	53.8	73.3	64.4	68.9	82.9	76.4	79.7	90.4	89.3	89.9	94.0	96.4	95.2
Preventive care & fissure sealant		7.2	9.8	8.5	6.1	8.9	7.5	4.8	5.2	5.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		49.5	43.6	46.6	69.4	59.4	64.4	81.0	72.9	77.0	79.7	78.8	79.3	48.0	46.3	47.2
Crown & Veneer		0.0	0.0	0.0	2.5	2.0	2.3	1.4	3.7	2.6	2.5	2.0	2.3	0.6	0.9	0.8
Pulp care		1.3	0.8	1.1	3.3	2.0	2.7	4.9	6.2	5.6	7.8	4.2	6.0	8.4	2.5	5.5
Extraction		4.3	4.2	4.3	3.9	4.4	4.2	5.8	6.2	6.0	42.0	37.6	39.8	51.3	53.1	52.2
Need for other care		0.0	0.0	0.0	0.0	0.5	0.3	1.7	3.2	2.5	26.3	35.1	30.7	72.4	77.1	74.8
Region 2	n=	175	150	325	168	157	325	171	151	322	166	184	350	162	159	321
Treatment needed		20.4	19.8	20.1	46.9	42.1	44.5	45.8	52.2	49.0	72.6	77.6	75.1	94.0	95.0	94.5
Preventive care & fissure sealant		2.0	0.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		18.4	19.1	18.8	46.2	40.3	43.3	42.5	49.5	46.0	57.7	62.4	60.1	51.6	44.8	48.2
Crown & Veneer		0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.7	1.0	0.9	0.7	0.5	0.6
Pulp care		0.0	0.0	0.0	0.7	2.1	1.4	3.3	2.4	2.9	3.3	3.2	3.3	1.1	1.4	1.3
Extraction		0.0	0.7	0.4	0.0	0.7	0.4	2.1	1.2	1.7	23.0	28.2	25.6	48.5	54.0	51.3
Need for other care		0.0	0.0	0.0	0.7	0.0	0.4	1.3	3.7	2.5	16.9	17.5	17.2	54.0	63.4	58.7
Region 3	n=	190	125	315	169	142	311	169	138	307	177	152	329	153	168	321
Treatment needed		47.6	46.2	46.9	61.5	59.5	60.5	57.9	58.0	58.0	71.5	81.3	76.4	73.7	77.2	75.5
Preventive care & fissure sealant		1.8	8.3	5.1	9.9	10.5	10.2	3.6	11.4	7.5	2.7	1.2	2.0	0.7	0.0	0.4
Filling one or more surfaces		45.1	38.8	42.0	50.0	44.3	47.2	48.7	47.1	47.9	49.1	53.1	51.1	24.0	17.1	20.6
Crown & Veneer		0.0	0.9	0.5	0.4	0.0	0.2	0.7	0.0	0.4	1.9	0.8	1.4	1.5	1.4	1.5
Pulp care		4.2	2.8	3.5	16.3	15.2	15.8	18.4	16.7	17.6	11.3	17.8	14.6	3.6	4.7	4.2
Extraction		2.8	1.8	2.3	2.7	5.6	4.2	2.8	2.1	2.5	17.9	22.8	20.4	29.5	30.0	29.8
Need for other care		2.4	0.0	1.2	5.5	5.3	5.4	7.7	3.3	5.5	28.1	38.3	33.2	54.3	62.0	58.2
Region 4	n=	171	144	315	170	145	315	167	153	320	153	163	316	149	160	309
Treatment needed		81.2	82.0	81.6	74.0	76.1	75.1	77.0	81.7	79.4	81.1	87.1	84.1	72.0	72.6	72.3
Preventive care & fissure sealant		2.2	3.4	2.8	0.0	0.0	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		76.3	81.6	79.0	73.6	73.7	73.7	74.8	80.9	77.9	68.2	74.4	71.3	45.7	32.1	38.9
Crown & Veneer		0.0	0.0	0.0	3.9	2.8	3.4	1.1	5.9	3.5	5.4	1.6	3.5	1.7	1.2	1.5
Pulp care		0.4	0.0	0.2	0.7	2.4	1.6	3.6	1.2	2.4	0.7	3.3	2.0	2.8	0.7	1.8
Extraction		9.0	1.4	5.2	9.0	5.7	7.4	11.8	11.3	11.6	49.5	52.6	51.1	47.4	44.0	45.7
Need for other care		0.7	0.0	0.4	3.8	4.5	4.2	5.7	3.4	4.6	18.4	19.5	19.0	35.6	31.0	33.3

Treatment Need		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 5	n=	162	142	304	157	147	304	165	135	300	148	162	310	138	142	280
Treatment needed		31.4	26.3	**28.9**	33.8	32.9	**33.4**	33.8	29.5	**31.7**	69.5	73.2	**71.4**	83.6	87.4	**85.5**
Preventive care & fissure sealant		0.0	0.0	**0.0**	0.5	0.0	**0.3**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Filling one or more surfaces		26.7	25.7	**26.2**	30.5	30.9	**30.7**	32.5	27.2	**29.9**	41.5	42.5	**42.0**	5.0	6.9	**6.0**
Crown & Veneer		0.0	0.0	**0.0**	2.2	0.9	**1.6**	0.5	1.0	**0.8**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Pulp care		3.5	3.1	**3.3**	0.9	3.4	**2.2**	4.3	2.7	**3.5**	4.9	6.0	**5.5**	2.9	2.1	**2.5**
Extraction		2.2	0.0	**1.1**	0.5	0.9	**0.7**	1.3	2.3	**1.8**	15.2	30.3	**22.8**	24.9	27.4	**26.2**
Need for other care		2.5	0.0	**1.3**	1.0	1.1	**1.1**	2.1	1.8	**2.0**	34.3	37.1	**35.7**	74.8	78.6	**76.7**
Region 6	n=	180	142	322	161	154	315	168	150	318	151	171	322	149	167	316
Treatment needed		31.9	22.4	**27.2**	46.7	59.5	**53.1**	56.4	59.3	**57.9**	71.6	78.5	**75.1**	86.9	89.2	**88.1**
Preventive care & fissure sealant		1.4	0.8	**1.1**	1.5	7.4	**4.5**	4.7	7.5	**6.1**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Filling one or more surfaces		30.6	21.6	**26.1**	44.0	49.5	**46.8**	51.3	55.4	**53.4**	64.2	67.8	**66.0**	46.5	43.2	**44.9**
Crown & Veneer		0.0	0.0	**0.0**	0.7	0.8	**0.8**	0.4	0.0	**0.2**	0.4	1.1	**0.8**	0.0	0.7	**0.4**
Pulp care		0.3	0.0	**0.2**	1.9	1.1	**1.5**	6.1	5.9	**6.0**	3.1	4.0	**3.6**	0.4	0.7	**0.6**
Extraction		2.0	1.2	**1.6**	1.5	3.8	**2.7**	2.2	0.4	**1.3**	15.6	18.3	**17.0**	50.4	43.9	**47.2**
Need for other care		0.7	1.2	**1.0**	0.0	1.2	**0.6**	0.7	0.0	**0.4**	12.4	24.7	**18.6**	64.3	71.4	**67.9**
State Rural	n=	688	593	1281	652	625	1277	654	618	1272	663	656	1319	625	656	1281
Treatment needed		38.5	36.9	**37.7**	56.0	57.2	**56.6**	58.5	60.8	**59.7**	72.5	78.8	**75.7**	86.6	88.1	**87.4**
Preventive care & fissure sealant		2.7	2.6	**2.7**	1.9	3.7	**2.8**	2.2	3.0	**2.6**	0.1	0.0	**0.1**	0.0	0.0	**0.0**
Filling one or more surfaces		35.8	35.2	**35.5**	53.6	52.3	**53.0**	55.5	58.2	**56.9**	58.6	63.0	**60.8**	43.1	37.5	**40.3**
Crown & Veneer		0.0	0.0	**0.0**	1.1	0.7	**0.9**	0.5	1.8	**1.2**	1.6	0.8	**1.2**	0.5	0.5	**0.5**
Pulp care		0.7	0.5	**0.6**	1.9	2.4	**2.2**	5.0	3.7	**4.4**	3.0	4.2	**3.6**	2.0	1.6	**1.8**
Extraction		2.1	0.4	**1.3**	3.1	2.9	**3.0**	4.4	3.9	**4.2**	23.3	26.1	**24.7**	41.7	41.4	**41.6**
Need for other care		0.3	0.2	**0.3**	1.7	1.4	**1.6**	2.0	2.9	**2.5**	21.1	25.4	**23.3**	59.5	64.0	**61.8**
State Urban	n=	358	257	615	335	269	604	346	259	605	281	343	624	266	317	583
Treatment needed		45.4	38.6	**42.0**	44.8	40.6	**42.7**	48.8	50.4	**49.6**	83.6	82.8	**83.2**	84.0	87.4	**85.7**
Preventive care & fissure sealant		0.5	1.4	**1.0**	0.2	0.5	**0.4**	0.6	1.3	**1.0**	0.1	0.1	**0.1**	0.0	0.0	**0.0**
Filling one or more surfaces		41.2	35.7	**38.5**	42.8	37.0	**39.9**	45.1	46.5	**45.8**	64.8	64.4	**64.6**	31.5	28.2	**29.9**
Crown & Veneer		0.0	0.0	**0.0**	2.7	2.5	**2.6**	0.5	1.5	**1.0**	1.5	1.8	**1.7**	1.0	1.2	**1.1**
Pulp care		2.1	1.4	**1.8**	1.8	3.3	**2.6**	4.6	4.7	**4.7**	6.7	5.1	**5.9**	3.6	1.4	**2.5**
Extraction		5.4	4.2	**4.8**	1.3	2.7	**2.0**	3.5	2.9	**3.2**	36.7	44.7	**40.7**	53.1	53.1	**53.1**
Need for other care		2.1	0.4	**1.3**	0.3	1.6	**1.0**	3.3	0.9	**2.1**	19.3	25.8	**22.6**	53.9	62.1	**58.0**
State Total	n=	1046	850	1896	987	894	1881	1000	877	1877	944	999	1943	891	973	1864
Treatment needed		40.7	37.5	**39.1**	54.7	54.9	**54.8**	57.0	59.7	**58.4**	75.7	80.6	**78.2**	86.2	88.2	**87.2**
Preventive care & fissure sealant		2.1	2.3	**2.2**	1.4	3.1	**2.3**	1.8	2.7	**2.3**	0.1	0.0	**0.1**	0.0	0.0	**0.0**
Filling one or more surfaces		37.3	35.6	**36.5**	52.3	50.3	**51.3**	53.8	56.9	**55.4**	60.9	64.2	**62.6**	41.3	35.2	**38.3**
Crown & Veneer		0.0	0.0	**0.0**	1.6	1.2	**1.4**	0.5	1.8	**1.2**	1.6	1.0	**1.3**	0.6	0.7	**0.7**
Pulp care		1.2	0.8	**1.0**	1.9	2.8	**2.4**	5.1	4.0	**4.6**	4.0	4.8	**4.4**	2.3	1.5	**1.9**
Extraction		3.0	1.1	**2.1**	2.6	2.9	**2.8**	4.2	3.7	**4.0**	27.0	32.4	**29.7**	45.4	45.3	**45.4**
Need for other care		1.0	0.3	**0.7**	1.3	1.4	**1.4**	2.4	2.4	**2.4**	20.0	24.8	**22.4**	58.1	63.9	**61.0**

Regional variations

The need for extraction is least in Region 5 (Rangareddy) 27.4 per cent and highest in Guntur 54 per cent. Need for one surface filling highest in Vishapatnam district (35-44 group) 70 per cent and least in Ranagareddy district (29 per cent). The need for other care is felt most in Rangareddy (78.6 per cent) and least in Chittoor district (31.0 per cent)

Fig. 6.06. Mean number of teeth with treatment need in Andhra Pradesh



TO SUM UP

39 to 87 per cent of the total subjects examined needed dental treatment. The treatment was age based. The higher the age, the greater the need. Thus, fewer 5 years olds needed treatment compared to the elderly.

The need for one surface and more than one surface fillings is most with 36.5 per cent of 5 years olds and 62.6 per cent of 35-44 group needing this treatment. 45.4 per cent of the elderly need extraction 64 per cent of the state's subjects need ' other care ' which may mean many things like scaling, treatment of abrasion, erosion etc.

Fewer teeth needed treatment at young age (1.6) and the need progressively increased with age, with nearly 11.8 teeth requiring treatment by the elderly of Andhra Pradesh. There are no marked gender based differentials.

The need for fillings was felt equally at 5, 12 and 15 years and reached a peak at 35-44 (2.4) and declined slightly at 65-74 (1.4)

Need for crown / veneer was least or nil. Pulp care was felt to a certain minimal extent

Need for extraction steadily increased with age with none of the 5 years olds needing extractions and 2.4 teeth requiring extraction at 65-74

Need for ' other care ' also increased with age with practically no teeth needing treatment under this category at 5 and 7.5 teeth needing ' other care '.

Subjects in Rangareddy district need most number of teeth to be treated (22.2) with region II (Guntur) needing least (8.3)

While the need for treatment for different dental procedures was generally similar , region V's need for ' other treatment ' was very high. In fact, this treatment category need made this region stand tall before other regions when data is analyzed for mean number of teeth with treatment.

Table 6.06 Mean number of teeth with treatment need by age, sex and geographical area. **State: Andhra Pradesh**

Treatment Need		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	**n=**	**168**	**147**	***315***	**162**	**149**	***311***	**160**	**150**	***310***	**149**	**167**	***316***	**140**	**177**	***317***
Treatment needed		53.5	54.0	**53.8**	73.3	64.4	**68.9**	82.9	76.4	**79.7**	90.4	89.3	**89.9**	94.0	96.4	**95.2**
Preventive care & fissure sealant		7.2	9.8	***8.5***	6.1	8.9	***7.5***	4.8	5.2	***5.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Filling one or more surfaces		49.5	43.6	***46.6***	69.4	59.4	***64.4***	81.0	72.9	***77.0***	79.7	78.8	***79.3***	48.0	46.3	***47.2***
Crown & Veneer		0.0	0.0	***0.0***	2.5	2.0	***2.3***	1.4	3.7	***2.6***	2.5	2.0	***2.3***	0.6	0.9	***0.8***
Pulp care		1.3	0.8	***1.1***	3.3	2.0	***2.7***	4.9	6.2	***5.6***	7.8	4.2	***6.0***	8.4	2.5	***5.5***
Extraction		4.3	4.2	***4.3***	3.9	4.4	***4.2***	5.8	6.2	***6.0***	42.0	37.6	***39.8***	51.3	53.1	***52.2***
Need for other care		0.0	0.0	***0.0***	0.0	0.5	***0.3***	1.7	3.2	***2.5***	26.3	35.1	***30.7***	72.4	77.1	***74.8***
Region 2	**n=**	**175**	**150**	***325***	**168**	**157**	***325***	**171**	**151**	***322***	**166**	**184**	***350***	**162**	**159**	***321***
Treatment needed		20.4	19.8	***20.1***	46.9	42.1	***44.5***	45.8	52.2	***49.0***	72.6	77.6	***75.1***	94.0	95.0	***94.5***
Preventive care & fissure sealant		2.0	0.7	***1.4***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Filling one or more surfaces		18.4	19.1	***18.8***	46.2	40.3	***43.3***	42.5	49.5	***46.0***	57.7	62.4	***60.1***	51.6	44.8	***48.2***
Crown & Veneer		0.0	0.0	***0.0***	0.0	0.5	***0.3***	0.0	0.0	***0.0***	0.7	1.0	***0.9***	0.7	0.5	***0.6***
Pulp care		0.0	0.0	***0.0***	0.7	2.1	***1.4***	3.3	2.4	***2.9***	3.3	3.2	***3.3***	1.1	1.4	***1.3***
Extraction		0.0	0.7	***0.4***	0.0	0.7	***0.4***	2.1	1.2	***1.7***	23.0	28.2	***25.6***	48.5	54.0	***51.3***
Need for other care		0.0	0.0	***0.0***	0.7	0.0	***0.4***	1.3	3.7	***2.5***	16.9	17.5	***17.2***	54.0	63.4	***58.7***
Region 3	**n=**	**190**	**125**	***315***	**169**	**142**	***311***	**169**	**138**	***307***	**177**	**152**	***329***	**153**	**168**	***321***
Treatment needed		47.6	46.2	***46.9***	61.5	59.5	***60.5***	57.9	58.0	***58.0***	71.5	81.3	***76.4***	73.7	77.2	***75.5***
Preventive care & fissure sealant		1.8	8.3	***5.1***	9.9	10.5	***10.2***	3.6	11.4	***7.5***	2.7	1.2	***2.0***	0.7	0.0	***0.4***
Filling one or more surfaces		45.1	38.8	***42.0***	50.0	44.3	***47.2***	48.7	47.1	***47.9***	49.1	53.1	***51.1***	24.0	17.1	***20.6***
Crown & Veneer		0.0	0.9	***0.5***	0.4	0.0	***0.2***	0.7	0.0	***0.4***	1.9	0.8	***1.4***	1.5	1.4	***1.5***
Pulp care		4.2	2.8	***3.5***	16.3	15.2	***15.8***	18.4	16.7	***17.6***	11.3	17.8	***14.6***	3.6	4.7	***4.2***
Extraction		2.8	1.8	***2.3***	2.7	5.6	***4.2***	2.8	2.1	***2.5***	17.9	22.8	***20.4***	29.5	30.0	***29.8***
Need for other care		2.4	0.0	***1.2***	5.5	5.3	***5.4***	7.7	3.3	***5.5***	28.1	38.3	***33.2***	54.3	62.0	***58.2***
Region 4	**n=**	**171**	**144**	***315***	**170**	**145**	***315***	**167**	**153**	***320***	**153**	**163**	***316***	**149**	**160**	***309***
Treatment needed		81.2	82.0	***81.6***	74.0	76.1	***75.1***	77.0	81.7	***79.4***	81.1	87.1	***84.1***	72.0	72.6	***72.3***
Preventive care & fissure sealant		2.2	3.4	***2.8***	0.0	0.0	***0.0***	0.4	0.0	***0.2***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Filling one or more surfaces		76.3	81.6	***79.0***	73.6	73.7	***73.7***	74.8	80.9	***77.9***	68.2	74.4	***71.3***	45.7	32.1	***38.9***
Crown & Veneer		0.0	0.0	***0.0***	3.9	2.8	***3.4***	1.1	5.9	***3.5***	5.4	1.6	***3.5***	1.7	1.2	***1.5***
Pulp care		0.4	0.0	***0.2***	0.7	2.4	***1.6***	3.6	1.2	***2.4***	0.7	3.3	***2.0***	2.8	0.7	***1.8***
Extraction		9.0	1.4	***5.2***	9.0	5.7	***7.4***	11.8	11.3	***11.6***	49.5	52.6	***51.1***	47.4	44.0	***45.7***
Need for other care		0.7	0.0	***0.4***	3.8	4.5	***4.2***	5.7	3.4	***4.6***	18.4	19.5	***19.0***	35.6	31.0	***33.3***
Region 5	**n=**	**162**	**142**	***304***	**157**	**147**	***304***	**165**	**135**	***300***	**148**	**162**	***310***	**138**	**142**	***280***
Treatment needed		31.4	26.3	***28.9***	33.8	32.9	***33.4***	33.8	29.5	***31.7***	69.5	73.2	***71.4***	83.6	87.4	***85.5***
Preventive care & fissure sealant		0.0	0.0	***0.0***	0.5	0.0	***0.3***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Filling one or more surfaces		26.7	25.7	***26.2***	30.5	30.9	***30.7***	32.5	27.2	***29.9***	41.5	42.5	***42.0***	5.0	6.9	***6.0***
Crown & Veneer		0.0	0.0	***0.0***	2.2	0.9	***1.6***	0.5	1.0	***0.8***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Pulp care		3.5	3.1	***3.3***	0.9	3.4	***2.2***	4.3	2.7	***3.5***	4.9	6.0	***5.5***	2.9	2.1	***2.5***
Extraction		2.2	0.0	***1.1***	0.5	0.9	***0.7***	1.3	2.3	***1.8***	15.2	30.3	***22.8***	24.9	27.4	***26.2***
Need for other care		2.5	0.0	***1.3***	1.0	1.1	***1.1***	2.1	1.8	***2.0***	34.3	37.1	***35.7***	74.8	78.6	***76.7***

Treatment Need		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 6	n=	180	142	*322*	161	154	*315*	168	150	*318*	151	171	*322*	149	167	*316*
Treatment needed		31.9	22.4	*27.2*	46.7	59.5	*53.1*	56.4	59.3	*57.9*	71.6	78.5	*75.1*	86.9	89.2	*88.1*
Preventive care & fissure sealant		1.4	0.8	*1.1*	1.5	7.4	*4.5*	4.7	7.5	*6.1*	0.0	0.0	*0.0*	0.0	0.0	*0.0*
Filling one or more surfaces		30.6	21.6	*26.1*	44.0	49.5	*46.8*	51.3	55.4	*53.4*	64.2	67.8	*66.0*	46.5	43.2	*44.9*
Crown & Veneer		0.0	0.0	*0.0*	0.7	0.8	*0.8*	0.4	0.0	*0.2*	0.4	1.1	*0.8*	0.0	0.7	*0.4*
Pulp care		0.3	0.0	*0.2*	1.9	1.1	*1.5*	6.1	5.9	*6.0*	3.1	4.0	*3.6*	0.4	0.7	*0.6*
Extraction		2.0	1.2	*1.6*	1.5	3.8	*2.7*	2.2	0.4	*1.3*	15.6	18.3	*17.0*	50.4	43.9	*47.2*
Need for other care		0.7	1.2	*1.0*	0.0	1.2	*0.6*	0.7	0.0	*0.4*	12.4	24.7	*18.6*	64.3	71.4	*67.9*
State Rural	n=	688	593	*1281*	652	625	*1277*	654	618	*1272*	663	656	*1319*	625	656	*1281*
Treatment needed		38.5	36.9	*37.7*	56.0	57.2	*56.6*	58.5	60.8	*59.7*	72.5	78.8	*75.7*	86.6	88.1	*87.4*
Preventive care & fissure sealant		2.7	2.6	*2.7*	1.9	3.7	*2.8*	2.2	3.0	*2.6*	0.1	0.0	*0.1*	0.0	0.0	*0.0*
Filling one or more surfaces		35.8	35.2	*35.5*	53.6	52.3	*53.0*	55.5	58.2	*56.9*	58.6	63.0	*60.8*	43.1	37.5	*40.3*
Crown & Veneer		0.0	0.0	*0.0*	1.1	0.7	*0.9*	0.5	1.8	*1.2*	1.6	0.8	*1.2*	0.5	0.5	*0.5*
Pulp care		0.7	0.5	*0.6*	1.9	2.4	*2.2*	5.0	3.7	*4.4*	3.0	4.2	*3.6*	2.0	1.6	*1.8*
Extraction		2.1	0.4	*1.3*	3.1	2.9	*3.0*	4.4	3.9	*4.2*	23.3	26.1	*24.7*	41.7	41.4	*41.6*
Need for other care		0.3	0.2	*0.3*	1.7	1.4	*1.6*	2.0	2.9	*2.5*	21.1	25.4	*23.3*	59.5	64.0	*61.8*
State Urban	n=	358	257	*615*	335	269	*604*	346	259	*605*	281	343	*624*	266	317	*583*
Treatment needed		45.4	38.6	*42.0*	44.8	40.6	*42.7*	48.8	50.4	*49.6*	83.6	82.8	*83.2*	84.0	87.4	*85.7*
Preventive care & fissure sealant		0.5	1.4	*1.0*	0.2	0.5	*0.4*	0.6	1.3	*1.0*	0.1	0.1	*0.1*	0.0	0.0	*0.0*
Filling one or more surfaces		41.2	35.7	*38.5*	42.8	37.0	*39.9*	45.1	46.5	*45.8*	64.8	64.4	*64.6*	31.5	28.2	*29.9*
Crown & Veneer		0.0	0.0	*0.0*	2.7	2.5	*2.6*	0.5	1.5	*1.0*	1.5	1.8	*1.7*	1.0	1.2	*1.1*
Pulp care		2.1	1.4	*1.8*	1.8	3.3	*2.6*	4.6	4.7	*4.7*	6.7	5.1	*5.9*	3.6	1.4	*2.5*
Extraction		5.4	4.2	*4.8*	1.3	2.7	*2.0*	3.5	2.9	*3.2*	36.7	44.7	*40.7*	53.1	53.1	*53.1*
Need for other care		2.1	0.4	*1.3*	0.3	1.6	*1.0*	3.3	0.9	*2.1*	19.3	25.8	*22.6*	53.9	62.1	*58.0*
State Total	n=	1046	850	*1896*	987	894	*1881*	1000	877	*1877*	944	999	*1943*	891	973	*1864*
Treatment needed		40.7	37.5	*39.1*	54.7	54.9	*54.8*	57.0	59.7	*58.4*	75.7	80.6	*78.2*	86.2	88.2	*87.2*
Preventive care & fissure sealant		2.1	2.3	*2.2*	1.4	3.1	*2.3*	1.8	2.7	*2.3*	0.1	0.0	*0.1*	0.0	0.0	*0.0*
Filling one or more surfaces		37.3	35.6	*36.5*	52.3	50.3	*51.3*	53.8	56.9	*55.4*	60.9	64.2	*62.6*	41.3	35.2	*38.3*
Crown & Veneer		0.0	0.0	*0.0*	1.6	1.2	*1.4*	0.5	1.8	*1.2*	1.6	1.0	*1.3*	0.6	0.7	*0.7*
Pulp care		1.2	0.8	*1.0*	1.9	2.8	*2.4*	5.1	4.0	*4.6*	4.0	4.8	*4.4*	2.3	1.5	*1.9*
Extraction		3.0	1.1	*2.1*	2.6	2.9	*2.8*	4.2	3.7	*4.0*	27.0	32.4	*29.7*	45.4	45.3	*45.4*
Need for other care		1.0	0.3	*0.7*	1.3	1.4	*1.4*	2.4	2.4	*2.4*	20.0	24.8	*22.4*	58.1	63.9	*61.0*

6.2 PERIODONTAL STATUS

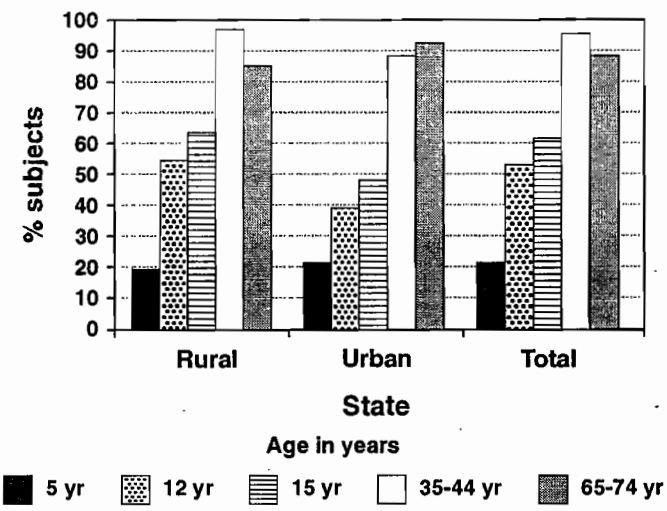
6.2.1. Bleeding, calculus and pockets

The periodontal status was assessed using the Community Periodontal Index (CPI) with its three indicators of gingival bleeding, calculus and periodontal pockets.

Table 6.07 and Figure 6.07 present the per cent subjects with their periodontal status (bleeding, calculus and pockets) by level of severity and Table 6.08 and Figure 6.08 present the mean number of teeth with bleeding, calculus and pockets.

Overall the percentage of subjects who had periodontal disease in the state was 52.9 (12 years); 61.1 (15 years); 94.9 (35-44 years); and 88.5 (65-74 years).

Fig 6.07. Percent subjects with bleeding, calculus & pockets in Andhra Pradesh



Per cent subjects with calculus were found to be notably higher than those with bleeding in 35-44 years (85.2 per cent) and 65-74years age group (75.5 per cent).

Shallow pockets (4-5 mm) were found in 12.3 per cent subjects aged 35-44 years and 29.9 per cent subjects in 65-74 years. Deep pockets (6 mm or more) were found in 5.9 per cent subjects (65-74 years) and only 1 per cent subjects in 35-44 yaers. Except for the highest age group of 65-74 years, where the opposite was true, periodontal disease prevalence was higher in rural compared with urban areas. Gender related differentials were not marked.

The mean number of sextants affected by periodontal disease appeared age related and increased with age.

The least mean number of healthy sextants were found in the 65-74 year age group (0.2). It means most of the elderly in all the regions of A.P. have not even one area of the mouth unaffected by periodontal disease. If six sextants of the mouth are taken as a full complement, 97.5 per cent area of the mouth is showing presence of periodontal disease parameters

The mean number of healthy sextants averaged 3.5 at 15 years, progressively decreasing with advancing age and reaching the lowest at 65-74. This trend is consistent with observed findings about the onset of periodontal disease at teen and adolescent age and advancing with age.

Periodontal disease (with bleeding, calculus, pocket) is more in 35-44 group compared to other groups. Pockets are more in 65-74 age group compared to other age groups.

Overall, urban people have more number of healthy sextants in all the age groups compared to rural people. Rural people have more periodontal disease in all parameters in all the age groups and maximum disease is found in 35-44 aged rural group.

Table: 6.07 Percent subjects with bleeding, calculus and/ or pockets by age, sex, and geographical area. State: Andhra Pradesh

Periodontal Disease		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	13	4	17	117	114	231	158	148	306	148	163	311	115	147	262
With bleeding,calculus, or pockets		34.9	50.0	42.5	79.6	70.9	75.3	80.2	78.0	79.1	97.2	96.3	96.8	91.8	89.3	90.6
with bleeding		0.0	0.0	0.0	32.3	28.3	30.3	28.8	29.7	29.3	12.7	10.3	11.5	7.5	3.0	5.3
with calculus		26.1	50.0	38.1	32.2	21.8	27.0	28.3	26.9	27.6	32.2	32.5	32.4	14.0	21.5	17.8
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.5	0.3	1.3	0.5	0.9	6.1	8.9	7.5
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.7	1.2
with bleeding or higher		8.7	0.0	4.4	47.5	49.1	48.3	51.9	50.6	51.3	47.4	49.3	48.4	23.5	15.6	19.6
with calculus or higher		26.1	50.0	38.1	32.2	21.8	27.0	28.3	26.9	27.6	48.5	46.6	47.6	59.9	60.1	60.0
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.5	0.3	1.3	0.5	0.9	7.7	11.9	9.8
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.7	1.7	1.2
Region 2	n=	1	0	1	132	114	246	171	151	322	165	184	349	160	156	316
With bleeding,calculus, or pockets		0.0	0.0	0.0	12.5	12.7	12.6	38.7	46.9	42.8	92.9	96.4	94.7	97.2	93.4	95.3
with bleeding		0.0	0.0	0.0	12.5	12.1	12.3	35.9	43.3	39.6	12.6	18.5	15.6	4.2	1.2	2.7
with calculus		0.0	0.0	0.0	0.0	0.6	0.3	2.1	2.9	2.5	60.8	57.9	59.4	83.2	82.3	82.8
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.2
with bleeding or higher		0.0	0.0	0.0	12.5	12.1	12.3	36.6	44.0	40.3	32.2	38.5	35.4	10.8	11.2	11.0
with calculus or higher		0.0	0.0	0.0	0.0	0.6	0.3	2.1	2.9	2.5	60.8	57.9	59.4	85.3	82.3	83.8
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.2
Region 3	n=	3	2	5	155	133	288	164	133	297	175	149	324	137	154	291
With bleeding,calculus, or pockets		0.0	0.0	0.0	50.8	43.1	47.0	50.9	41.4	46.2	86.2	91.3	88.8	91.4	92.1	91.8
with bleeding		0.0	0.0	0.0	15.8	11.1	13.5	6.0	2.4	4.2	3.5	3.7	3.6	2.1	1.6	1.9
with calculus		0.0	0.0	0.0	28.9	24.9	26.9	37.1	31.2	34.2	57.6	55.3	56.5	38.7	30.7	34.7
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	4.6	3.6	4.1	11.4	15.4	13.4
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
with bleeding or higher		0.0	0.0	0.0	21.9	18.2	20.1	13.8	10.2	12.0	15.0	21.6	18.3	13.2	11.0	12.1
with calculus or higher		0.0	0.0	0.0	28.9	24.9	26.9	37.1	31.2	34.2	65.9	66.1	66.0	63.4	59.5	61.5
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	5.3	3.6	4.5	13.9	20.9	17.4
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8
Region 4	n=	9	6	15	127	110	237	163	148	311	142	163	305	131	137	268
With bleeding,calculus, or pockets		44.4	16.7	30.6	80.2	79.4	79.8	63.9	71.8	67.9	99.2	99.1	99.2	80.0	83.6	81.8
with bleeding		33.3	16.7	25.0	28.3	23.2	25.8	13.9	13.1	13.5	1.7	1.5	1.6	0.0	0.0	0.0
with calculus		0.0	0.0	0.0	2.3	2.0	2.2	17.1	18.8	18.0	18.8	22.9	20.9	3.9	3.2	3.6
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	1.3	2.2	1.8	20.2	29.0	24.6
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.3	1.1
with bleeding or higher		44.4	16.7	30.6	77.9	77.4	77.7	46.7	52.9	49.8	48.6	38.9	43.8	15.4	14.5	15.0
with calculus or higher		0.0	0.0	0.0	2.3	2.0	2.2	17.1	18.8	18.0	48.5	57.3	52.9	29.7	27.0	28.4
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	2.1	2.9	2.5	34.0	40.8	37.4
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.3	1.1
Region 5	n=	5	6	11	157	145	302	165	135	300	146	159	305	111	113	224
With bleeding,calculus, or pockets		0.0	0.0	0.0	51.1	44.1	47.6	58.6	58.2	58.4	92.7	93.0	92.9	70.4	69.7	70.1
with bleeding		0.0	0.0	0.0	17.4	19.8	18.6	20.0	26.6	23.3	18.4	11.4	14.9	1.6	4.7	3.2
with calculus		0.0	0.0	0.0	27.0	18.4	22.7	25.9	20.7	23.3	61.1	69.2	65.2	46.8	45.7	46.3
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	1.1	0.5	0.8	9.9	8.6	9.3
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4
with bleeding or higher		0.0	0.0	0.0	24.1	25.7	24.9	32.7	37.5	35.1	27.7	20.5	24.1	5.5	9.2	7.4
with calculus or higher		0.0	0.0	0.0	27.0	18.4	22.7	25.9	20.7	23.3	63.3	72.0	67.7	55.0	50.4	52.7
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	1.7	0.5	1.1	9.9	9.4	9.7
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4

Periodontal Disease		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 6	n=	1	1	*2*	158	152	*310*	166	149	*315*	147	170	*317*	145	164	*309*
With bleeding,calculus, or pockets		0.0	0.0	***0.0***	61.8	61.9	***61.9***	63.2	68.0	***65.6***	94.0	89.6	***91.8***	90.3	87.5	***88.9***
with bleeding		0.0	0.0	***0.0***	21.1	25.3	***23.2***	11.7	20.6	***16.2***	2.4	0.7	***1.6***	0.4	0.4	***0.4***
with calculus		0.0	0.0	***0.0***	23.8	16.7	***20.3***	31.4	30.8	***31.1***	43.9	54.3	***49.1***	36.9	40.2	***38.6***
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	4.1	0.7	***2.4***
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with bleeding or higher		0.0	0.0	***0.0***	38.0	45.2	***41.6***	31.8	37.2	***34.5***	46.9	29.9	***38.4***	25.3	19.8	***22.6***
with calculus or higher		0.0	0.0	***0.0***	23.8	16.7	***20.3***	31.4	30.8	***31.1***	47.2	59.7	***53.5***	59.7	66.3	***63.0***
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	5.3	1.5	***3.4***
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	n=	16	13	*29*	563	542	*1105*	650	612	*1262*	650	650	*1300*	587	617	*1204*
With bleeding,calculus, or pockets		24.4	13.8	***19.1***	56.0	54.0	***55.0***	60.9	65.1	***63.0***	96.1	96.9	***96.5***	87.1	84.5	***85.8***
with bleeding		6.1	0.0	***3.1***	42.6	44.4	***43.5***	42.9	48.0	***45.5***	42.5	38.3	***40.4***	15.1	13.7	***14.4***
with calculus		24.4	13.8	***19.1***	32.3	30.5	***31.4***	34.8	34.5	***34.7***	84.6	84.4	***84.5***	73.3	71.2	***72.3***
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.1	0.4	***0.3***	13.9	14.1	***14.0***	32.0	32.0	***32.0***
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.2	***0.1***	1.0	1.4	***1.2***	4.9	6.4	***5.7***
with bleeding or higher		6.1	0.0	***3.1***	42.6	44.4	***43.5***	42.9	48.0	***45.5***	42.5	38.3	***40.4***	15.1	13.7	***14.4***
with calculus or higher		18.3	13.8	***16.1***	13.4	9.6	***11.5***	18.0	17.1	***17.6***	52.5	57.7	***55.1***	61.0	59.2	***60.1***
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	1.1	1.0	***1.1***	10.7	11.1	***10.9***
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.5	***0.4***
State Urban	n=	16	6	*22*	283	226	*509*	337	252	*589*	273	338	*611*	212	254	*466*
With bleeding,calculus, or pockets		24.5	16.7	***20.6***	41.3	36.8	***39.1***	46.9	48.6	***47.8***	88.6	88.6	***88.6***	92.6	93.7	***93.2***
with bleeding		24.5	16.7	***20.6***	19.0	18.8	***18.9***	23.4	25.0	***24.2***	24.3	23.5	***23.9***	17.7	15.7	***16.7***
with calculus		6.1	0.0	***3.1***	29.3	24.8	***27.1***	35.3	32.6	***34.0***	80.1	83.4	***81.8***	79.8	80.7	***80.3***
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.3	***0.2***	6.9	8.7	***7.8***	18.8	20.8	***19.8***
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.5	***0.3***	6.8	6.8	***6.8***
with bleeding or higher		24.5	16.7	***20.6***	19.0	18.8	***18.9***	23.4	25.0	***24.2***	24.3	23.5	***23.9***	17.7	15.7	***16.7***
with calculus or higher		0.0	0.0	***0.0***	22.3	17.9	***20.1***	23.6	23.3	***23.5***	63.5	64.8	***64.2***	66.2	67.4	***66.8***
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.3	***0.2***	0.7	0.2	***0.5***	7.7	9.6	***8.7***
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.1	0.9	***1.0***
State Total	n=	32	19	*51*	846	768	*1614*	987	864	*1851*	923	988	*1911*	799	871	*1670*
With bleeding,calculus, or pockets		24.4	16.6	***20.5***	54.6	51.2	***52.9***	59.3	62.9	***61.1***	94.5	95.2	***94.9***	89.4	87.5	***88.5***
with bleeding		14.6	5.0	***9.8***	36.2	38.2	***37.2***	37.9	42.9	***40.4***	37.9	33.7	***35.8***	16.3	14.3	***15.3***
with calculus		15.9	11.6	***13.8***	34.9	31.5	***33.2***	38.0	36.3	***37.2***	84.8	85.6	***85.2***	76.1	74.9	***75.5***
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.1	0.4	***0.3***	12.0	12.5	***12.3***	29.9	29.8	***29.9***
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.1	***0.1***	0.7	1.2	***1.0***	5.3	6.4	***5.9***
with bleeding or higher		14.6	5.0	***9.8***	36.2	38.2	***37.2***	37.9	42.9	***40.4***	37.9	33.7	***35.8***	16.3	14.3	***15.3***
with calculus or higher		9.8	11.6	***10.7***	18.4	13.0	***15.7***	21.4	19.9	***20.7***	55.7	60.7	***58.2***	62.8	62.2	***62.5***
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.1	***0.1***	0.9	0.7	***0.8***	10.0	10.5	***10.3***
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.5	***0.5***

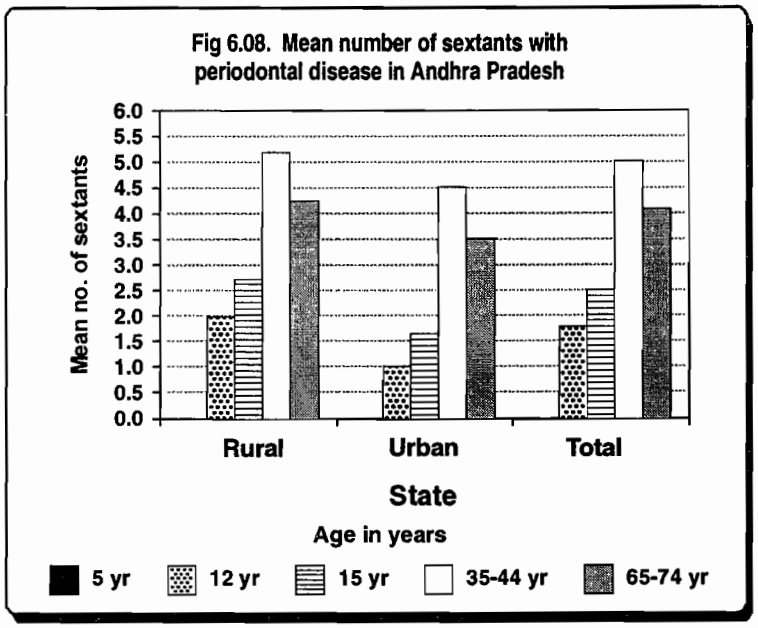
Table: 6.08 Mean no. of sextants with bleeding, calculus and pockets by age, sex and geographical area. State: Andhra Pradesh

Periodontal Disease		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	168	147	315	162	149	311	160	150	310	149	167	316	140	177	317
Mean no. of healthy sextants		0.3	0.2	0.3	2.0	2.4	2.2	2.9	3.0	3.0	1.0	1.1	1.1	0.5	0.5	0.5
With bleeding, calculus, pockets		0.1	0.0	0.1	2.4	2.2	2.3	3.0	2.9	3.0	4.8	4.7	4.8	3.6	3.4	3.5
with bleeding		0.0	0.0	0.0	0.9	1.0	1.0	1.4	1.4	1.4	1.3	1.2	1.3	0.5	0.3	0.4
with calculus		0.1	0.0	0.1	1.5	1.2	1.4	1.6	1.4	1.5	2.9	2.9	2.9	1.6	1.7	1.7
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.7	0.6	0.7	1.4	1.2	1.3
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2
Excluded sextants		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.8	1.1	1.0
Not recorded		5.6	5.8	5.7	1.6	1.4	1.5	0.1	0.1	0.1	0.0	0.2	0.1	1.1	1.1	1.1
Region 2	n=	175	150	325	168	157	325	171	151	322	166	184	350	162	159	321
Mean no. of healthy sextants		0.0	0.0	0.0	4.4	4.0	4.2	4.4	4.1	4.3	0.9	0.7	0.8	0.1	0.2	0.2
With bleeding, calculus, pockets		0.0	0.0	0.0	0.2	0.2	0.2	1.6	1.9	1.8	5.0	5.3	5.2	5.4	5.1	5.3
with bleeding		0.0	0.0	0.0	0.2	0.1	0.2	1.5	1.8	1.7	0.9	1.2	1.1	0.3	0.3	0.3
with calculus		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	4.1	4.0	4.1	4.9	4.8	4.9
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excluded sextants		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.5
Not recorded		6.0	6.0	6.0	1.4	1.8	1.6	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2
Region 3	n=	190	125	315	169	142	311	169	138	307	177	152	329	153	168	321
Mean no. of healthy sextants		0.1	0.1	0.1	3.7	4.1	3.9	3.9	4.2	4.1	1.7	1.6	1.7	0.6	0.4	0.5
With bleeding, calculus, pockets		0.0	0.0	0.0	1.8	1.5	1.7	2.0	1.6	1.8	4.1	4.2	4.2	3.8	4.2	4.0
with bleeding		0.0	0.0	0.0	0.6	0.5	0.6	0.5	0.3	0.4	0.4	0.5	0.5	0.2	0.2	0.2
with calculus		0.0	0.0	0.0	1.2	1.0	1.1	1.5	1.2	1.4	3.0	2.9	3.0	2.0	2.0	2.0
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.7	0.8	0.8	1.5	1.7	1.6
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2
Excluded sextants		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.5	0.4	0.5
Not recorded		5.9	5.9	5.9	0.5	0.4	0.5	0.2	0.2	0.2	0.1	0.2	0.2	1.1	1.0	1.1
Region 4	n=	171	144	315	170	145	315	167	153	320	153	163	316	149	160	309
Mean no. of healthy sextants		0.2	0.1	0.2	1.6	1.5	1.6	3.0	2.7	2.9	0.2	0.3	0.3	0.1	0.1	0.1
With bleeding, calculus, pockets		0.1	0.0	0.1	3.1	3.2	3.2	2.8	3.1	3.0	5.3	5.5	5.4	3.5	3.5	3.5
with bleeding		0.1	0.0	0.1	1.9	1.9	1.9	1.4	1.3	1.4	1.0	0.8	0.9	0.2	0.2	0.2
with calculus		0.0	0.0	0.0	1.2	1.3	1.3	1.4	1.7	1.6	3.4	3.7	3.6	1.1	0.8	1.0
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.8	0.9	0.9	2.0	2.2	2.1
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	0.3
Excluded sextants		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	1.7	1.5	1.6
Not recorded		5.8	5.8	5.8	1.4	1.2	1.3	0.1	0.2	0.2	0.4	0.0	0.2	0.7	1.0	0.9
Region 5	n=	162	142	304	157	147	304	165	135	300	148	162	310	138	142	280
Mean no. of healthy sextants		0.2	0.2	0.2	4.2	4.3	4.3	3.6	3.6	3.6	1.0	0.9	1.0	0.2	0.1	0.2
With bleeding, calculus, pockets		0.0	0.0	0.0	1.8	1.6	1.7	2.4	2.4	2.4	4.9	4.9	4.9	2.6	2.3	2.5
with bleeding		0.0	0.0	0.0	1.0	1.1	1.1	1.3	1.6	1.5	1.2	0.9	1.1	0.1	0.2	0.2
with calculus		0.0	0.0	0.0	0.8	0.5	0.7	1.2	0.9	1.1	3.5	3.9	3.7	1.8	1.6	1.7
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.2	0.1	0.2	0.6	0.4	0.5
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Excluded sextants		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.4	1.6	1.5
Not recorded		5.8	5.8	5.8	0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	1.9	2.0	2.0

Periodontal Disease		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 6	**n=**	**180**	**142**	***322***	**161**	**154**	***315***	**168**	**150**	***318***	**151**	**171**	***322***	**149**	**167**	***316***
Mean no. of healthy sextants		0.0	0.0	***0.0***	3.6	3.5	***3.6***	3.4	3.3	***3.4***	1.0	1.3	***1.2***	0.3	0.3	***0.3***
With bleeding, calculus, pockets		0.0	0.0	***0.0***	2.3	2.4	***2.4***	2.5	2.7	***2.6***	4.8	4.6	***4.7***	4.6	4.5	***4.6***
with bleeding		0.0	0.0	***0.0***	1.1	1.3	***1.2***	0.7	1.2	***1.0***	0.9	0.6	***0.8***	0.5	0.4	***0.5***
with calculus		0.0	0.0	***0.0***	1.2	1.2	***1.2***	1.8	1.5	***1.7***	3.9	3.9	***3.9***	3.3	3.3	***3.3***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.7	0.7	***0.7***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	1.1	***1.0***
Not recorded		6.0	6.0	***6.0***	0.1	0.0	***0.1***	0.1	0.0	***0.1***	0.2	0.0	***0.1***	0.3	0.1	***0.2***
State Rural	**n=**	**688**	**593**	***1281***	**652**	**625**	***1277***	**654**	**618**	***1272***	**663**	**656**	***1319***	**625**	**656**	***1281***
Mean no. of healthy sextants		0.1	0.1	***0.1***	3.0	3.1	***3.1***	3.4	3.2	***3.3***	0.7	0.7	***0.7***	0.2	0.2	***0.2***
With bleeding, calculus, pockets		0.0	0.0	***0.0***	2.0	2.0	***2.0***	2.6	2.8	***2.7***	5.1	5.2	***5.2***	4.4	4.1	***4.3***
with bleeding		0.0	0.0	***0.0***	1.1	1.1	***1.1***	1.4	1.7	***1.6***	1.1	1.0	***1.1***	0.3	0.3	***0.3***
with calculus		0.0	0.0	***0.0***	0.9	0.8	***0.9***	1.2	1.1	***1.2***	3.7	3.8	***3.8***	3.0	2.8	***2.9***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.3	0.3	***0.3***	0.9	0.9	***0.9***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***	1.1	1.3	***1.2***
Not recorded		5.9	5.9	***5.9***	0.9	1.0	***1.0***	0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.4	0.4	***0.4***
State Urban	**n=**	**358**	**257**	***615***	**335**	**269**	***604***	**346**	**259**	***605***	**281**	**343**	***624***	**266**	**317**	***583***
Mean no. of healthy sextants		0.2	0.1	***0.2***	4.2	4.3	***4.3***	4.3	4.4	***4.4***	1.4	1.4	***1.4***	0.3	0.2	***0.3***
With bleeding, calculus, pockets		0.0	0.0	***0.0***	1.1	0.9	***1.0***	1.6	1.5	***1.6***	4.4	4.5	***4.5***	3.5	3.5	***3.5***
with bleeding		0.0	0.0	***0.0***	0.5	0.5	***0.5***	0.6	0.6	***0.6***	0.7	0.6	***0.7***	0.3	0.3	***0.3***
with calculus		0.0	0.0	***0.0***	0.6	0.5	***0.6***	1.0	1.0	***1.0***	3.6	3.7	***3.7***	2.7	2.5	***2.6***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.2	0.2	***0.2***	0.4	0.6	***0.5***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.5	***0.5***
Not recorded		5.8	5.9	***5.9***	0.7	0.7	***0.7***	0.1	0.1	***0.1***	0.2	0.1	***0.2***	1.8	1.8	***1.8***
State Total	**n=**	**1046**	**850**	***1896***	**987**	**894**	***1881***	**1000**	**877**	***1877***	**944**	**999**	***1943***	**891**	**973**	***1864***
Mean no. of healthy sextants		0.1	0.1	***0.1***	3.3	3.4	***3.4***	3.6	3.4	***3.5***	0.9	0.9	***0.9***	0.2	0.2	***0.2***
With bleeding, calculus, pockets		0.0	0.0	***0.0***	1.8	1.7	***1.8***	2.4	2.5	***2.5***	4.9	5.0	***5.0***	4.2	3.9	***4.1***
with bleeding		0.0	0.0	***0.0***	0.9	1.0	***1.0***	1.2	1.4	***1.3***	0.9	0.9	***0.9***	0.3	0.3	***0.3***
with calculus		0.0	0.0	***0.0***	0.9	0.8	***0.9***	1.2	1.1	***1.2***	3.7	3.8	***3.8***	2.9	2.8	***2.9***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.3	0.3	***0.3***	0.8	0.8	***0.8***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.9	1.0	***1.0***
Not recorded		5.9	5.9	***5.9***	0.9	0.9	***0.9***	0.1	0.1	***0.1***	0.2	0.1	***0.2***	0.7	0.8	***0.8***

Region IV (Chittoor) has least number of healthy sextants and maximum periodontal disease including shallow and deep pockets compared to other regions

Guntur and Nellore have least disease till 35-44 disease but 65-74 age group subjects showed more calculus levels (Guntur –4.8 sextants, Nellore 3.3 sextants) whereas least calculus was found in Chittoor district (less than one sextant)

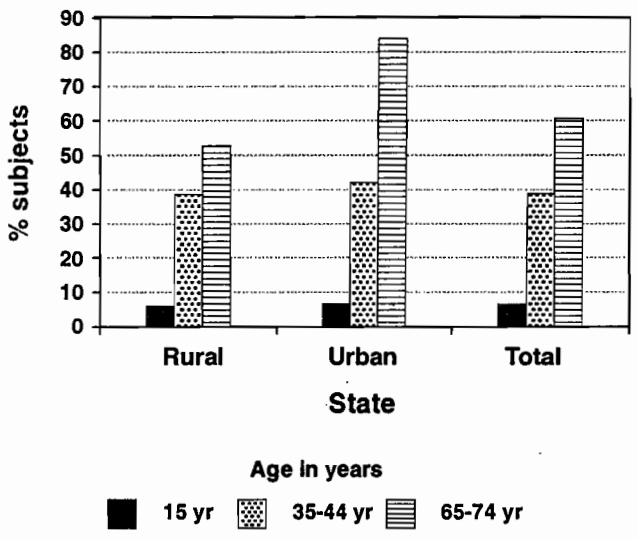


6.2.2. Loss of attachment

Tables 6.09 and Figure 6.09 present the per cent subjects with loss of epithelial attachment by severity, and Table 6.10 and Figure 6.10 present the mean number of teeth with loss of attachment, by severity, respectively.

The destructive and degenerative nature of the periodontal disease was assessed, in addition to the CPI scores, with the measurement of Loss of Attachment for 15 year, 35-44 year and 65-74 year age groups only. The CPI Probe was used to measure pocket depth.

Fig. 6.09. Percent subjects with Loss of Attachment in Andhra Pradesh



Loss of attachment was present in 6.5 per cent subjects (15 years); 39.6 per cent subjects (35-44 years); and 60.2 per cent subjects (65-74).

The majority of those affected across ages had the least severe form of loss of attachment (4-5 mm). The severity of loss of attachment increased with age and was highest in the highest age group.

More males than females were affectedexcept in the age group of 35-44 years where the opposite was true. More urban than rural subjects were affected.

Loss of attachment of 4-5 and 6-8 mm is mostly found in urban population in 65-74 group, whereas rural people have more 9-11 mm loss of attachment (8.5) compared to urban subjects (7.4 & 7.1 in males and females)

No loss of attachment is found in region II (Guntur) in 15 years age group , whereas 30 per cent had loss of attachment in region I (Vishkapatnam) in the same age group. 0.7 per cent had loss of attachment > 12 mm in 15 years group of region III (Nellore)

In 35-44 group Guntur and Rangareddy subjects had least loss of attachment (15 per cent) where as in region 1 (Vishakapatnam) 80 – 85 per cent subjects had loss of attachment

In 65-74 age group 88 per cent had loss of attachment with 6-8 mm as highest score (53-55per cent) in region I I(Vishakapatnam) whereas region II (Guntur) had least loss of attachment (23 per cent) with 6-8 mm in 4.2 per cent of subjects studied

Loss of attachment of >12mm was not found in regions II, V & VI (0per cent) whereas highest scores are recorded in subjects of region IV (3.2per cent & 6.5per cent in males & females respectively).

Mean number of sextants with loss of attachment increased steadily with increasing age (0.2 in 15years group and 2.2 in 65-74years group).

Number of sextants with loss of attachment of 4-5mm found to be relatively same (1.3 and 1.4) in 35-44 & 65-74years groups, whereas loss of attachment of 6-8mm &9-11mm found to be more in 65-74years group.

Table 6.09 Percent distribution of subjects with highest scores of loss of attachment by age, sex, and geographical area.

State: Andhra Pradesh

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	154	145	*299*	147	163	*310*	113	143	*256*
With loss of attachment		31.4	28.5	*30.0*	84.5	80.5	*82.5*	88.0	88.1	*88.1*
with LOA 4-5 mm		27.9	27.7	*27.8*	58.4	56.0	*57.2*	23.9	25.2	*24.6*
with LOA 6-8 mm		3.6	0.8	*2.2*	24.6	22.7	*23.7*	56.3	53.2	*54.8*
with LOA 9-11 mm		0.0	0.0	*0.0*	1.5	1.8	*1.7*	7.1	7.0	*7.1*
with LOA 12 mm or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.7	2.7	*1.7*
Region 2	n=	171	150	*321*	165	182	*347*	159	156	*315*
With loss of attachment		0.4	0.0	*0.2*	14.9	15.8	*15.4*	24.0	23.1	*23.6*
with LOA 4-5 mm		0.4	0.0	*0.2*	14.5	15.4	*15.0*	19.2	18.9	*19.1*
with LOA 6-8 mm		0.0	0.0	*0.0*	0.4	0.4	*0.4*	4.3	4.2	*4.3*
with LOA 9-11 mm		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.4	0.0	*0.2*
with LOA 12 mm or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*
Region 3	n=	163	133	*296*	174	146	*320*	136	151	*287*
With loss of attachment		11.8	7.0	*9.4*	42.8	48.8	*45.8*	71.3	77.1	*74.2*
with LOA 4-5 mm		9.7	7.0	*8.4*	25.3	32.4	*28.9*	31.7	33.9	*32.8*
with LOA 6-8 mm		1.4	0.0	*0.7*	16.1	14.7	*15.4*	34.1	35.9	*35.0*
with LOA 9-11 mm		0.0	0.0	*0.0*	0.7	1.6	*1.2*	5.0	6.2	*5.6*
with LOA 12 mm or more		0.7	0.0	*0.4*	0.7	0.0	*0.4*	0.5	1.2	*0.9*
Region 4	n=	76	76	*152*	141	161	*302*	131	138	*269*
With loss of attachment		8.5	15.4	*12.0*	80.4	82.0	*81.2*	73.7	79.0	*76.4*
with LOA 4-5 mm		6.9	13.1	*10.0*	39.6	43.5	*41.6*	15.1	14.7	*14.9*
with LOA 6-8 mm		1.5	2.3	*1.9*	31.8	31.3	*31.6*	23.5	24.8	*24.2*
with LOA 9-11 mm		0.0	0.0	*0.0*	9.0	6.7	*7.9*	31.9	33.0	*32.5*
with LOA 12 mm or more		0.0	0.0	*0.0*	0.0	0.4	*0.2*	3.2	6.5	*4.9*
Region 5	n=	164	135	*299*	145	159	*304*	111	114	*225*
With loss of attachment		0.5	1.6	*1.1*	16.4	11.8	*14.1*	47.5	48.6	*48.1*
with LOA 4-5 mm		0.5	0.6	*0.6*	13.5	11.3	*12.4*	33.4	33.9	*33.7*
with LOA 6-8 mm		0.0	1.0	*0.5*	2.9	0.5	*1.7*	14.1	12.4	*13.3*
with LOA 9-11 mm		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	2.3	*1.2*
with LOA 12 mm or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 6	**n=**	**166**	**149**	***315***	**147**	**170**	***317***	**145**	**164**	***309***
With loss of attachment		3.3	5.9	***4.6***	44.9	36.8	***40.9***	83.4	84.6	***84.0***
with LOA 4-5 mm		3.3	5.9	***4.6***	44.1	33.2	***38.7***	54.9	58.3	***56.6***
with LOA 6-8 mm		0.0	0.0	***0.0***	0.0	2.9	***1.5***	21.5	21.6	***21.6***
with LOA 9-11 mm		0.0	0.0	***0.0***	0.8	0.7	***0.8***	6.9	4.8	***5.9***
with LOA 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	**n=**	**593**	**562**	***1155***	**646**	**644**	***1290***	**583**	**612**	***1195***
With loss of attachment		5.9	6.9	***6.4***	41.1	38.1	***39.6***	51.3	54.2	***52.8***
with LOA 4-5 mm		5.0	6.6	***5.8***	28.5	26.1	***27.3***	24.1	25.5	***24.8***
with LOA 6-8 mm		0.8	0.3	***0.6***	10.3	10.1	***10.2***	18.3	18.6	***18.5***
with LOA 9-11 mm		0.0	0.0	***0.0***	2.2	1.9	***2.1***	8.5	8.5	***8.5***
with LOA 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	1.5	***1.0***
State Urban	**n=**	**301**	**226**	***527***	**273**	**337**	***610***	**212**	**254**	***466***
With loss of attachment		6.0	7.8	***6.9***	41.1	40.8	***41.0***	84.1	84.3	***84.2***
with LOA 4-5 mm		6.0	6.6	***6.3***	34.7	33.7	***34.2***	53.0	51.1	***52.1***
with LOA 6-8 mm		0.0	1.2	***0.6***	5.8	6.1	***6.0***	22.0	24.6	***23.3***
with LOA 9-11 mm		0.0	0.0	***0.0***	0.7	0.7	***0.7***	7.4	7.1	***7.3***
with LOA 12 mm or more		0.0	0.0	***0.0***	0.0	0.3	***0.2***	1.8	1.5	***1.7***
State Total	**n=**	**894**	**788**	***1682***	**919**	**981**	***1900***	**795**	**866**	***1661***
With loss of attachment		5.8	7.2	***6.5***	40.8	38.4	***39.6***	58.5	61.8	***60.2***
with LOA 4-5 mm		5.2	6.6	***5.9***	29.6	27.7	***28.7***	29.9	32.2	***31.1***
with LOA 6-8 mm		0.6	0.6	***0.6***	9.1	9.0	***9.1***	19.2	19.8	***19.5***
with LOA 9-11 mm		0.0	0.0	***0.0***	1.9	1.6	***1.8***	8.7	8.3	***8.5***
with LOA 12 mm or more		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.6	1.5	***1.1***

Table 6.10 Mean no. of sextants with loss of attachment by age, sex, and geographical area. **State: Andhra Pradesh**

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	**160**	**150**	***310***	**149**	**167**	***316***	**140**	**177**	***317***
With no loss of attachment (0-3 mm)		5.1	5.3	***5.2***	2.3	2.4	***2.4***	0.6	0.5	***0.6***
With loss of attachment		0.7	0.6	***0.7***	3.5	3.3	***3.4***	3.4	3.2	***3.3***
with loss of attachment 4-5 mm		0.7	0.5	***0.6***	3.0	2.8	***2.9***	1.8	1.7	***1.8***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.5	0.5	***0.5***	1.4	1.3	***1.4***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.8	1.1	***1.0***
Not recorded		0.2	0.2	***0.2***	0.1	0.2	***0.2***	1.2	1.2	***1.2***
Region 2	n=	**171**	**151**	***322***	**166**	**184**	***350***	**162**	**159**	***321***
With no loss of attachment (0-3 mm)		6.0	6.0	***6.0***	5.1	5.0	***5.1***	4.2	4.1	***4.2***
With loss of attachment		0.0	0.0	***0.0***	0.9	0.9	***0.9***	1.3	1.2	***1.3***
with loss of attachment 4-5 mm		0.0	0.0	***0.0***	0.8	0.9	***0.9***	1.0	1.0	***1.0***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.2	***0.2***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.5	***0.5***
Not recorded		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.1	0.2	***0.2***
Region 3	n=	**169**	**138**	***307***	**177**	**152**	***329***	**153**	**168**	***321***
With no loss of attachment (0-3 mm)		5.4	5.6	***5.5***	3.9	3.6	***3.8***	1.6	1.4	***1.5***
With loss of attachment		0.3	0.2	***0.3***	1.6	1.8	***1.7***	2.5	2.9	***2.7***
with loss of attachment 4-5 mm		0.3	0.2	***0.3***	1.0	1.3	***1.2***	1.3	1.6	***1.5***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.6	0.5	***0.6***	1.1	1.1	***1.1***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.5	0.4	***0.5***
Not recorded		0.2	0.2	***0.2***	0.4	0.5	***0.5***	1.3	1.4	***1.4***
Region 4	n=	**167**	**153**	***320***	**153**	**163**	***316***	**149**	**160**	***309***
With no loss of attachment (0-3 mm)		2.5	2.6	***2.6***	1.9	2.3	***2.1***	0.7	0.5	***0.6***
With loss of attachment		0.2	0.4	***0.3***	3.6	3.5	***3.6***	2.8	3.0	***2.9***
with loss of attachment 4-5 mm		0.2	0.4	***0.3***	2.3	2.5	***2.4***	0.7	0.7	***0.7***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	1.2	0.9	***1.1***	1.3	1.3	***1.3***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.8	0.9	***0.9***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.1	0.2	***0.2***	1.6	1.5	***1.6***
Not recorded		3.3	2.9	***3.1***	0.5	0.1	***0.3***	0.8	0.9	***0.9***
Region 5	n=	**165**	**135**	***300***	**148**	**162**	***310***	**138**	**142**	***280***
With no loss of attachment (0-3 mm)		5.9	5.9	***5.9***	5.2	5.3	***5.3***	1.2	1.1	***1.2***
With loss of attachment		0.0	0.1	***0.1***	0.7	0.5	***0.6***	1.6	1.4	***1.5***
with loss of attachment 4-5 mm		0.0	0.0	***0.0***	0.5	0.5	***0.5***	1.3	0.9	***1.1***
with loss of attachment 6-8 mm		0.0	0.1	***0.1***	0.1	0.0	***0.1***	0.3	0.4	***0.4***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.1	***0.1***	1.4	1.6	***1.5***
Not recorded		0.1	0.0	***0.1***	0.1	0.1	***0.1***	1.8	2.0	***1.9***

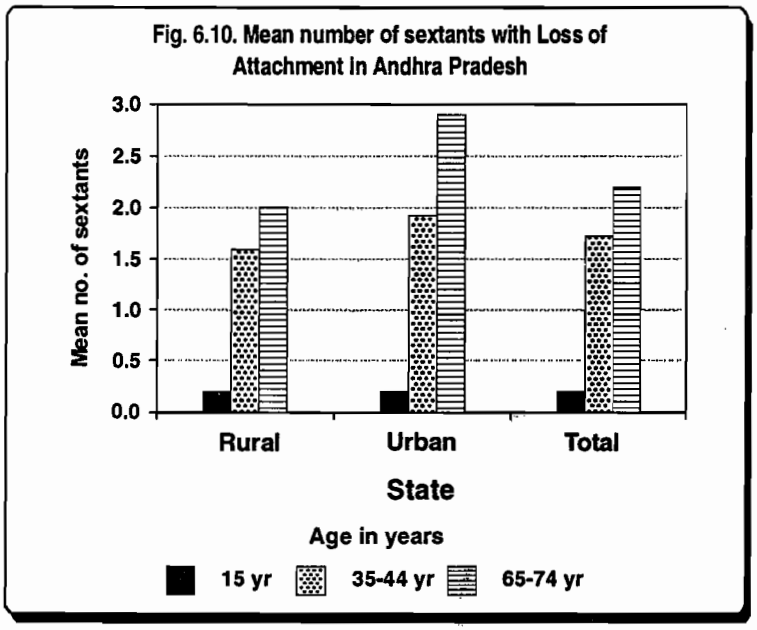
Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 6	**n=**	**168**	**150**	***318***	**151**	**171**	***322***	**149**	**167**	***316***
With no loss of attachment (0-3 mm)		5.8	5.8	***5.8***	4.4	4.8	***4.6***	2.0	1.9	***2.0***
With loss of attachment		0.1	0.2	***0.2***	1.4	1.1	***1.3***	2.9	2.9	***2.9***
with loss of attachment 4-5 mm		0.1	0.2	***0.2***	1.4	1.0	***1.2***	2.1	2.2	***2.2***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.7	0.6	***0.7***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	1.1	***1.0***
Not recorded		0.1	0.0	***0.1***	0.2	0.0	***0.1***	0.3	0.1	***0.2***
State Rural	**n=**	**654**	**618**	***1272***	**663**	**656**	***1319***	**625**	**656**	***1281***
With no loss of attachment (0-3 mm)		5.2	5.2	***5.2***	4.1	4.3	***4.2***	2.5	2.2	***2.4***
With loss of attachment		0.2	0.2	***0.2***	1.7	1.5	***1.6***	2.0	2.0	***2.0***
with loss of attachment 4-5 mm		0.2	0.2	***0.2***	1.3	1.3	***1.3***	1.2	1.1	***1.2***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.4	0.3	***0.4***	0.7	0.7	***0.7***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.2	***0.2***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.1	***0.1***	1.1	1.3	***1.2***
Not recorded		0.6	0.6	***0.6***	0.2	0.1	***0.2***	0.4	0.4	***0.4***
State Urban	**n=**	**346**	**259**	***605***	**281**	**343**	***624***	**266**	**317**	***583***
With no loss of attachment (0-3 mm)		5.2	5.2	***5.2***	3.8	4.1	***4.0***	0.9	1.0	***1.0***
With loss of attachment		0.1	0.2	***0.2***	2.0	1.8	***1.9***	2.9	2.8	***2.9***
with loss of attachment 4-5 mm		0.1	0.1	***0.1***	1.8	1.6	***1.7***	2.0	1.9	***2.0***
with loss of attachment 6-8 mm		0.0	0.1	***0.1***	0.2	0.2	***0.2***	0.6	0.8	***0.7***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.2	***0.2***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.5	***0.5***
Not recorded		0.7	0.6	***0.7***	0.2	0.1	***0.2***	1.8	1.8	***1.8***
State Total	**n=**	**1000**	**877**	***1877***	**944**	**999**	***1943***	**891**	**973**	***1864***
With no loss of attachment (0-3 mm)		5.2	5.2	***5.2***	4.1	4.3	***4.2***	2.1	1.9	***2.0***
With loss of attachment		0.2	0.2	***0.2***	1.7	1.6	***1.7***	2.2	2.2	***2.2***
with loss of attachment 4-5 mm		0.1	0.2	***0.2***	1.4	1.3	***1.4***	1.3	1.3	***1.3***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.3	0.2	***0.3***	0.7	0.7	***0.7***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.2	***0.2***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.9	1.0	***1.0***
Not recorded		0.6	0.6	***0.6***	0.2	0.1	***0.2***	0.8	0.9	***0.9***

Loss of attachment of >12mm was not found in any age group.

Overall urban subjects have more loss of attachment than rural subjects. Even though loss of attachment of 4-5mm found to be more in urban subjects, 6-8mm, 9-11mm & >12mm loss found to be similar to rural subjects.

Mean number of sextants with loss of attachment are 3.3 in 65-74 age group of region I whereas it is only 1.2 in region II.

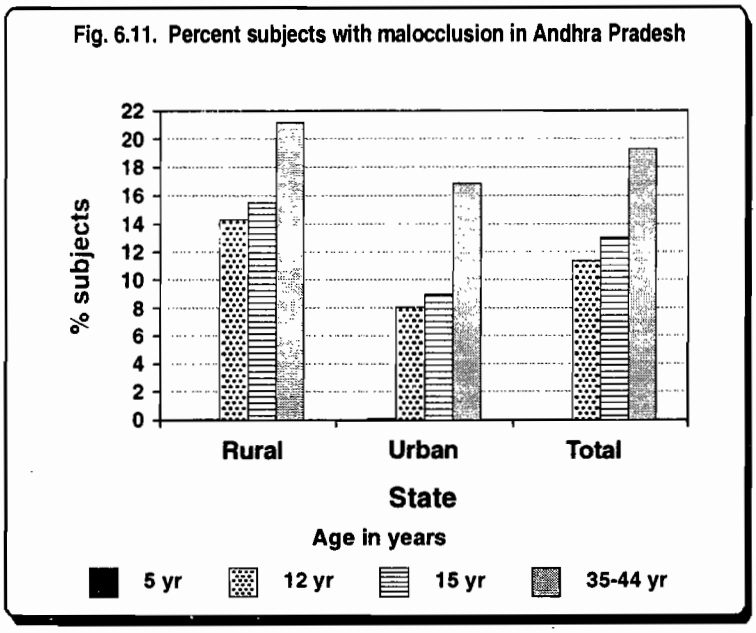
Loss of attachment of > 9mm was found only in region IV (0.1) in 35-44 age group.



6.3 MALOCCLUSION STATUS

The Dental Aesthetic Index (DAI) as recommended by the WHO was used to analyze the severity of malocclusion in the surveyed subjects. The age groups 5, 12, 15 and 35-44 years have been included in the study.

Table 6.11 and Figure 6.11 present the malocclusion status of the subjects measured by DAI scores



In this report malocclusion is not considered for age group 65 – 74 for the reason that at this age the spacing and migration is due to cumulative dental disease burden and not just a problem of unsightly, unaesthetic dentition due to developmental or growth related irregularities of teeth

Most cases of malocclusion manifest at 12 and 15 years and sustain and peak sometimes at 35-44

No malocclusion was recorded in all the regions surveyed in the 5 years age group. This is on expected lines as children of this age have no erupted permanent teeth and the chances of malocclusion are not likely except in cases of congenital anomalies and genetically associated deformities

In the 12 years group moderate malocclusion (11.5 per cent) was evident. No notable gender related differentials were noticed.

The 15 years group also showed only moderate malocclusion (13.1 per cent).

In the 35-44 age group severe malocclusion was noted with no notable gender bias.

Urban residents appeared to have marginally more malocclusion than their rural counterparts. In general, the state of Andhra Pradesh showed only mild to moderate malocclusion with only 3-5 per cent showing severe and very severe malocclusion

Nearly 80 per cent of the state's population did not show any malocclusion or had minor malocclusion which cannot be taken cognizance of because of its trivial nature. The rural and urban subjects did not differ in this aspect.

That 20 per cent of state's subjects have unattractive teeth , spaced and badly aligned , irregular teeth is a disturbing aspect and points to the need for correctional and preventable steps towards this issue.

Table 6.11 Percent subjects with malocclusion by age, sex and geographical areas. **State: Andhra Pradesh**

Malocclusion (DAI Score)		5 years			12 years			15 years			35-44 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	168	147	315	162	149	311	160	150	310	149	167	316
None or minor malocclusion (<25)		100.0	100.0	100.0	73.8	80.5	77.2	76.3	80.0	78.2	60.8	56.3	58.6
Malocclusion present		0.0	0.0	0.0	26.2	19.5	22.9	23.7	20.0	21.9	39.2	43.7	41.5
Definite malocclusion (26 -30)		0.0	0.0	0.0	18.7	12.9	15.8	16	14.5	15.3	18.3	23.6	21.0
Severe malocclusion (31 - 35)		0.0	0.0	0.0	5.2	5.2	5.2	5.1	2.7	3.9	8.7	7.5	8.1
V Severe malocclusion (36 or more)		0.0	0.0	0.0	2.3	1.5	1.9	2.6	2.7	2.7	12.2	12.6	12.4
Region 2	n=	175	150	325	168	157	325	171	151	322	166	184	350
None or minor malocclusion (<25)		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.9	97.2	98.1
Malocclusion present		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.8	2.0
Definite malocclusion (26 -30)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3
Severe malocclusion (31 - 35)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V Severe malocclusion (36 or more)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.2	1.7
Region 3	n=	190	125	315	169	142	311	170	138	308	177	152	329
None or minor malocclusion (<25)		100.0	99.1	99.6	95.2	96.3	95.8	94.7	95.4	95.1	87.5	79.6	83.6
Malocclusion present		0.0	0.9	0.5	4.8	3.7	4.3	5.3	4.6	5.0	12.5	20.4	16.5
Definite malocclusion (26 -30)		0.0	0.0	0.0	2.7	2.9	2.8	3.3	3.8	3.6	5.6	11.4	8.5
Severe malocclusion (31 - 35)		0.0	0.0	0.0	2.1	0.0	1.1	0.7	0.0	0.4	1.3	5.0	3.2
V Severe malocclusion (36 or more)		0.0	0.9	0.5	0.0	0.8	0.4	1.4	0.8	1.1	5.6	4.0	4.8
Region 4	n=	171	144	315	170	145	315	167	153	320	153	163	316
None or minor malocclusion (<25)		99.3	100.0	99.7	71.4	73.9	72.7	54.1	55.9	55.0	43.8	48.9	46.4
Malocclusion present		0.7	0.0	0.4	28.6	26.1	27.4	45.9	44.1	45.0	56.2	51.1	53.7
Definite malocclusion (26 -30)		0.0	0.0	0.0	19.4	16.3	17.9	33.6	29.3	31.5	17.4	14.7	16.1
Severe malocclusion (31 - 35)		0.0	0.0	0.0	6.8	8.5	7.7	9.1	10.3	9.7	8.5	11.6	10.1
V Severe malocclusion (36 or more)		0.7	0.0	0.4	2.5	1.3	1.9	3.2	4.4	3.8	30.3	24.8	27.6
Region 5	n=	162	142	304	157	147	304	165	135	300	148	162	310
None or minor malocclusion (<25)		99.2	100.0	99.6	87.8	87.6	87.7	86.2	84.9	85.6	89.0	80.9	85.0
Malocclusion present		0.8	0.0	0.4	12.2	12.4	12.3	13.8	15.1	14.5	11.0	19.1	15.1
Definite malocclusion (26 -30)		0.0	0.0	0.0	9.2	7.0	8.1	8.3	12.1	10.2	3.7	9.6	6.7
Severe malocclusion (31 - 35)		0.0	0.0	0.0	2.5	3.9	3.2	2.4	2.4	2.4	4.5	4.1	4.3
V Severe malocclusion (36 or more)		0.8	0.0	0.4	0.5	1.5	1.0	3.1	0.6	1.9	2.8	5.4	4.1
Region 6	n=	180	142	322	161	154	315	168	150	318	151	171	322
None or minor malocclusion (<25)		100.0	100.0	100.0	87.2	86.9	87.1	96.8	98.1	97.5	91	86.8	88.9
Malocclusion present		0.0	0.0	0.0	12.8	13.1	13.0	3.2	1.9	2.6	9.0	13.2	11.1
Definite malocclusion (26 -30)		0.0	0.0	0.0	11.3	11.6	11.5	2.5	1.2	1.9	7.0	10	8.5
Severe malocclusion (31 - 35)		0.0	0.0	0.0	0.8	1.2	1.0	0.4	0.0	0.2	1.2	1.1	1.2
V Severe malocclusion (36 or more)		0.0	0.0	0.0	0.7	0.4	0.6	0.4	0.8	0.6	0.8	2.1	1.5
State Rural	n=	688	593	1281	652	625	1277	655	618	1273	663	656	1319
None or minor malocclusion (<25)		99.8	100.0	99.9	84.4	87.1	85.8	83.8	85.0	84.4	79.6	78.6	79.1
Malocclusion present		0.2	0.0	0.1	15.6	12.9	14.3	16.2	15.0	15.6	20.4	21.4	20.9
Definite malocclusion (26 -30)		0.0	0.0	0.0	11.8	8.8	10.3	11.2	10.6	10.9	7.8	9.5	8.7
Severe malocclusion (31 - 35)		0.0	0.0	0.0	2.9	3.5	3.2	3.5	2.8	3.2	4.0	4.0	4.0
V Severe malocclusion (36 or more)		0.2	0.0	0.1	0.9	0.6	0.8	1.5	1.6	1.6	8.6	7.9	8.3
State Urban	n=	358	257	615	335	269	604	346	259	605	281	343	624
None or minor malocclusion (<25)		99.5	100.0	99.8	92.7	91.3	92.0	90.8	91.3	91.1	86.9	79.7	83.3
Malocclusion present		0.5	0.0	0.3	7.3	8.7	8.0	9.2	8.7	9.0	13.1	20.3	16.7
Definite malocclusion (26 -30)		0.0	0.0	0.0	4.5	6.0	5.3	6.7	5.7	6.2	5.7	9.4	7.6
Severe malocclusion (31 - 35)		0.0	0.0	0.0	1.5	1.3	1.4	0.7	2.0	1.4	1.9	3.6	2.8
V Severe malocclusion (36 or more)		0.5	0.0	0.3	1.2	1.4	1.3	1.8	1.0	1.4	5.5	7.3	6.4
State Total	n=	1046	850	1896	987	894	1881	1001	877	1878	944	999	1943
None or minor malocclusion (<25)		99.7	99.9	99.8	87.9	89.1	88.5	86.6	87.2	86.9	82.1	79.3	80.7
Malocclusion present		0.3	0.1	0.2	12.1	10.9	11.5	13.4	12.8	13.1	17.9	20.7	19.3
Definite malocclusion (26 -30)		0.0	0.0	0.0	8.9	7.6	8.3	9.3	9.1	9.2	7.2	9.3	8.3
Severe malocclusion (31 - 35)		0.0	0.0	0.0	2.4	2.6	2.5	2.5	2.4	2.5	3.1	3.9	3.5
V Severe malocclusion (36 or more)		0.3	0.1	0.2	0.8	0.8	0.8	1.6	1.4	1.5	7.6	7.5	7.6

Note: 'No malocclusion (<25)' includes minor malocclusion.

Regional variations

There are some contrasting and conflicting data when DAI scores for different regions are considered. 49 per cent in region IV, 58.5 per cent in region I , 79.6per cent in region III, 80.9 per cent in region V have no malocclusion reported in their 35-44 age group subjects. Surprisingly 100 per cent of the 15 years olds and 98 per cent of 35-44 group in region II have no malocclusion. This observations are at variance with those seen in other regions for similar age groups

Again in region IV (Chittoor) 27.5 per cent of the 35-44 group have very severe malocclusion whereas in the other regions of the state it only varies between 0.8 and 12.6 per cent. The sudden upsurge in cases of very severe malocclusion is so different from other regions and need to be carefully weighed

TO SUM UP

Malocclusion was assessed in all age groups except in 65-74

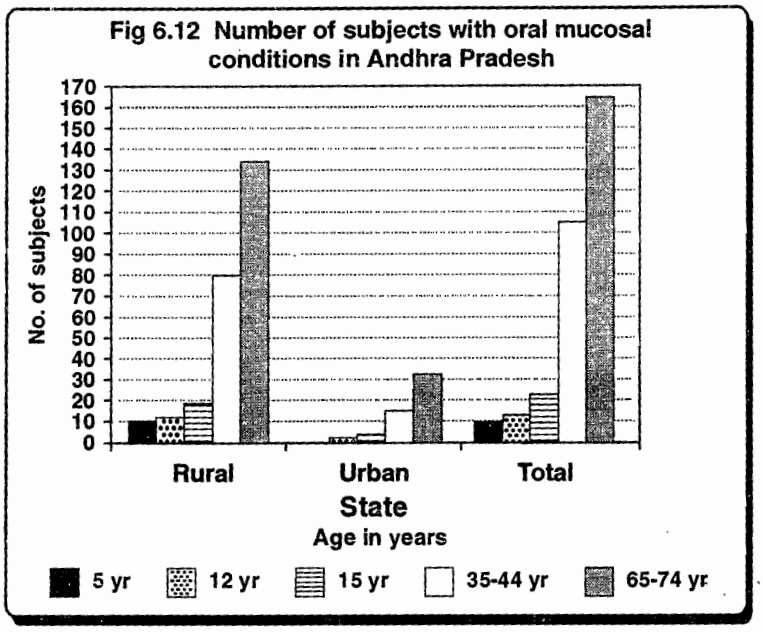
5 years olds do not have malocclusion, 12 and 15 years olds showed moderate malocclusion

13.1 per cent o 35-44 years olds had different grades of malocclusion and this high values for DA I could be due to various factors which make teeth appear unaesthetic at middle age.

Malocclusion at 12 years is 11.5 per cent and at 15 it is 13.1 per cent. This is the age of adolescence and teens where esthetics are of importance. Data on state's children having definitive malocclusion is an important observation of this survey

6.4. ORAL CANCER & ORAL MUCOSAL LESIONS

Tables 6.12 and Figure 6.12 present the proportion of subjects with oral cancer and other oral mucosal lesions and Table 6.13 presents the number of lesions by their location in the mouth of affected subjects.



305 subjects out of 9347 examined in different regions of A.P. had oral mucosal lesions. 36 cases of abscess, 15 cases of leukoplakia, 15 cases of candidiasis, 2 cases of oral cancer and two cases of ANUG were recorded. Ulceration was most common (150 cases) 1o4 cases of oral lesions of non-specific category were also recorded.

The prevalence of oral lesions shows a marked contrast between rural and urban subjects. While 253 rural subjects had oral lesions only one fourth of this i.e. 52 urban subjects had oral lesions. Rural subjects are generally far from medical facilities and show lesser motivation and urge to get their problems attended promptly

Not even one subject from Guntur district recorded any oral lesion. The number of subjects showing oral lesions for different regions of the state are 0 (Guntur) , 3 (Chitttoor), 45 (Khammam), 49 (Nellore) 67 (Chittoor) and 141 (Vishakapatnam). The near total absence of oral lesions in Guntur (0), Khammam (3) and high prevalence (141) in Vishakapatnam makes an interesting study. The reason for such variation cannot be precisely ascertained

The differences in the prevalence of oral lesions between sexes are not consistent and do not follow any particular pattern .The two cases of cancer and 15 cases of leukoplakia have appeared in both males and females with similar frequency.

TO SUM UP

305 subjects out of 9347 examined had mucosal lesions. Rrural people had lesion fpur time more than urban subjects. Many cases of ulcerations, few cases of leukoplakia, candidiasis and two cases of cance were recorded.

Distribution of oral mucosal lesions

377 oral lesions were observed among the subjects examined in Andhra Pradesh. No significant differences between males and females were noticed

Bucccal mucosa, commissures, lips, tongue, alveolar ridges, gingival in decreasing order had lesions

Lip lesions were common in Rural areas (20 per cent) than urban areas (3 per cent) . Lesions on commissures and floor of mouth were seen in least number of subjects

Table 6.12 Numbers of subjects with oral mucosal lesions and type of lesions by age, sex and geographical area. State : Andhra Pradesh

Oral Mucosal Lesions		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	166	146	312	160	148	308	158	147	305	148	164	312	136	174	310
Oral mucosal lesions present		0	0	0	2	2	4	3	6	9	22	20	42	34	52	86
Oral Cancer		0	0	0	0	0	0	0	0	0	0	1	1	1	0	1
Leukoplakia		0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Lichen Planus		0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Ulceration		0	0	0	2	1	3	1	4	5	20	13	33	21	37	58
ANUG		0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Candidiasis		0	0	0	0	0	0	0	0	0	0	0	0	2	1	3
Abscess		0	0	0	0	0	0	1	2	3	1	1	2	2	0	2
Any other condition		0	0	0	0	1	1	1	0	1	1	6	7	8	14	22
Region 2	n=	175	150	325	168	157	325	171	151	322	162	184	346	160	159	319
Oral mucosal lesions present		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Oral Cancer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leukoplakia		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Lichen Planus		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ulceration		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANUG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candidiasis		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abscess		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Any other condition		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Region 3	n=	183	123	306	167	139	306	164	134	298	175	147	322	148	163	311
Oral mucosal lesions present		2	2	4	2	3	5	1	1	2	10	6	16	13	9	22
Oral Cancer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leukoplakia		0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Lichen Planus		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ulceration		1	1	2	0	0	0	1	0	1	3	0	3	1	1	2
ANUG		0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Candidiasis		0	1	1	1	1	2	0	0	0	2	0	2	3	2	5
Abscess		0	0	0	0	0	0	0	0	0	0	2	2	1	1	2
Any other condition		1	0	1	1	2	3	0	1	1	4	4	8	11	5	16
Region 4	n=	168	144	312	169	145	314	164	150	314	145	163	308	147	157	304
Oral mucosal lesions present		2	1	3	2	1	3	3	3	6	10	11	21	17	17	34
Oral Cancer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leukoplakia		0	0	0	0	0	0	0	0	0	1	0	1	2	2	4
Lichen Planus		0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Ulceration		0	0	0	0	1	1	1	2	3	5	9	14	7	12	19
ANUG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candidiasis		0	1	1	0	0	0	0	0	0	1	0	1	0	0	0
Abscess		1	0	1	2	0	2	2	0	2	5	2	7	6	5	11
Any other condition		1	0	1	1	0	1	0	1	1	0	0	0	1	1	2
Region 5	n=	162	141	303	157	146	303	165	135	300	146	158	304	138	138	276
Oral mucosal lesions present		0	1	1	0	0	0	0	0	0	0	1	1	0	1	1
Oral Cancer		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Leukoplakia		0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
Lichen Planus		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ulceration		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ANUG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candidiasis		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Abscess		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Any other condition		0	1	1	0	0	0	0	0	0	0	0	0	0	0	0

Oral Mucosal Lesions		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 6	**n=**	**180**	**141**	***321***	**160**	**153**	***313***	**166**	**149**	***315***	**147**	**170**	***317***	**149**	**167**	***316***
Oral mucosal lesions present		2	0	***2***	1	0	***1***	2	3	***5***	12	3	***15***	20	2	***22***
Oral Cancer		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***
Leukoplakia		0	0	***0***	0	0	***0***	0	0	***0***	1	0	***1***	5	0	***5***
Lichen Planus		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***
Ulceration		0	0	***0***	0	0	***0***	1	3	***4***	1	1	***2***	0	0	***0***
ANUG		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***
Candidiasis		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***
Abscess		0	0	***0***	0	0	***0***	0	0	***0***	1	0	***1***	0	1	***1***
Any other condition		2	0	***2***	1	0	***1***	1	0	***1***	10	3	***13***	20	1	***21***
State Rural	**n=**	**682**	**590**	***1272***	**649**	**623**	***1272***	**650**	**611**	***1261***	**650**	**648**	***1298***	**620**	**647**	***1267***
Oral mucosal lesions present		6	4	***10***	7	4	***11***	7	12	***19***	46	34	***80***	65	68	***133***
Oral Cancer		0	0	***0***	0	0	***0***	0	0	***0***	0	1	***1***	1	0	***1***
Leukoplakia		0	0	***0***	0	0	***0***	0	0	***0***	3	1	***4***	5	4	***9***
Lichen Planus		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	1	0	***1***
Ulceration		1	1	***2***	2	1	***3***	4	8	***12***	23	21	***44***	22	40	***62***
ANUG		0	0	***0***	0	0	***0***	0	0	***0***	1	0	***1***	1	0	***1***
Candidiasis		0	2	***2***	1	1	***2***	0	0	***0***	3	0	***3***	5	3	***8***
Abscess		1	0	***1***	2	0	***2***	2	2	***4***	5	4	***9***	7	7	***14***
Any other condition		4	1	***5***	3	2	***5***	1	2	***3***	14	9	***23***	32	19	***51***
State Urban	**n=**	**352**	**255**	***607***	**332**	**265**	***597***	**338**	**255**	***593***	**273**	**338**	***611***	**258**	**311**	***569***
Oral mucosal lesions present		0	0	***0***	0	2	***2***	2	1	***3***	8	7	***15***	19	13	***32***
Oral Cancer		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***
Leukoplakia		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	2	0	***2***
Lichen Planus		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	0	1	***1***
Ulceration		0	0	***0***	0	1	***1***	0	1	***1***	6	2	***8***	7	10	***17***
ANUG		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***
Candidiasis		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***
Abscess		0	0	***0***	0	0	***0***	1	0	***1***	2	1	***3***	2	0	***2***
Any other condition		0	0	***0***	0	1	***1***	1	0	***1***	1	4	***5***	8	2	***10***
State Total	**n=**	**1034**	**845**	***1879***	**981**	**888**	***1869***	**988**	**866**	***1854***	**923**	**986**	***1909***	**878**	**958**	***1836***
Oral mucosal lesions present		6	4	***10***	7	6	***13***	9	13	***22***	54	41	***95***	84	81	***165***
Oral Cancer		0	0	***0***	0	0	***0***	0	0	***0***	0	1	***1***	1	0	***1***
Leukoplakia		0	0	***0***	0	0	***0***	0	0	***0***	3	1	***4***	7	4	***11***
Lichen Planus		0	0	***0***	0	0	***0***	0	0	***0***	0	0	***0***	1	1	***2***
Ulceration		1	1	***2***	2	2	***4***	4	9	***13***	29	23	***52***	29	50	***79***
ANUG		0	0	***0***	0	0	***0***	0	0	***0***	1	0	***1***	1	0	***1***
Candidiasis		0	2	***2***	1	1	***2***	0	0	***0***	3	0	***3***	5	3	***8***
Abscess		1	0	***1***	2	0	***2***	3	2	***5***	7	5	***12***	9	7	***16***
Any other condition		4	1	***5***	3	3	***6***	2	2	***4***	15	13	***28***	40	21	***61***

Two cases of oral cancer. and 15 cases of leukoplakia were noted. Both cases of cancer were seen in palate , Cases of leukoplakia were seen on buccal mucosa, vermillion border and on gingiva

Many of the oral lesions were of the ulceration category with most of the ulcerations seen in rural subjects and seen on commissures, lips, lips, palate and buccal mucosa in that order

Cases of abscess were seen on gingival, mostly in rural subjects. Considerable number of subjects had oral lesions of ' other category ' and most of these were seen on buccal mucosa, palate, lips and tongue

Table 6.13 Distibution of subjects with oral mucosal conditions by location of conditions in the mouth. State: Andhra Pradesh

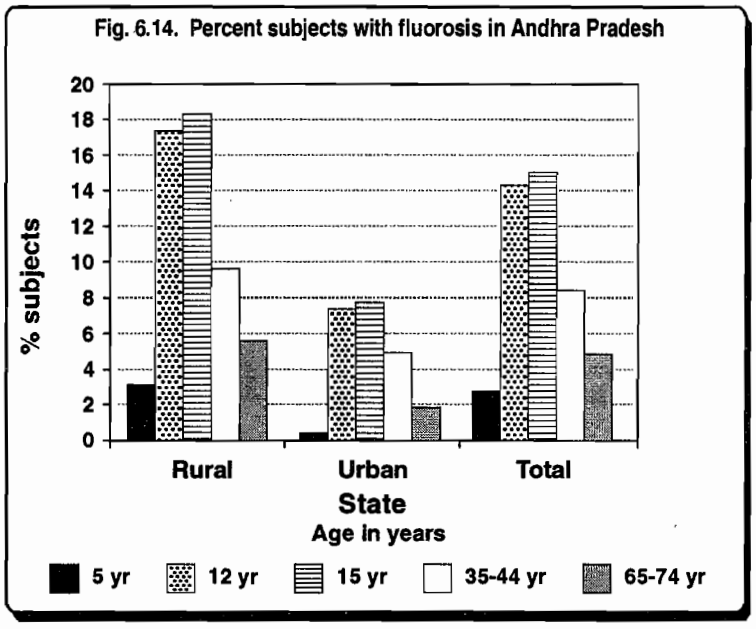
Location	Oral Mucosal Condition																	
	Oral Cancer		Leuko-plakia		Lichen Planus		Ulceration		ANUG		Candi-diasis		Abscess		Others		Total by Location	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
State Rural																		
Vermilion Border	0	0	3	0	0	0	0	4	1	0	0	0	0	0	1	0	**5**	**4**
Commissures	0	1	0	0	0	0	17	18	0	0	5	3	0	0	3	3	**25**	**25**
Lips	0	0	0	0	0	0	12	18	0	0	0	0	0	0	13	2	**25**	**20**
Sulci	0	0	0	2	0	0	5	2	0	0	0	0	6	1	0	0	**11**	**5**
Buccal mucosa	0	0	2	2	0	0	7	14	0	0	0	1	1	0	29	7	**39**	**24**
Floor of mouth	0	0	0	1	0	0	2	1	0	0	0	0	1	1	0	0	**3**	**3**
Tongue	0	0	0	0	0	0	6	12	0	0	3	2	0	0	8	2	**17**	**16**
Hard/Soft palate	1	0	1	0	1	0	9	12	0	0	0	0	0	0	11	17	**23**	**29**
Alv ridges/ Gingiva	0	0	2	0	0	0	2	8	1	0	2	0	9	11	1	2	**17**	**21**
Rural Total	**1**	**1**	**8**	**5**	**1**	**0**	**60**	**89**	**2**	**0**	**10**	**6**	**17**	**13**	**66**	**33**	**165**	**147**
State Urban																		
Vermilion Border	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	**1**	**1**
Commissures	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	**1**	**7**
Lips	0	0	0	0	0	0	1	3	0	0	0	0	0	0	3	0	**4**	**3**
Sulci	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	**4**	**0**
Buccal mucosa	0	0	2	0	0	1	4	2	0	0	0	0	1	0	8	6	**15**	**9**
Floor of mouth	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**	**0**
Tongue	0	0	0	0	0	0	1	4	0	0	0	0	0	0	3	2	**4**	**6**
Hard/Soft palate	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3	3	**4**	**3**
Alv ridges/ Gingiva	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	**0**	**2**
Urban Total	**0**	**0**	**2**	**0**	**0**	**2**	**10**	**17**	**0**	**0**	**0**	**0**	**5**	**1**	**17**	**11**	**34**	**31**
State Total																		
Vermilion Border	0	0	3	0	0	0	1	5	1	0	0	0	0	0	1	0	**6**	**5**
Commissures	0	1	0	0	0	0	18	25	0	0	5	3	0	0	3	3	**26**	**32**
Lips	0	0	0	0	0	0	13	21	0	0	0	0	0	0	16	2	**29**	**23**
Sulci	0	0	0	2	0	0	5	2	0	0	0	0	10	1	0	0	**15**	**5**
Buccal mucosa	0	0	4	2	0	1	11	16	0	0	0	1	2	0	37	13	**54**	**33**
Floor of mouth	0	0	0	1	0	0	3	1	0	0	0	0	1	1	0	0	**4**	**3**
Tongue	0	0	0	0	0	0	7	16	0	0	3	2	0	0	11	4	**21**	**22**
Hard/Soft palate	1	0	1	0	1	0	10	12	0	0	0	0	0	0	14	20	**27**	**32**
Alv ridges/ Gingiva	0	0	2	0	0	1	2	8	1	0	2	0	9	12	1	2	**17**	**23**
State Total	**1**	**1**	**10**	**5**	**1**	**2**	**70**	**106**	**2**	**0**	**10**	**6**	**22**	**14**	**83**	**44**	**199**	**178**

TO SUM UP

Buccal mucosal lesions were common. Lip lesions were common in rural subjects compared to urban subjects. Both cases of cancer were noticed in palate.

6.5 FLUOROSIS STATUS

Table 6.14 and Figure 6.14 present the per cent subjects with dental fluorosis by level of severity.



Out of 8925 subjects examined all over Andhra Pradesh 4.7 per cent had fluorosis affected teeth. 3.3 per cent had very mild to mild fluorosis, 0.7 per cent had moderate fluorosis and only 0.2 per cent had severe fluorosis. Rural subjects had significantly higher prevalence (5.8 per cent) than urban subjects (1.8 per cent) . Not only the prevalence was higher in rural subjects but also the severity. Moderate and severe form of fluorosis seen in 0.9 and 0.2 per cent of rural female subjects was not evident in urban subjects

The differences if any between males and females are varied and not consistent. Maximum fluorosis is evident at 12 and 15 years groups and progressively declining with advancing age. The sudden decline in fluorosed teeth at 65-74 could be due to some of the index teeth missing and also a life time wear and tear and habits which collectively mask the colour of the teeth

Regional variations

Region IV (Chittoor) has higher fluorosis affected individuals averaging 12, 29, 37.5, 32, 26.5 per cent for the ages 5, 12, 15, 35-44 and 65-74 respectively (for both sexes). Fluorosis involvement is least in Vishakapatnam and Guntur districts not exceeding 2.8 per cent in any age group for either sexes

Region III (Nellore) has slightly higher percentage of individuals affected by fluorosis, ranging between 3.5 and 4.9 per cent and none of the elderly showing any form of involvement

Region V (Khammam) has higher percentage of fluorosis affected teeth but values are still lower than region IV (Chittoor) ranging from 0.9 to 18.5 per cent. The highest values are seen in 12 and 15 years. There are no major differences between males and females

Region VI (Rangareddy) which is geographical area around Hyderabad city makes an interesting reading. The involvement is 1.2, 25.5, 23, 8, 1 per cent in 5, 12, 15, 35-44, 65-74 age groups (both sexes) respectively. It can be seen , the involvement is minimum at 5 and 65-74 years and at its height at 12 and 15 years

The fluorosis involvement as reported in this survey does not give a real perspective of fluorosis burden of the state of Andhra Pradesh. The two most endemic districts of A. P viz Nalgonda and Prakasam have highest fluoride in water but the two districts do not form the sample regions of the present survey having themselves got eliminated during randomization process. The fluoride scenario of the present survey has to be viewed along with established data available for the whole state of Andhra Pradesh

Table 6.14. Percent distribution of subjects with severity of dental fluorosis by age, sex and geographical area.

State : Andhra Pradesh

Dental Fluorosis		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	149	137	286	155	141	296	152	144	296	145	154	299	118	147	265
With Fluorosis		0.5	0.0	0.3	0.7	1.5	1.1	1.4	0.8	1.1	1.3	0.7	1.0	0.6	0.7	0.7
Questionable		0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4	0.5	0.0	0.3	0.6	0.0	0.3
V Mild & Mild		0.5	0.0	0.3	0.7	1.5	1.1	0.7	0.8	0.8	0.0	0.7	0.4	0.0	0.7	0.4
Moderate		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Severe		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0
Region 2	n=	173	146	319	167	157	324	169	146	315	162	179	341	154	145	299
With Fluorosis		0.0	0.0	0.0	2.1	2.8	2.5	2.0	2.7	2.4	0.7	0.4	0.6	0.0	0.0	0.0
Questionable		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0
V Mild & Mild		0.0	0.0	0.0	2.1	0.7	1.4	0.0	0.5	0.3	0.7	0.0	0.4	0.0	0.0	0.0
Moderate		0.0	0.0	0.0	0.0	0.7	0.4	2.0	1.5	1.8	0.0	0.4	0.2	0.0	0.0	0.0
Severe		0.0	0.0	0.0	0.0	1.4	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Region 3	n=	177	121	298	165	138	303	164	134	298	172	148	320	135	148	283
With Fluorosis		0.0	0.0	0.0	3.5	4.9	4.2	3.5	1.7	2.6	0.7	1.6	1.2	0.0	0.0	0.0
Questionable		0.0	0.0	0.0	0.7	0.8	0.8	0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.0	0.0
V Mild & Mild		0.0	0.0	0.0	0.7	2.5	1.6	2.1	1.7	1.9	0.7	0.8	0.8	0.0	0.0	0.0
Moderate		0.0	0.0	0.0	2.1	0.8	1.5	0.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Severe		0.0	0.0	0.0	0.0	0.8	0.4	0.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Region 4	n=	168	143	311	168	143	311	163	149	312	142	161	303	111	120	231
With Fluorosis		11.8	12.8	12.3	30.0	28.1	29.1	38.2	37.0	37.6	33.9	30.3	32.1	27.3	25.6	26.5
Questionable		0.0	0.0	0.0	0.7	0.8	0.8	0.7	2.3	1.5	0.8	1.2	1.0	2.6	1.0	1.8
V Mild & Mild		9.7	10.4	10.1	23.3	23.6	23.5	31.4	27.8	29.6	26.6	26.2	26.4	23.6	19.7	21.7
Moderate		2.1	2.4	2.3	5.9	3.7	4.8	5.4	6.9	6.2	6.4	2.2	4.3	1.0	3.9	2.5
Severe		0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4	0.0	0.7	0.4	0.0	1.0	0.5
Region 5	n=	152	133	285	157	145	302	164	135	299	146	156	302	91	91	182
With Fluorosis		0.0	0.0	0.0	17.8	18.5	18.2	14.1	17.7	15.9	4.5	6.9	5.7	0.9	2.6	1.8
Questionable		0.0	0.0	0.0	3.6	3.9	3.8	2.9	4.9	3.9	1.1	3.0	2.1	0.9	1.7	1.3
V Mild & Mild		0.0	0.0	0.0	10.7	10.7	10.7	8.2	7.3	7.8	3.4	3.4	3.4	0.0	0.9	0.5
Moderate		0.0	0.0	0.0	2.5	2.8	2.7	1.9	3.7	2.8	0.0	0.5	0.3	0.0	0.0	0.0
Severe		0.0	0.0	0.0	1.0	1.1	1.1	1.0	1.8	1.4	0.0	0.0	0.0	0.0	0.0	0.0
Region 6	n=	179	141	320	160	153	313	166	148	314	147	168	315	134	149	283
With Fluorosis		1.7	0.8	1.3	26.5	24.8	25.7	26.3	20.2	23.3	5.2	10.9	8.1	1.3	0.8	1.1
Questionable		0.0	0.0	0.0	1.5	4.3	2.9	2.2	4.0	3.1	1.6	0.0	0.8	0.0	0.8	0.4
V Mild & Mild		1.7	0.0	0.9	20.4	18.2	19.3	23.3	15.1	19.2	3.6	10.6	7.1	0.9	0.0	0.5
Moderate		0.0	0.8	0.4	4.5	2.3	3.4	0.7	1.2	1.0	0.0	0.4	0.2	0.4	0.0	0.2
Severe		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Rural	n=	669	580	1249	645	620	1265	645	611	1256	644	644	1288	527	538	1065
With Fluorosis		3.1	3.3	3.2	18.2	17.2	17.7	19.0	17.7	18.4	9.1	10.4	9.8	5.7	5.8	5.8
Questionable		0.0	0.0	0.0	1.4	2.3	1.9	1.5	3.0	2.3	0.9	1.0	1.0	0.6	0.8	0.7
V Mild & Mild		2.6	2.5	2.6	13.3	11.7	12.5	14.2	11.3	12.8	6.7	8.6	7.7	4.9	3.9	4.4
Moderate		0.5	0.8	0.7	3.3	2.4	2.9	2.8	3.0	2.9	1.4	0.6	1.0	0.2	0.9	0.6
Severe		0.0	0.0	0.0	0.3	0.8	0.6	0.5	0.4	0.5	0.1	0.2	0.2	0.0	0.2	0.1
State Urban	n=	329	241	570	327	257	584	333	245	578	270	322	592	216	262	478
With Fluorosis		1.1	0.0	0.6	7.6	7.4	7.5	8.5	7.1	7.8	4.5	5.5	5.0	2.0	1.8	1.9
Questionable		0.0	0.0	0.0	0.6	0.4	0.5	0.6	0.0	0.3	0.3	0.3	0.3	0.7	0.0	0.4
V Mild & Mild		1.1	0.0	0.6	6.2	6.7	6.5	7.7	5.9	6.8	4.2	4.5	4.4	0.9	1.8	1.4
Moderate		0.0	0.0	0.0	0.8	0.3	0.6	0.3	1.2	0.8	0.0	0.7	0.4	0.5	0.0	0.3
Severe		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
State Total	n=	998	821	1819	972	877	1849	978	856	1834	914	966	1880	743	800	1543
With Fluorosis		2.7	2.7	2.7	14.3	13.9	14.1	15.3	14.6	15.0	7.9	8.8	8.4	5.0	4.7	4.9
Questionable		0.0	0.0	0.0	0.9	1.6	1.3	1.0	2.2	1.6	0.7	0.6	0.7	0.6	0.5	0.6
V Mild & Mild		2.3	2.0	2.2	10.8	9.9	10.4	12.0	9.9	11.0	6.0	7.5	6.8	4.2	3.3	3.8
Moderate		0.4	0.7	0.6	2.5	1.8	2.2	2.0	2.3	2.2	1.2	0.6	0.9	0.2	0.7	0.5
Severe		0.0	0.0	0.0	0.1	0.6	0.4	0.3	0.2	0.3	0.1	0.1	0.1	0.0	0.2	0.1

6.6. OTHER LESIONS

6.6.1 Extra oral lesions

Table 6.15 and Figure 6.15 present the per cent subjects with extra oral lesions by type of lesions.

Extra oral lesions being few and negligible at 5 years increased to 4per cent at 65-74 years. Ulcerations, sores, erosions, fissures constituted major part followed by a negligible percentage of enlarged lymph notes, averaging not more than 0.4per cent in the middle aged and elderly group.

Lesions of Cancrum Oris and abnormalities of upper and lower limbs were not seen.

There is a difference between urban and rural subjects with rural subjects showing more (4.5per cent) prevalence of extra oral lesions than urban subjects (1.8per cent).

No extra oral lesions were observed in region-II and practically nil in the region-V (0.6per cent). Region-I reported maximum extra oral lesions (10.5per cent).

Fig. 6.15. Percent subjects with extra oral lesions in Andhra Pradesh

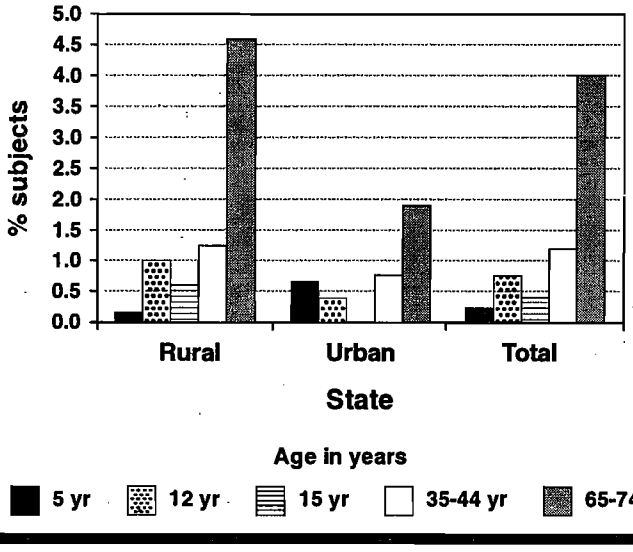


Table 6.15 Percent distribution of subjects with extra oral lesions by age, sex and geographical area.

State : Andhra Pradesh

Extra Oral Lesions		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	165	146	311	159	148	307	158	149	307	148	165	313	136	174	310
With extra oral lesions		0.0	0.0	**0.0**	1.4	0.7	**1.1**	0.7	2.2	**1.5**	2.2	2.7	**2.5**	10.7	10.4	**10.6**
Ulceration,sores,erosions,fissures		0.0	0.0	**0.0**	1.4	0.7	**1.1**	0.7	2.2	**1.5**	2.2	1.3	**1.8**	10.2	10.4	**10.3**
head, neck, limbs		0.0	0.0	**0.0**	0.7	0.0	**0.4**	0.7	0.0	**0.4**	0.0	0.7	**0.4**	4.1	1.9	**3.0**
nose, cheeks, chin		0.0	0.0	**0.0**	0.7	0.7	**0.7**	0.0	0.7	**0.4**	0.0	0.7	**0.4**	1.4	1.7	**1.6**
commissures		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	1.5	**0.8**	1.5	0.0	**0.8**	3.8	5.6	**4.7**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.7	0.0	**0.4**	0.8	1.3	**1.1**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	1.3	**0.7**	0.6	0.0	**0.3**
Region 2	n=	175	150	325	168	157	325	171	151	322	164	184	348	160	159	319
With extra oral lesions		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Ulceration,sores,erosions,fissures		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
head, neck, limbs		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
nose, cheeks, chin		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
commissures		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Region 3	n=	183	123	306	167	139	306	163	134	297	175	148	323	148	165	313
With extra oral lesions		2.0	5.8	**3.9**	4.6	3.3	**4.0**	2.9	0.8	**1.9**	1.7	0.8	**1.3**	3.1	1.4	**2.3**
Ulceration,sores,erosions,fissures		2.0	5.8	**3.9**	4.6	3.3	**4.0**	2.9	0.8	**1.9**	1.7	0.8	**1.3**	3.1	1.4	**2.3**
head, neck, limbs		0.0	2.8	**1.4**	1.4	2.4	**1.9**	0.0	0.8	**0.4**	0.0	0.0	**0.0**	0.8	0.0	**0.4**
nose, cheeks, chin		0.4	0.0	**0.2**	1.1	0.0	**0.6**	2.1	0.0	**1.1**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
commissures		1.6	3.0	**2.3**	2.1	0.8	**1.5**	0.7	0.0	**0.4**	1.7	0.8	**1.3**	2.3	1.4	**1.9**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Region 4	n=	169	144	313	169	145	314	165	152	317	145	162	307	144	158	302
With extra oral lesions		0.7	0.0	**0.4**	3.2	1.6	**2.4**	0.7	0.7	**0.7**	6.4	3.5	**5.0**	11.0	10.5	**10.8**
Ulceration,sores,erosions,fissures		0.7	0.0	**0.4**	0.0	0.8	**0.4**	0.0	0.0	**0.0**	3.1	1.9	**2.5**	6.8	9.3	**8.1**
head, neck, limbs		0.0	0.0	**0.0**	0.0	0.8	**0.4**	0.0	0.0	**0.0**	0.8	0.0	**0.4**	0.0	0.7	**0.4**
nose, cheeks, chin		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	1.6	0.0	**0.8**
commissures		0.7	0.0	**0.4**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.8	1.9	**1.4**	1.6	2.7	**2.2**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	1.6	0.0	**0.8**	3.7	5.9	**4.8**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.7	**0.4**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	3.2	0.0	**1.6**	0.7	0.0	**0.4**	2.0	1.6	**1.8**	4.1	1.2	**2.7**
Region 5	n=	162	141	303	157	146	303	165	135	300	146	160	306	138	140	278
With extra oral lesions		0.0	0.0	**0.0**	0.5	0.6	**0.6**	0.5	0.0	**0.3**	0.6	0.0	**0.3**	0.6	0.6	**0.6**
Ulceration,sores,erosions,fissures		0.0	0.0	**0.0**	0.5	0.6	**0.6**	0.5	0.0	**0.3**	0.6	0.0	**0.3**	0.6	0.6	**0.6**
head, neck, limbs		0.0	0.0	**0.0**	0.5	0.6	**0.6**	0.5	0.0	**0.3**	0.6	0.0	**0.3**	0.6	0.0	**0.3**
nose, cheeks, chin		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.6	**0.3**
commissures		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**

Extra Oral Lesions		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 6	**n=**	**180**	**141**	**321**	**160**	**153**	**313**	**166**	**149**	**315**	**147**	**170**	**317**	**149**	**167**	**316**
With extra oral lesions		0.0	1.2	**0.6**	0.0	0.4	**0.2**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	2.4	3.3	**2.9**
Ulceration,sores,erosions,fissures		0.0	1.2	**0.6**	0.0	0.4	**0.2**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	2.4	3.3	**2.9**
head, neck, limbs		0.0	1.2	**0.6**	0.0	0.4	**0.2**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.7	**0.4**
nose, cheeks, chin		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
commissures		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	2.4	2.5	**2.5**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	0.0
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
State Rural	**n=**	**682**	**590**	1272	**648**	**623**	1271	**649**	**614**	1263	**651**	**651**	1302	**617**	**651**	1268
With extra oral lesions		0.2	0.2	**0.2**	1.3	0.7	**1.0**	0.6	0.5	**0.6**	1.7	0.9	**1.3**	4.3	4.8	**4.6**
Ulceration,sores,erosions,fissures		0.2	0.2	**0.2**	0.6	0.6	**0.6**	0.4	0.4	**0.4**	1.2	0.6	**0.9**	3.6	4.6	**4.1**
head, neck, limbs		0.0	0.1	**0.1**	0.3	0.4	**0.4**	0.2	0.0	**0.1**	0.3	0.1	**0.2**	0.7	0.5	**0.6**
nose, cheeks, chin		0.0	0.0	**0.0**	0.1	0.1	**0.1**	0.1	0.1	**0.1**	0.0	0.1	**0.1**	0.5	0.3	**0.4**
commissures		0.2	0.1	**0.2**	0.1	0.0	**0.1**	0.0	0.2	**0.1**	0.5	0.4	**0.5**	1.6	2.2	**1.9**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.5	0.0	**0.3**	0.8	1.6	**1.2**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.2	**0.1**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	0.7	0.0	**0.4**	0.2	0.0	**0.1**	0.4	0.4	**0.4**	0.7	0.2	**0.5**
State Urban	**n=**	**352**	**255**	607	**332**	**265**	597	**339**	**256**	595	**274**	**338**	612	**258**	**312**	570
With extra oral lesions		0.1	1.2	**0.7**	0.3	0.4	**0.4**	0.0	0.0	**0.0**	0.7	0.8	**0.8**	1.9	1.8	**1.9**
Ulceration,sores,erosions,fissures		0.1	1.2	**0.7**	0.1	0.4	**0.3**	0.0	0.0	**0.0**	0.1	0.3	**0.2**	0.9	1.5	**1.2**
head, neck, limbs		0.0	1.1	**0.6**	0.0	0.4	**0.2**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.6	**0.3**
nose, cheeks, chin		0.1	0.0	**0.1**	0.1	0.0	**0.1**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.3	0.2	**0.3**
commissures		0.1	0.1	**0.1**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.1	0.3	**0.2**	0.3	0.6	**0.5**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.4	0.0	**0.2**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	0.3	0.0	**0.2**	0.0	0.0	**0.0**	0.3	0.5	**0.4**	1.0	0.3	**0.7**
State Total	**n=**	**1034**	**845**	1879	**980**	**888**	1868	**988**	**870**	1858	**925**	**989**	1914	**875**	**963**	1838
With extra oral lesions		0.2	0.4	**0.3**	1.0	0.6	**0.8**	0.4	0.4	**0.4**	1.5	0.9	**1.2**	3.9	4.0	**4.0**
Ulceration,sores,erosions,fissures		0.2	0.4	**0.3**	0.4	0.5	**0.5**	0.2	0.3	**0.3**	0.9	0.5	**0.7**	3.1	3.8	**3.5**
head, neck, limbs		0.0	0.3	**0.2**	0.2	0.4	**0.3**	0.1	0.0	**0.1**	0.2	0.1	**0.2**	0.5	0.5	**0.5**
nose, cheeks, chin		0.0	0.0	**0.0**	0.1	0.1	**0.1**	0.1	0.1	**0.1**	0.0	0.1	**0.1**	0.4	0.3	**0.4**
commissures		0.2	0.1	**0.2**	0.1	0.0	**0.1**	0.0	0.2	**0.1**	0.4	0.3	**0.4**	1.4	1.8	**1.6**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.4	0.0	**0.2**	0.8	1.3	**1.1**
Cancrum oris		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Abnormalities of upper & lower lips		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.1	**0.1**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.0	0.0	**0.0**	0.6	0.0	**0.3**	0.1	0.0	**0.1**	0.4	0.4	**0.4**	0.8	0.2	**0.5**

6.6.2. T M Joint symptoms and signs

Table 6.16 and Figure 6.16 present the per cent subjects with temporomandibular joint (TM Joint) symptoms and signs.

1.2 per cent of the state's 65-74 subjects had symptoms and 7.5 per cent had signs of involvement of tempromandibular joints. Most of the time the symptoms are noticed in middle aged and the elderly.

About 9per cent had symptoms indicating TMJ problem like tenderness and clicking. There are no significant differences between urban and rural subjects nor between males and females.

Region-II (Guntur) surprisingly has not even 1 instance of temperomandibular signs and symptoms, whereas Rangareddy district has highest percentage of cases with TMJ signs and seen in middle age and elderly.

Region-I had highest percentage of TMJ signs (20.6per cent) followed by region-V Rangareddy district (17.3per cent).

Fig. 6.16. Percent subjects with signs in T M Joint in Andhra Pradesh

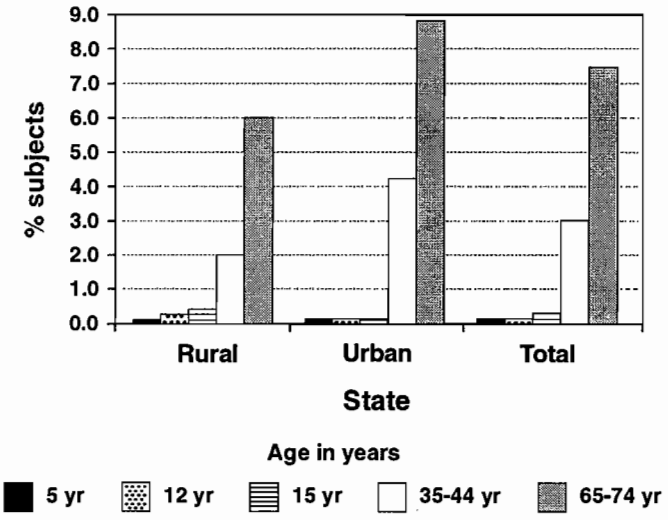


Table 6.16 Percent subjects with symptoms and signs in the tempromandibular joints by age, sex and geographical area State : Andhra Pradesh

T M Joints Assessment		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	*n=*	**165**	**146**	***311***	**159**	**145**	***304***	**158**	**149**	***307***	**147**	**164**	***311***	**135**	**173**	***308***
Symptoms present		0.0	0.0	***0.0***	0.7	0.0	***0.4***	0.0	0.0	***0.0***	0.0	0.7	***0.4***	2.5	2.5	***2.5***
Signs present		1.1	0.0	***0.6***	1.4	0.5	***1.0***	1.2	0.0	***0.6***	7.6	10.3	***9.0***	18.6	20.6	***19.6***
Clicking		1.1	0.0	***0.6***	1.4	0.5	***1.0***	1.2	0.0	***0.6***	6.8	10.3	***8.6***	18.0	17.4	***17.7***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	1.3	***1.1***	0.6	3.1	***1.9***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 2	*n=*	**175**	**150**	***325***	**168**	**157**	***325***	**171**	**150**	***321***	**164**	**184**	***348***	**160**	**159**	***319***
Symptoms present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Signs present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Clicking		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 3	*n=*	**183**	**123**	***306***	**167**	**139**	***306***	**163**	**134**	***297***	**175**	**148**	***323***	**148**	**165**	***313***
Symptoms present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.6	0.0	***0.3***	3.1	4.2	***3.7***
Signs present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.8	***0.4***	1.3	0.0	***0.7***	4.6	7.8	***6.2***
Clicking		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.3	0.0	***0.7***	4.6	7.8	***6.2***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.8	***0.4***	0.6	0.0	***0.3***	2.3	3.5	***2.9***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.6	0.0	***0.3***	0.0	0.0	***0.0***
Region 4	*n=*	**169**	**144**	***313***	**169**	**145**	***314***	**165**	**152**	***317***	**145**	**161**	***306***	**144**	**157**	***301***
Symptoms present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.7	0.0	***0.4***	0.0	1.5	***0.8***	3.7	2.7	***3.2***
Signs present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.4	0.0	***0.7***	2.4	2.2	***2.3***	4.1	2.7	***3.4***
Clicking		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.7	0.0	***0.4***	1.6	1.5	***1.6***	2.5	0.7	***1.6***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.7	0.0	***0.4***	0.0	0.7	***0.4***	1.6	1.9	***1.8***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	0.0	***0.4***	0.0	0.0	***0.0***
Region 5	*n=*	**162**	**141**	***303***	**156**	**146**	***302***	**165**	**134**	***299***	**146**	**160**	***306***	**138**	**140**	***278***
Symptoms present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.5	0.0	***0.8***	0.6	1.8	***1.2***
Signs present		0.0	0.0	***0.0***	0.0	0.6	***0.3***	0.0	0.0	***0.0***	6.9	5.9	***6.4***	10.3	17.3	***13.8***
Clicking		0.0	0.0	***0.0***	0.0	0.6	***0.3***	0.0	0.0	***0.0***	6.9	5.9	***6.4***	10.3	17.3	***13.8***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.2	0.6	***0.9***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 6	*n=*	**180**	**141**	***321***	**160**	**153**	***313***	**166**	**147**	***313***	**147**	**170**	***317***	**149**	**166**	***315***
Symptoms present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	0.0	***0.4***
Signs present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.7	***0.4***	4.8	8.0	***6.4***
Clicking		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.7	***0.4***	4.8	8.0	***6.4***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	*n=*	**682**	**590**	***1272***	**648**	**620**	***1268***	**649**	**612**	***1261***	**650**	**650**	***1300***	**616**	**649**	***1265***
Symptoms present		0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.2	0.0	***0.1***	0.2	0.4	***0.3***	1.6	1.6	***1.6***
Signs present		0.1	0.0	***0.1***	0.2	0.1	***0.2***	0.5	0.0	***0.3***	1.9	2.1	***2.0***	4.8	7.2	***6.0***
Clicking		0.1	0.0	***0.1***	0.2	0.1	***0.2***	0.3	0.0	***0.2***	1.6	1.9	***1.8***	4.4	6.3	***5.4***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.1	0.4	***0.3***	0.8	1.2	***1.0***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.0	0.0	***0.0***
State Urban	*n=*	**352**	**255**	***607***	**331**	**265**	***596***	**339**	**254**	***593***	**274**	**337**	***611***	**258**	**311**	***569***
Symptoms present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.7	0.0	***0.4***	0.4	0.3	***0.4***
Signs present		0.2	0.0	***0.1***	0.0	0.2	***0.1***	0.2	0.0	***0.1***	4.2	4.1	***4.2***	7.9	9.8	***8.9***
Clicking		0.2	0.0	***0.1***	0.0	0.2	***0.1***	0.2	0.0	***0.1***	4.2	4.1	***4.2***	7.7	9.5	***8.6***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.3	***0.3***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Total	*n=*	**1034**	**845**	***1879***	**979**	**885**	***1864***	**988**	**866**	***1854***	**924**	**987**	***1911***	**874**	**960**	***1834***
Symptoms present		0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.1	0.0	***0.1***	0.3	0.3	***0.3***	1.3	1.1	***1.2***
Signs present		0.1	0.0	***0.1***	0.1	0.1	***0.1***	0.4	0.0	***0.2***	2.8	3.1	***3.0***	6.1	8.9	***7.5***
Clicking		0.1	0.0	***0.1***	0.1	0.1	***0.1***	0.3	0.0	***0.2***	2.6	3.0	***2.8***	5.7	8.2	***7.0***
Tenderness		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.1	0.3	***0.2***	0.6	0.9	***0.8***
Reduced jaw mobility		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.0	0.0	***0.0***

6.6.3 Enamel Defects (Opacities, Hypoplasia)

Structural enamel defects in teeth were recorded in terms of opacities and hypoplasias, types of opacities and combinations of both. The lower age group of 5 year was excluded from examination.

Fig. 6.17. Percent subjects with enamel defects in Andhra Pradesh

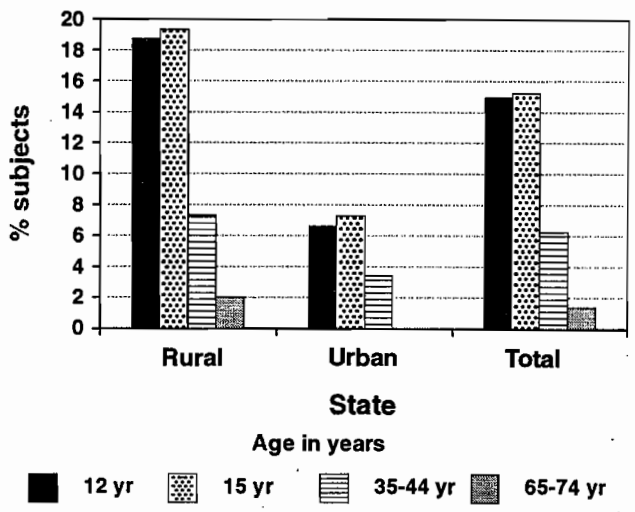


Table 6.17 and Figure 6.17 present the per cent subjects with enamel defects by type of defect and Table 6.18 and Figure 6.18 present presents the mean number of teeth affected with enamel defects by type of defects.

The prevalence of enamel defects progressively decreased with advancing age. Maximum defects were seen in 12 and 15 years groups. Demarcated opacity was the most common defect observed. The prevalence of enamel defects did not differ between boys and girls

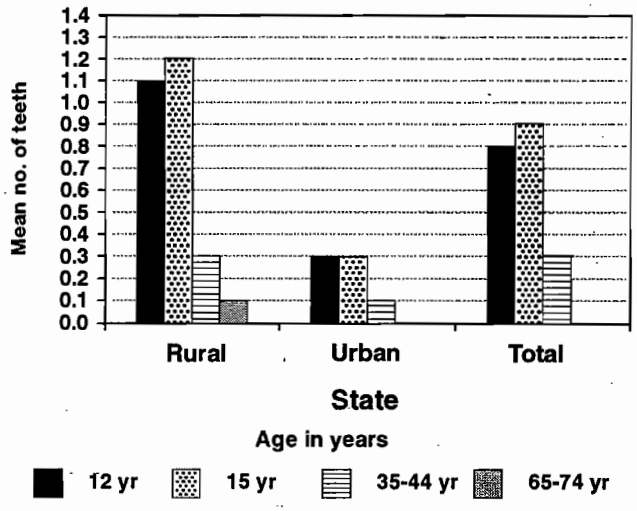
Urban subjects showed considerably lesser enamel defects compared to rural subjects

More rural males and urban females showed enamel defects

All the regions showed more enamel defects in 12 and 15 years group with only negligible percentage in 65-74 years showing any enamel defects. Chittoor district showed maximum prevalence of enamel defects followed by Rangareddy and Vishakaptnam districts. Guntur district showed the least enamel defects

Mean number of teeth affected by enamel defects is practically non-existent in 5 and 65-74 age groups.

Fig. 6.18. Mean number of teeth with enamel defects in Andhra Pradesh



A mean number of 0.8 teeth were affected by enamel defects in 12, 15 age groups. The defects decreased in 35-44 group with a value of 0.25. Rural subjects were having more enamel defects compared to urban subjects. Demarcated opacities, diffuse opacity were seen in all most all the instances. Combinations of opacities and all three conditions together were not encountered

Regions IV and V and VI had nearly 1.4 to 1.9 mean teeth affected by enamel defects in 12, 15 and 35-64 age groups. Region I had least mean number of teeth affected by enamel defects.

Table 6.17 Percent distribution of subjects with enamel defects (opacities/ hypoplasia) by age, sex & geographical area.State : Andhra Pradesh

Enamel Opacities/Hypoplasia		12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 1	**n=**	**159**	**147**	***306***	**158**	**149**	***307***	**147**	**164**	***311***	**119**	**148**	***267***
With enamel defects		17.0	17.5	***17.3***	15.6	13.0	***14.3***	8.4	7.2	***7.8***	0.0	1.5	***0.8***
with demarcated opacity		14.2	16.0	***15.1***	14.4	11.6	***13.0***	8.4	5.2	***6.8***	0.0	0.7	***0.4***
with diffuse opacity		2.1	0.7	***1.4***	0.0	1.5	***0.8***	0.8	1.3	***1.1***	0.0	0.0	***0.0***
with hypoplasia		0.7	1.5	***1.1***	0.5	0.0	***0.3***	0.0	0.7	***0.4***	0.0	0.7	***0.4***
with other defects		0.7	0.0	***0.4***	0.7	0.0	***0.4***	0.0	0.7	***0.4***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.7	***0.4***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.7	***0.4***	0.0	0.0	***0.0***
Region 2	**n=**	**168**	**157**	***325***	**171**	**150**	***321***	**164**	**184**	***348***	**157**	**151**	***308***
With enamel defects		1.8	2.1	***2.0***	2.0	1.2	***1.6***	1.4	0.0	***0.7***	0.0	0.0	***0.0***
with demarcated opacity		0.4	0.0	***0.2***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with diffuse opacity		1.4	1.4	***1.4***	2.0	0.7	***1.4***	0.7	0.0	***0.4***	0.0	0.0	***0.0***
with hypoplasia		0.0	0.0	***0.0***	0.0	0.5	***0.3***	0.7	0.0	***0.4***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.7	***0.4***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 3	**n=**	**167**	**139**	***306***	**164**	**134**	***298***	**175**	**148**	***323***	**128**	**148**	***276***
With enamel defects		3.3	11.9	***7.6***	5.0	5.2	***5.1***	1.3	1.6	***1.5***	0.9	0.0	***0.5***
with demarcated opacity		2.6	11.9	***7.3***	4.2	5.2	***4.7***	0.6	0.8	***0.7***	0.9	0.0	***0.5***
with diffuse opacity		0.7	0.8	***0.8***	1.4	0.8	***1.1***	0.0	0.8	***0.4***	0.0	0.0	***0.0***
with hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.8	***0.4***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.6	0.0	***0.3***	0.0	0.0	***0.0***
Region 4	**n=**	**168**	**143**	***311***	**165**	**150**	***315***	**144**	**163**	***307***	**116**	**118**	***234***
With enamel defects		32.2	35.3	***33.8***	39.6	39.4	***39.5***	20.7	18.0	***19.4***	6.9	6.0	***6.5***
with demarcated opacity		16.6	19.5	***18.1***	24.9	26.7	***25.8***	10.3	9.4	***9.9***	2.0	4.0	***3.0***
with diffuse opacity		11.2	11.5	***11.4***	11.5	8.7	***10.1***	11.8	7.2	***9.5***	4.9	1.0	***3.0***
with hypoplasia		6.6	6.2	***6.4***	18.4	16.0	***17.2***	5.2	5.9	***5.6***	0.0	1.0	***0.5***
with other defects		0.0	0.5	***0.3***	0.0	0.0	***0.0***	0.8	0.0	***0.4***	0.0	1.0	***0.5***
with combinations of opacities and hypoplasia		2.1	0.5	***1.3***	2.1	2.4	***2.3***	0.8	0.0	***0.4***	1.0	0.0	***0.5***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.5	0.0	***0.3***	0.0	0.0	***0.0***
Region 5	**n=**	**157**	**146**	***303***	**165**	**135**	***300***	**146**	**156**	***302***	**92**	**92**	***184***
With enamel defects		23.7	22.1	***22.9***	17.4	21.2	***19.3***	6.8	7.4	***7.1***	0.9	2.6	***1.8***
with demarcated opacity		11.0	6.7	***8.9***	5.3	6.5	***5.9***	3.4	3.0	***3.2***	0.9	0.9	***0.9***
with diffuse opacity		10.2	14.3	***12.3***	10.1	12.2	***11.2***	2.8	4.4	***3.6***	0.0	0.9	***0.5***
with hypoplasia		3.1	3.3	***3.2***	3.4	2.4	***2.9***	0.6	1.0	***0.8***	0.0	0.9	***0.5***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.6	0.0	***0.3***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		1.5	1.7	***1.6***	0.5	1.8	***1.2***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 6	**n=**	**160**	**153**	***313***	**166**	**149**	***315***	**147**	**170**	***317***	**134**	**148**	***282***
With enamel defects		12.2	14.0	***13.1***	15.7	14.3	***15.0***	4.0	3.2	***3.6***	0.9	0.0	***0.5***
with demarcated opacity		10.6	13.2	***11.9***	15.0	13.1	***14.1***	4.0	2.9	***3.5***	0.0	0.0	***0.0***
with diffuse opacity		2.3	3.9	***3.1***	1.5	0.0	***0.8***	0.8	0.0	***0.4***	0.9	0.0	***0.5***
with hypoplasia		0.0	0.8	***0.4***	0.7	0.8	***0.8***	0.0	0.4	***0.2***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.4	***0.2***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.8	0.0	***0.4***	0.7	2.0	***1.4***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***

Enamel Opacities/Hypoplasia		12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T
State Rural	n=	**648**	**621**	***1269***	**650**	**612**	***1262***	**649**	**648**	***1297***	**527**	**539**	***1066***
With enamel defects		18.4	19.2	***18.8***	20.3	18.3	***19.3***	8.1	6.8	***7.5***	1.9	2.0	***2.0***
with demarcated opacity		10.3	11.8	***11.1***	13.3	12.2	***12.8***	5.2	4.1	***4.7***	0.6	1.1	***0.9***
with diffuse opacity		6.3	7.2	***6.8***	5.9	4.7	***5.3***	3.4	2.3	***2.9***	1.3	0.4	***0.9***
with hypoplasia		2.5	2.3	***2.4***	5.5	4.4	***5.0***	1.5	1.6	***1.6***	0.0	0.5	***0.3***
with other defects		0.1	0.0	***0.1***	0.1	0.0	***0.1***	0.3	0.1	***0.2***	0.0	0.2	***0.1***
with combinations of opacities and hypoplasia		1.1	0.7	***0.9***	0.9	1.2	***1.1***	0.2	0.1	***0.2***	0.2	0.0	***0.1***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.0	0.0	***0.0***
State Urban	n=	**331**	**264**	***595***	**339**	**255**	***594***	**274**	**337**	***611***	**219**	**266**	***485***
With enamel defects		7.3	6.0	***6.7***	5.6	8.5	***7.1***	3.1	3.6	***3.4***	0.0	0.0	***0.0***
with demarcated opacity		5.7	2.6	***4.2***	2.8	4.7	***3.8***	0.7	1.5	***1.1***	0.0	0.0	***0.0***
with diffuse opacity		1.9	2.0	***2.0***	2.3	2.1	***2.2***	1.7	1.8	***1.8***	0.0	0.0	***0.0***
with hypoplasia		0.3	1.0	***0.7***	0.7	1.3	***1.0***	0.3	0.8	***0.6***	0.0	0.0	***0.0***
with other defects		0.0	0.3	***0.2***	0.0	0.0	***0.0***	0.0	0.3	***0.2***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.3	***0.2***	0.0	1.1	***0.6***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.0	***0.2***	0.0	0.0	***0.0***
State Total	n=	**979**	**885**	***1864***	**989**	**867**	***1856***	**923**	**985**	***1908***	**746**	**805**	***1551***
With enamel defects		14.6	15.1	***14.9***	15.4	15.2	***15.3***	6.6	5.6	***6.1***	1.5	1.4	***1.5***
with demarcated opacity		9.2	9.6	***9.4***	10.4	10.6	***10.5***	4.1	3.2	***3.7***	0.4	0.8	***0.6***
with diffuse opacity		4.4	5.2	***4.8***	4.2	3.3	***3.8***	2.8	2.0	***2.4***	1.1	0.2	***0.7***
with hypoplasia		1.7	1.8	***1.8***	4.0	3.7	***3.9***	1.2	1.3	***1.3***	0.0	0.3	***0.2***
with other defects		0.1	0.1	***0.1***	0.1	0.0	***0.1***	0.2	0.2	***0.2***	0.0	0.2	***0.1***
with combinations of opacities and hypoplasia		0.8	0.5	***0.7***	0.6	1.1	***0.9***	0.1	0.1	***0.1***	0.2	0.0	***0.1***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.0	0.0	***0.0***

Table 6.18 Mean number of teeth with enamel defects (opacities/ hypoplasia) by age, sex & geographical area **State : Andhra Pradesh**

Enamel Opacities/Hypoplasia		12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 1	*n=*	**162**	**149**	***311***	**160**	**150**	***310***	**149**	**167**	***316***	**140**	**177**	***317***
Mean no. of teeth with enamel defects		0.2	0.3	***0.3***	0.3	0.2	***0.3***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with demarcated opacity		0.2	0.3	***0.3***	0.2	0.2	***0.2***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with diffuse opacity		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 2	*n=*	**168**	**157**	***325***	**171**	**151**	***322***	**166**	**184**	***350***	**162**	**159**	***321***
Mean no. of teeth with enamel defects		0.1	0.2	***0.2***	0.2	0.1	***0.2***	0.1	0.0	***0.1***	0.0	0.0	***0.0***
with demarcated opacity		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with diffuse opacity		0.1	0.1	***0.1***	0.2	0.1	***0.2***	0.1	0.0	***0.1***	0.0	0.0	***0.0***
with hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.1	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 3	*n=*	**169**	**142**	***311***	**169**	**138**	***307***	**177**	**152**	***329***	**153**	**168**	***321***
Mean no. of teeth with enamel defects		0.3	0.5	***0.4***	0.3	0.3	***0.3***	0.0	0.1	***0.1***	0.0	0.0	***0.0***
with demarcated opacity		0.2	0.5	***0.4***	0.2	0.2	***0.2***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with diffuse opacity		0.1	0.0	***0.1***	0.1	0.0	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 4	*n=*	**170**	**145**	***315***	**167**	**153**	***320***	**153**	**163**	***316***	**149**	**160**	***309***
Mean no. of teeth with enamel defects		1.4	1.4	***1.4***	1.9	1.7	***1.8***	0.7	0.7	***0.7***	0.1	0.2	***0.2***
with demarcated opacity		0.5	0.5	***0.5***	0.8	0.8	***0.8***	0.2	0.3	***0.3***	0.0	0.1	***0.1***
with diffuse opacity		0.5	0.5	***0.5***	0.6	0.3	***0.5***	0.3	0.3	***0.3***	0.1	0.0	***0.1***
with hypoplasia		0.4	0.3	***0.4***	0.5	0.4	***0.5***	0.2	0.1	***0.2***	0.0	0.1	***0.1***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.1	0.0	***0.1***	0.1	0.1	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 5	*n=*	**157**	**147**	***304***	**165**	**135**	***300***	**148**	**162**	***310***	**138**	**142**	***280***
Mean no. of teeth with enamel defects		1.9	1.9	***1.9***	1.6	1.8	***1.7***	0.6	0.5	***0.6***	0.1	0.1	***0.1***
with demarcated opacity		0.6	0.4	***0.5***	0.4	0.5	***0.5***	0.2	0.1	***0.2***	0.1	0.0	***0.1***
with diffuse opacity		0.9	1.1	***1.0***	0.8	1.0	***0.9***	0.3	0.3	***0.3***	0.0	0.1	***0.1***
with hypoplasia		0.3	0.3	***0.3***	0.3	0.2	***0.3***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.1	0.1	***0.1***	0.0	0.1	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***

Enamel Opacities/Hypoplasia		12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 6	***n=***	**161**	**154**	***315***	**168**	**150**	***318***	**151**	**171**	***322***	**149**	**167**	***316***
Mean no. of teeth with enamel defects		1.0	1.0	***1.0***	1.0	0.9	***1.0***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with demarcated opacity		0.8	0.9	***0.9***	0.9	0.9	***0.9***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with diffuse opacity		0.1	0.1	***0.1***	0.1	0.0	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.1	0.0	***0.1***	0.0	0.1	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	***n=***	**652**	**625**	***1277***	**654**	**618**	***1272***	**663**	**656**	***1319***	**625**	**656**	***1281***
Mean no. of teeth with enamel defects		1.1	1.1	***1.1***	1.3	1.0	***1.2***	0.3	0.3	***0.3***	0.1	0.1	***0.1***
with demarcated opacity		0.5	0.5	***0.5***	0.6	0.5	***0.6***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with diffuse opacity		0.4	0.4	***0.4***	0.4	0.3	***0.4***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with hypoplasia		0.2	0.1	***0.2***	0.2	0.1	***0.2***	0.1	0.0	***0.1***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.1	0.1	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Urban	***n=***	**335**	**269**	***604***	**346**	**259**	***605***	**281**	**343**	***624***	**266**	**317**	***583***
Mean no. of teeth with enamel defects		0.3	0.3	***0.3***	0.2	0.4	***0.3***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with demarcated opacity		0.2	0.1	***0.2***	0.1	0.2	***0.2***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with diffuse opacity		0.1	0.1	***0.1***	0.1	0.1	***0.1***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with hypoplasia		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Total	***n=***	**987**	**894**	***1881***	**1000**	**877**	***1877***	**944**	**999**	***1943***	**891**	**973**	***1864***
Mean no. of teeth with enamel defects		0.8	0.8	***0.8***	0.9	0.8	***0.9***	0.3	0.2	***0.3***	0.0	0.0	***0.0***
with demarcated opacity		0.4	0.4	***0.4***	0.5	0.4	***0.5***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with diffuse opacity		0.2	0.3	***0.3***	0.3	0.2	***0.3***	0.1	0.1	***0.1***	0.0	0.0	***0.0***
with hypoplasia		0.1	0.1	***0.1***	0.1	0.1	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with other defects		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with combinations of opacities and hypoplasia		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with all three conditions		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***

6.6.4. Prosthetic status (upper & lower)

The prosthetic status was recorded for subjects 15 years and above. Information was collected to assess the extent to which subjects were wearing dental prosthesis including bridge, partial dentures and full dentures. The data was recorded separately for upper arch and the lower arch

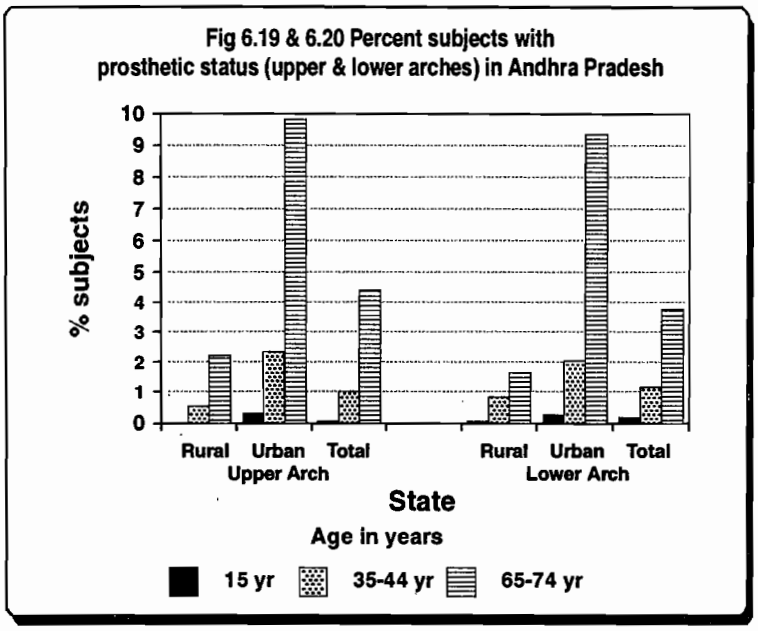


Table 6.19 and Figure 6.19 present the per cent subjects with prosthetic status of upper arch by type of prostheses

5636 subjects were examined in the three age groups viz 15, 35-44 and 65-74. Out of 891 males of 65-74 group surveyed 5 per cent had prosthesis and 3 per cent of them were full removable denture and the remaining were partial denture wearers. There was no differences between males and females in this regard.

Among the 988 subjects in the 35-44 group, prosthesis wear was less with only 1.6 per cent of them using any prosthesis and 1.1 per cent of this were having bridges. None of the 15 years group were using any prosthesis

Urban subjects were more often using prosthesis more often (9.8 per cent) compared to rural subjects (2.9 per cent) in the elderly group. More rural males were using prosthesis (2.9 per cent) than females (1.4 per cent)

Region I (Vishakapatnam) showed more prosthesis wearers followed by region V (Rangareddy). Region 2 (Guntur) least prosthesis wearers

Except few instances in Vishakapatnam district, none of the states 15 years olds were wearing any prosthesis

Table 6.20 and Figure 6.20 present the per cent subjects with prosthetic status of lower arch by type of prosthesis

Examination of 3776 adults and elderly of Andhra Pradesh state showed 3.8 per cent of them were having some prosthesis or other

A small percentage (3) of the state's 15 years old females were having either bridge or removable partial denture

Among 65-74 group, females were wearing full removable denture (3 per cent) more than males (2.1 per cent)

Table 6.19 Percent distribution of subjects with their prosthetic status (upper arch) by age, sex, and geographical area. State : Andhra Pradesh

Prosthetic Status (Upper)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	*n=*	**158**	**149**	***307***	**149**	**164**	***313***	**140**	**177**	***317***
With Prostheses present		0.5	0.5	***0.5***	1.3	4.8	***3.1***	4.4	7.5	***6.0***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.5	3.2	***1.9***	0.6	0.0	***0.3***
Partial denture		0.5	0.5	***0.5***	0.7	1.6	***1.2***	1.1	1.9	***1.5***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.4	***0.2***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.8	5.1	***4.0***
Region 2	*n=*	**171**	**151**	***322***	**165**	**182**	***347***	**162**	**159**	***321***
With Prostheses present		0.0	0.0	***0.0***	0.0	0.4	***0.2***	0.7	1.4	***1.1***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Partial denture		0.0	0.0	***0.0***	0.0	0.4	***0.2***	0.0	0.7	***0.4***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.7	0.7	***0.7***
Region 3	*n=*	**163**	**134**	***297***	**173**	**149**	***322***	**153**	**168**	***321***
With Prostheses present		0.0	0.0	***0.0***	1.5	1.7	***1.6***	3.1	6.9	***5.0***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.8	1.2	***1.0***	0.0	2.9	***1.5***
Partial denture		0.0	0.0	***0.0***	0.8	0.0	***0.4***	0.0	0.0	***0.0***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.7	***0.4***
Full removable denture		0.0	0.0	***0.0***	0.0	0.5	***0.3***	3.1	3.3	***3.2***
Region 4	*n=*	**165**	**151**	***316***	**147**	**163**	***310***	**149**	**160**	***309***
With Prostheses present		0.0	0.0	***0.0***	0.0	2.9	***1.5***	7.1	0.9	***4.0***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.0	2.0	***1.0***	0.0	0.4	***0.2***
Partial denture		0.0	0.0	***0.0***	0.0	0.9	***0.5***	2.8	0.0	***1.4***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	0.0	***0.4***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	3.5	0.4	***2.0***
Region 5	*n=*	**165**	**135**	***300***	**144**	**160**	***304***	**138**	**142**	***280***
With Prostheses present		0.0	0.0	***0.0***	0.6	1.3	***1.0***	8.0	8.0	***8.0***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.0	1.3	***0.7***	0.0	0.6	***0.3***
Partial denture		0.0	0.0	***0.0***	0.6	0.0	***0.3***	1.1	0.6	***0.9***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.1	0.0	***0.6***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	5.9	6.9	***6.4***
Region 6	*n=*	**166**	**149**	***315***	**149**	**170**	***319***	**149**	**167**	***316***
With Prostheses present		0.0	0.0	***0.0***	0.4	1.1	***0.8***	5.1	2.2	***3.7***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.0	1.1	***0.6***	0.4	0.4	***0.4***
Partial denture		0.0	0.0	***0.0***	0.4	0.0	***0.2***	2.4	0.0	***1.2***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.4	1.8	***2.1***
State Rural	*n=*	**650**	**614**	***1264***	**653**	**650**	***1303***	**625**	**656**	***1281***
With Prostheses present		0.0	0.0	***0.0***	0.2	0.8	***0.5***	2.9	1.4	***2.2***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.0	0.7	***0.4***	0.0	0.2	***0.1***
Partial denture		0.0	0.0	***0.0***	0.2	0.1	***0.2***	1.2	0.5	***0.9***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.5	0.6	***1.1***
State Urban	*n=*	**338**	**255**	***593***	**274**	**338**	***612***	**266**	**317**	***583***
With Prostheses present		0.2	0.3	***0.3***	0.9	3.8	***2.4***	9.8	9.9	***9.9***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.4	2.4	***1.4***	0.6	0.7	***0.7***
Partial denture		0.2	0.3	***0.3***	0.5	1.3	***0.9***	1.6	0.6	***1.1***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.7	0.2	***0.5***
Full removable denture		0.0	0.0	***0.0***	0.0	0.1	***0.1***	6.9	8.3	***7.6***
State Total	*n=*	**988**	**869**	***1857***	**927**	**988**	***1915***	**891**	**973**	***1864***
With Prostheses present		0.0	0.1	***0.1***	0.3	1.6	***1.0***	5.0	3.8	***4.4***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.1	1.2	***0.7***	0.1	0.3	***0.2***
Partial denture		0.0	0.1	***0.1***	0.2	0.4	***0.3***	1.5	0.5	***1.0***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.1	***0.3***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	3.0	2.9	***3.0***

Note: For information on current status and need for full mouth removable dentures, please refer to Tables 6.21 and 6.24 respectively.

Table 6.20 Percent distribution of subjects with their prosthetic status (lower arch) by age, sex, and geographical area. State : Andhra Pradesh

Prosthetic Status (Lower)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	158	149	307	147	164	311	140	177	317
Prostheses present		0.5	1.0	0.8	0.0	1.4	0.7	3.9	6.6	5.3
Bridge or more than one bridge		0.0	0.5	0.3	0.0	0.5	0.3	0.0	0.6	0.3
Partial denture		0.5	0.5	0.5	0.0	0.9	0.5	1.1	0.9	1.0
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	2.8	4.7	3.8
Region 2	n=	171	151	322	164	182	346	162	159	321
Prostheses present		0.0	0.0	0.0	0.0	1.2	0.6	0.7	0.7	0.7
Bridge or more than one bridge		0.0	0.0	0.0	0.0	0.6	0.3	0.0	0.0	0.0
Partial denture		0.0	0.0	0.0	0.0	0.6	0.3	0.0	0.0	0.0
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7
Region 3	n=	163	134	297	173	149	322	153	168	321
Prostheses present		0.0	0.0	0.0	1.3	1.6	1.5	4.3	6.1	5.2
Bridge or more than one bridge		0.0	0.0	0.0	0.7	0.8	0.8	0.7	0.7	0.7
Partial denture		0.0	0.0	0.0	0.7	0.8	0.8	0.7	0.7	0.7
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.4
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	2.8	4.0	3.4
Region 4	n=	165	151	316	147	163	310	149	160	309
Prostheses present		0.0	0.8	0.4	1.7	2.2	2.0	6.0	1.7	3.9
Bridge or more than one bridge		0.0	0.8	0.4	0.0	0.7	0.4	0.0	0.0	0.0
Partial denture		0.0	0.0	0.0	1.7	1.5	1.6	2.4	0.9	1.7
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.9	2.2
Region 5	n=	165	135	300	144	160	304	138	142	280
Prostheses present		0.0	0.0	0.0	1.6	0.8	1.2	7.0	6.9	7.0
Bridge or more than one bridge		0.0	0.0	0.0	1.0	0.8	0.9	1.1	0.0	0.6
Partial denture		0.0	0.0	0.0	0.6	0.0	0.3	2.7	0.0	1.4
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	3.2	6.9	5.1
Region 6	n=	166	149	315	149	170	319	149	167	316
Prostheses present		0.0	0.0	0.0	0.0	1.8	0.9	2.4	3.3	2.9
Bridge or more than one bridge		0.0	0.0	0.0	0.0	1.8	0.9	0.0	0.7	0.4
Partial denture		0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.7	1.2
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.8	1.3
State Rural	n=	650	614	1264	651	650	1301	625	656	1281
Prostheses present		0.0	0.2	0.1	0.4	1.1	0.8	1.9	1.3	1.6
Bridge or more than one bridge		0.0	0.2	0.1	0.0	0.5	0.3	0.0	0.4	0.2
Partial denture		0.0	0.0	0.0	0.3	0.6	0.5	0.8	0.3	0.6
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.6	0.9
State Urban	n=	338	255	593	273	338	611	266	317	583
Prostheses present		0.2	0.5	0.4	1.4	2.5	2.0	8.9	9.6	9.3
Bridge or more than one bridge		0.0	0.3	0.2	0.7	2.1	1.4	0.7	0.0	0.4
Partial denture		0.2	0.3	0.3	0.7	0.4	0.6	3.4	1.0	2.2
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	4.8	8.4	6.6
State Total	n=	988	869	1857	924	988	1912	891	973	1864
Prostheses present		0.0	0.3	0.2	0.6	1.5	1.1	3.8	3.8	3.8
Bridge or more than one bridge		0.0	0.2	0.1	0.3	0.9	0.6	0.3	0.3	0.3
Partial denture		0.0	0.1	0.1	0.4	0.6	0.5	1.4	0.4	0.9
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Full removable denture		0.0	0.0	0.0	0.0	0.0	0.0	2.1	3.0	2.6

Note: *For information on current status and need for full mouth removable dentures, please refer to Tables 6.21 and 6.24 respectively.*

The minimal use of prosthesis by state's subjects (between 1 to 3.8 per cent) does not augur well for their functional or esthetic demands

More urban subjects were using prosthesis (1.5 to 9.1 per cent per cent compared to rural subjects (0.7 to 1.6) and this is on expected lines as urban subjects have more accessibility and affordability for dental services

Among regions the use of prosthesis in decreasing order is as follows; Guntur (0.7 per cent), Khammam (2.7 per cent), Guntur (3.7 per cent), Nellore (4.7 per cent), Vishakapatnam (5.2 per cent), Ranagreddy (7 per cent). Rangareddy district has maximum prosthesis wearers.

Table 6.21 Percent subjects with full mouth removable denture (upper and lower arch) by age, sex and geographical area. State : Andhra Pradesh

Prosthetic status of full denture (upper & lower arch)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	158	149	*307*	147	164	*311*	136	173	*309*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	2.8	4.8	*3.8*
Region 2	n=	171	150	*321*	164	182	*346*	159	157	*316*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.7	0.7	*0.7*
Region 3	n=	161	134	*295*	173	149	*322*	148	165	*313*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	2.4	3.4	*2.9*
Region 4	n=	164	149	*313*	145	162	*307*	143	157	*300*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	3.7	0.4	*2.1*
Region 5	n=	165	131	*296*	144	160	*304*	138	139	*277*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	3.2	7.0	*5.1*
Region 6	n=	165	149	*314*	145	169	*314*	149	166	*315*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.8	1.8	*1.3*
State Rural	n=	647	611	*1258*	645	648	*1293*	614	649	*1263*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	1.1	0.6	*0.9*
State Urban	n=	337	251	*588*	273	338	*611*	259	308	*567*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	4.8	8.3	*6.6*
State Total	n=	984	862	*1846*	918	986	*1904*	873	957	*1830*
Percent subjects with full mouth removable denture		0.0	0.0	*0.0*	0.0	0.0	*0.0*	2.1	2.9	*2.5*

6.6.5. Prosthetic need (upper & lower)

The prosthetic need refers to the unmet need for replacement of lost or missing teeth. Prosthesis may include partial or full removable dentures and fixed prosthesis including bridges. The data on prosthetic needs (upper and lower arches) should be correlated with the section on prosthetic status

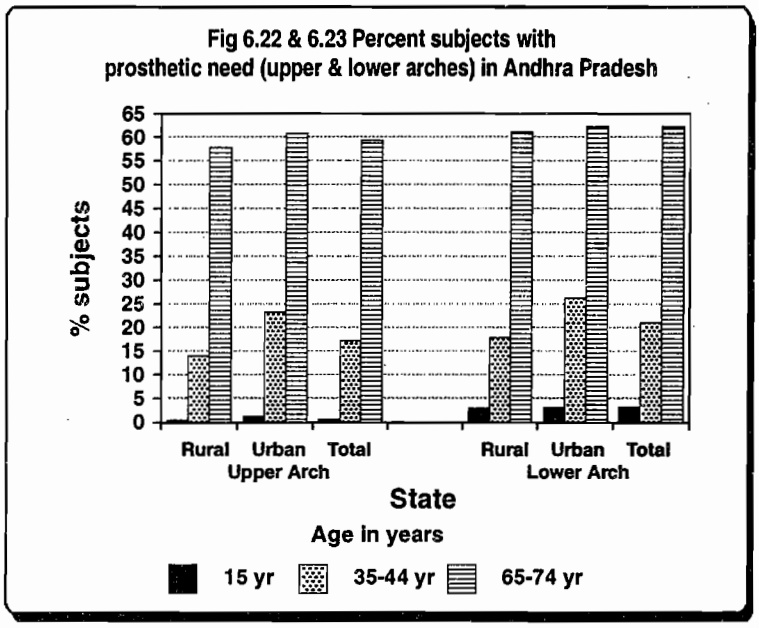


Table 6.22 and Figure 6.22 present the per cent subjects with prosthetic need of upper dental arch by type of prosthesis neeeded

5605 subjects were examined in the state. 60 per cent of the subjects in 65-74 group needed some prosthesis or other for upper arch. The need is felt equally in rural and urban regions as well as in males and females.

The need was 17 per cent in middle age (35-44) group. Urban subjects wew in need marginally more than rural. The need for prosthesis was minimum among 15 years old (1.3 per cent)

Thus it is evident , prosthetic need is age dependent and the elderly of the state need maximum prosthetic care

Out of the prosthetic care in the elderly 27 per cent needed multi unit prosthesis, 24 per cent needed full prosthesis. The need for full prosthesis was least in Khammam (9.4 per cent) and most in Ranagareddy district. The need for different prosthesis did not significantly differ between males and females

The need for prosthesis in 15 years old was nil in VI, almost nil in II (0.4 per cent) and most in region I (4.5 per cent).

Table 6.21 presents the per cent subjects with prosthetic need of lower dental arch by type of prosthesis needed

62 per cent of the elderly (65-74 years) 20 per cent of the and middle aged and only 2.6 per cent of the 15 year groups needed prosthesis. The differences between urban and rural and between sexes are marginal

When compared to needs for upper arch there are no differences i.e both arches almost equally merit prosthesis

Need for prosthesis steadily increased with age with 5 years. Olds needing least and 65-74 the most. 21.5 per cent of 65-74 needed full prosthesis, the need is same in rural and urban areas o between either sexes. The need for prosthesis is most in Khammam (51 per cent) and least in Rangareddy (8.3 per cent). This trend is seen also in the case of Upper arch (see table for upper arch)

Table 6.22 Percent distribution of subjects with their prosthetic need status (upper arch) by age, sex, and geographical area. State : Andhra Pradesh

Prosthetic Need (Upper)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	158	149	307	148	164	312	140	177	317
With Prosthetic need		3.6	5.7	4.7	22.5	26.7	24.6	65.6	67.6	66.6
Need for one unit prosthesis		2.6	5.0	3.8	12.1	14.5	13.3	5.7	7.2	6.5
Need for multi unit prosthesis		0.5	0.7	0.6	8.4	9.7	9.1	19.0	18.4	18.7
Need for combination of one and/or MUP		0.5	0.0	0.3	0.7	1.3	1.0	6.3	4.1	5.2
Need for full prosthesis		0.0	0.0	0.0	1.3	1.1	1.2	34.7	37.8	36.3
Region 2	n=	171	151	322	162	181	343	162	159	321
With Prosthetic need		0.4	0.0	0.2	11.4	13.5	12.5	44.0	48.1	46.1
Need for one unit prosthesis		0.0	0.0	0.0	5.9	4.9	5.4	8.5	8.8	8.7
Need for multi unit prosthesis		0.4	0.0	0.2	5.5	8.6	7.1	26.3	28.2	27.3
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.6
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	8.1	11.2	9.7
Region 3	n=	162	134	296	173	149	322	153	168	321
With Prosthetic need		1.6	3.4	2.5	17.6	21.8	19.7	51.1	52.9	52.0
Need for one unit prosthesis		0.7	1.7	1.2	7.7	8.4	8.1	6.0	5.0	5.5
Need for multi unit prosthesis		0.4	0.8	0.6	6.9	11.7	9.3	20.9	25.3	23.1
Need for combination of one and/or MUP		0.4	0.8	0.6	1.0	1.2	1.1	4.4	10.2	7.3
Need for full prosthesis		0.0	0.0	0.0	2.0	0.5	1.3	19.7	12.4	16.1
Region 4	n=	164	148	312	146	163	309	149	160	309
With Prosthetic need		2.0	4.3	3.2	27.6	26.8	27.2	78.4	74.7	76.6
Need for one unit prosthesis		2.0	3.5	2.8	18.2	14.8	16.5	9.5	11.2	10.4
Need for multi unit prosthesis		0.0	0.8	0.4	8.2	11.3	9.8	38.6	35.3	37.0
Need for combination of one and/or MUP		0.0	0.0	0.0	1.2	0.7	1.0	8.3	3.0	5.7
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	22.0	25.2	23.6
Region 5	n=	165	135	300	144	160	304	138	142	280
With Prosthetic need		1.3	0.0	0.7	16.7	19.1	17.9	64.9	67.8	66.4
Need for one unit prosthesis		0.8	0.0	0.4	8.6	12.4	10.5	3.7	4.6	4.2
Need for multi unit prosthesis		0.0	0.0	0.0	7.6	5.2	6.4	12.9	9.0	11.0
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.5	1.8
Need for full prosthesis		0.5	0.0	0.3	0.6	1.5	1.1	47.2	51.7	49.5
Region 6	n=	166	149	315	149	170	319	149	167	316
With Prosthetic need		0.0	0.0	0.0	5.5	9.3	7.4	50.0	53.6	51.8
Need for one unit prosthesis		0.0	0.0	0.0	2.4	3.9	3.2	9.1	5.1	7.1
Need for multi unit prosthesis		0.0	0.0	0.0	3.2	5.4	4.3	31.3	36.6	34.0
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	0.4	2.5	1.5
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	9.1	9.4	9.3
State Rural	n=	648	612	1260	651	650	1301	625	656	1281
With Prosthetic need		0.6	1.8	1.2	13.3	14.7	14.0	56.7	59.2	58.0
Need for one unit prosthesis		0.5	1.4	1.0	8.3	6.4	7.4	8.6	8.0	8.3
Need for multi unit prosthesis		0.0	0.3	0.2	4.4	7.4	5.9	27.0	26.7	26.9
Need for combination of one and/or MUP		0.0	0.0	0.0	0.3	0.4	0.4	2.4	2.5	2.5
Need for full prosthesis		0.1	0.0	0.1	0.3	0.5	0.4	18.7	22.1	20.4
State Urban	n=	338	254	592	271	337	608	266	317	583
With Prosthetic need		2.4	0.6	1.5	21.8	24.9	23.4	59.4	61.8	60.6
Need for one unit prosthesis		1.5	0.6	1.1	8.9	15.2	12.1	4.5	5.5	5.0
Need for multi unit prosthesis		0.7	0.0	0.4	12.2	9.4	10.8	24.6	27.4	26.0
Need for combination of one and/or MUP		0.2	0.0	0.1	0.4	0.1	0.3	4.5	2.4	3.5
Need for full prosthesis		0.0	0.0	0.0	0.3	0.2	0.3	25.8	26.5	26.2
State Total	n=	986	866	1852	922	987	1909	891	973	1864
With Prosthetic need		1.1	1.5	1.3	15.9	17.9	16.9	57.6	60.6	59.1
Need for one unit prosthesis		0.8	1.3	1.1	8.9	9.3	9.1	7.7	7.0	7.4
Need for multi unit prosthesis		0.2	0.3	0.3	6.4	8.0	7.2	26.7	27.1	26.9
Need for combination of one and/or MUP		0.1	0.0	0.1	0.3	0.3	0.3	3.0	2.6	2.8
Need for full prosthesis		0.1	0.0	0.1	0.3	0.3	0.3	20.2	23.8	22.0

Note: For information on current status and need for full mouth removable dentures, please refer to Tables 6.21 and 6.24 respectively.

Table 6.23 Percent distribution of subjects with their prosthetic need status (lower arch) by age, sex, and geographical area. State : Andhra Pradesh

Prosthetic Need (Lower)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	**158**	**149**	***307***	**147**	**164**	***311***	**140**	**177**	***317***
With Prosthetic need		4.7	6.7	***5.7***	25.0	31.8	***28.4***	62.7	74.8	***68.8***
Need for one unit prosthesis		3.6	5.5	***4.6***	14.0	15.6	***14.8***	5.7	10.1	***7.9***
Need for multi unit prosthesis		1.2	1.3	***1.3***	9.7	13.1	***11.4***	16.6	24.2	***20.4***
Need for combination of one and/or MUP		0.0	0.0	***0.0***	0.5	1.3	***0.9***	4.4	3.3	***3.9***
Need for full prosthesis		0.0	0.0	***0.0***	0.8	1.8	***1.3***	36.0	37.2	***36.6***
Region 2	n=	**171**	**151**	***322***	**162**	**181**	***343***	**162**	**159**	***321***
With Prosthetic need		0.9	3.4	***2.2***	13.0	14.7	***13.9***	43.3	52.4	***47.9***
Need for one unit prosthesis		0.0	1.5	***0.8***	5.2	5.5	***5.4***	6.2	9.7	***8.0***
Need for multi unit prosthesis		0.9	1.9	***1.4***	7.8	9.2	***8.5***	27.2	31.9	***29.6***
Need for combination of one and/or MUP		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.0	***0.2***
Need for full prosthesis		0.0	0.0	***0.0***	0.0	0.0	***0.0***	9.5	10.7	***10.1***
Region 3	n=	**162**	**134**	***296***	**173**	**149**	***322***	**153**	**168**	***321***
With Prosthetic need		5.6	3.9	***4.8***	22.2	28.0	***25.1***	51.0	51.6	***51.3***
Need for one unit prosthesis		5.1	0.8	***3.0***	10.3	8.5	***9.4***	6.5	8.3	***7.4***
Need for multi unit prosthesis		0.4	2.5	***1.5***	8.6	17.5	***13.1***	18.0	20.5	***19.3***
Need for combination of one and/or MUP		0.0	0.0	***0.0***	2.0	1.6	***1.8***	7.5	8.9	***8.2***
Need for full prosthesis		0.0	0.5	***0.3***	1.3	0.5	***0.9***	19.0	14.0	***16.5***
Region 4	n=	**164**	**148**	***312***	**145**	**163**	***308***	**149**	**160**	***309***
With Prosthetic need		5.1	5.0	***5.1***	33.6	37.4	***35.5***	81.7	82.6	***82.2***
Need for one unit prosthesis		4.4	3.5	***4.0***	19.3	18.9	***19.1***	11.6	15.2	***13.4***
Need for multi unit prosthesis		0.0	0.8	***0.4***	12.3	15.9	***14.1***	38.7	37.8	***38.3***
Need for combination of one and/or MUP		0.7	0.8	***0.8***	2.0	2.6	***2.3***	10.9	2.6	***6.8***
Need for full prosthesis		0.0	0.0	***0.0***	0.0	0.0	***0.0***	20.5	26.9	***23.7***
Region 5	n=	**165**	**135**	***300***	**144**	**160**	***304***	**138**	**142**	***280***
With Prosthetic need		2.1	0.0	***1.1***	16.1	20.5	***18.3***	62.4	63.1	***62.8***
Need for one unit prosthesis		0.0	0.0	***0.0***	9.5	10.9	***10.2***	2.5	3.5	***3.0***
Need for multi unit prosthesis		0.8	0.0	***0.4***	6.0	8.6	***7.3***	8.3	7.0	***7.7***
Need for combination of one and/or MUP		0.8	0.0	***0.4***	0.0	0.0	***0.0***	2.1	1.6	***1.9***
Need for full prosthesis		0.5	0.0	***0.3***	0.6	1.0	***0.8***	49.5	51.1	***50.3***
Region 6	n=	**166**	**149**	***315***	**149**	**170**	***319***	**149**	**167**	***316***
With Prosthetic need		0.7	0.0	***0.4***	8.6	16.5	***12.6***	54.7	63.4	***59.1***
Need for one unit prosthesis		0.7	0.0	***0.4***	5.5	9.3	***7.4***	9.9	14.5	***12.2***
Need for multi unit prosthesis		0.0	0.0	***0.0***	3.2	6.4	***4.8***	36.9	38.8	***37.9***
Need for combination of one and/or MUP		0.0	0.0	***0.0***	0.0	0.7	***0.4***	0.0	1.8	***0.9***
Need for full prosthesis		0.0	0.0	***0.0***	0.0	0.0	***0.0***	7.9	8.3	***8.1***
State Rural	n=	**648**	**612**	***1260***	**649**	**650**	***1299***	**625**	**656**	***1281***
With Prosthetic need		2.0	3.1	***2.6***	15.7	20.1	***17.9***	57.1	65.4	***61.3***
Need for one unit prosthesis		1.6	1.9	***1.8***	8.8	9.8	***9.3***	7.7	12.2	***10.0***
Need for multi unit prosthesis		0.1	0.9	***0.5***	6.1	8.9	***7.5***	27.8	29.1	***28.5***
Need for combination of one and/or MUP		0.2	0.2	***0.2***	0.5	1.0	***0.8***	2.9	1.9	***2.4***
Need for full prosthesis		0.1	0.0	***0.1***	0.3	0.4	***0.4***	18.7	22.2	***20.5***
State Urban	n=	**338**	**254**	***592***	**271**	**337**	***608***	**266**	**317**	***583***
With Prosthetic need		3.3	1.8	***2.6***	24.8	27.8	***26.3***	61.5	62.8	***62.2***
Need for one unit prosthesis		1.2	0.9	***1.1***	11.9	13.3	***12.6***	6.2	6.7	***6.5***
Need for multi unit prosthesis		1.6	0.8	***1.2***	12.3	13.9	***13.1***	24.0	28.8	***26.4***
Need for combination of one and/or MUP		0.5	0.0	***0.3***	0.6	0.3	***0.5***	4.1	1.8	***3.0***
Need for full prosthesis		0.0	0.1	***0.1***	0.0	0.2	***0.1***	27.1	25.5	***26.3***
State Total	n=	**986**	**866**	***1852***	**920**	**987**	***1907***	**891**	**973**	***1864***
With Prosthetic need		2.5	2.8	***2.7***	18.4	22.8	***20.6***	58.6	65.6	***62.1***
Need for one unit prosthesis		1.5	1.7	***1.6***	10.0	11.1	***10.6***	7.4	10.7	***9.1***
Need for multi unit prosthesis		0.6	0.9	***0.8***	7.7	10.5	***9.1***	27.3	29.1	***28.2***
Need for combination of one and/or MUP		0.3	0.1	***0.2***	0.5	0.8	***0.7***	3.4	1.9	***2.7***
Need for full prosthesis		0.1	0.0	***0.1***	0.2	0.3	***0.3***	20.5	23.8	***22.2***

Note: *For information on current status and need for full mouth removable dentures, please refer to Tables 6.21 and 6.24 respectively.*

Table 6.24. Percent subjects with full mouth removable dentures by age, sex, and geographical area. State : Andhra Pradesh

Prosthetic need for full denture (upper & lower arch)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	158	149	307	147	164	311	135	173	308
Percent subjects needing full mouth removable denture		0.0	0.0	0.0	0.8	1.1	1.0	35.8	37.4	36.6
Region 2	n=	171	150	321	162	181	343	158	157	315
Percent subjects needing full mouth removable denture		0.0	0.0	0.0	0.0	0.0	0.0	8.3	10.8	9.6
Region 3	n=	160	133	293	173	149	322	147	165	312
Percent subjects needing full mouth removable denture		0.0	0.0	0.0	1.3	0.5	0.9	19.0	12.6	15.8
Region 4	n=	163	146	309	143	162	305	143	158	301
Percent subjects needing full mouth removable denture		0.0	0.0	0.0	0.0	0.0	0.0	20.1	22.7	21.4
Region 5	n=	165	131	296	144	159	303	138	139	277
Percent subjects needing full mouth removable denture		0.5	0.0	0.3	0.6	1.0	0.8	46.6	50.8	48.7
Region 6	n=	165	149	314	145	169	314	148	165	313
Percent subjects needing full mouth removable denture		0.0	0.0	0.0	0.0	0.0	0.0	7.2	8.1	7.7
State Rural	n=	645	608	1253	643	647	1290	610	648	1258
Percent subjects needing full mouth removable denture		0.1	0.0	0.1	0.3	0.4	0.4	17.9	21.1	19.5
State Urban	n=	337	250	587	271	337	608	259	309	568
Percent subjects needing full mouth removable denture		0.0	0.0	0.0	0.0	0.2	0.1	25.5	25.0	25.3
State Total	n=	982	858	1840	914	984	1898	869	957	1826
Percent subjects needing full mouth removable denture		0.1	0.0	0.1	0.2	0.2	0.2	19.6	22.9	21.3

Generally, the need for full mouth prosthesis is not seen in middle age group with hardly not even 0.5 per cent of them needing full prosthesis.

To sum up, prosthetic need is directly proportional to age and 60 per cent of the elderly of Andhra Pradesh needing prosthetic care and about 23 per cent of them needing full prosthesis for the whole jaw

Table 6.21 presents the per cent subjects with full mouth removable dentures by age and Table 6.24 presents the per cent subjects with full mouth removable dentures by age.

People wearing full mouth removable dentures (Table 6.21)

While the previous two sections deal with use of either a upper or lower prosthesis, the use of full mouth removable dentures cannot be computed from this data alone. Hence, a separate data set is furnished regarding the use of full mouth dentures by the people and this information is of significance especially for the senior citizens of the country

None of the subjects up to and including 35-44 years have full mouth removable dentures. Only subjects in 65-74 group had full mouth removable dentures (2.5 per cent) . The wearing of full dentures between urban and rural subjects opens up an interesting issue. While 6.6 per cent of the state's urban elderly have full dentures, only 0.9 per cent of the rural subjects of the same age group have full mouth dentures. The access to clinical facilities, affordability seem to be taking its toll in this regard.

Vishakapatnam has more full mouth removable denture wearers (2.8 and 4.8 males and females respectively) and Guntur has least number of subjects wearing full dentures (0.7 per cent for both sexes)

In the next table an observation that 21.1 per cent of the state's rural elderly need full mouth removable dentures is made. The scenario as per the present table indicates that only 0.8 per cent of rural sablebjects wear dentures. This clearly shows the unmet treatment needs of this segment of population.

People needing full mouth removable dentures (Table 6.24)

From examination of 1840 fifteen 15 years olds, only 0.1 per cent needed full mouth removable denture. The need for full mouth removable denture is only seen in one isolated case in region V. It is unusual to have any subject of 15 years to need full removable denture. It could be a case of early loss of teeth due to periodontal disease, congenital absence of teeth as would happen with a case of ectodermal dysplasia or genetic disorders

While a small, negligible number of state's middle aged (35-44) subjects need full mouth removable dentures, a significant percentage of the elderly of A.P. i.e 21.3 per cent need full dentures. The need for full dentures does not significantly differ between sexes (males 19.6 and females 22.9 per cent).

Between the regions, the need for full mouth removable dentures is minimum in Khammam district (8.1 per cent) and maximum in Rangareddy district (50.8 per cent). To sum up the need for full dentures in decreasing order is in Rangareddy, Vishakapatnam,, Chittoor, Nellore, Guntur and Khammam.

The need for full dentures to the extent of 48.7 per cent in Rangareddy district only reflects the accumulated dental treatment needs of the population. It also focuses need on the health care requirements to meet such massive disease burden of the population

TO SUMUP

None of the subjects up to and including 35-44 had full mouth removable dentures. 2.9 per cent of 65-74 had full dentures. Urban subjects more often wear full dentures compared to rural people

21 per cent of the elderly of Andhra Pradesh need full dentures. Both males and females need this treatment equally. Khammam district need of full dentures is minimum (8.1 per cent) and Rangreddy district is maximum (50.8 per cent)

Whereas the need for full dentures is 21.5 per cent only 0 .8 per cent of them wear them. The need for full dentures for such large number of rural people is an important observation of this survey

6.6.6 Community need for immediate care and referrals

Table 6.25 presents the per cent subjects with life threatening conditions, pain or infection, other conditions. and referrals made.

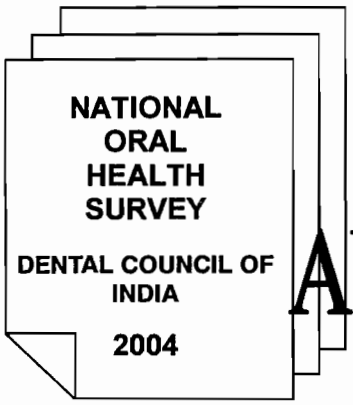
Out of 9259 subjects examined all over the state of Andhra Pradesh less than 1 per cent (0.9 per cent) needed referral for life threatening, painful conditions. More rural subjects 9 1.2 per cent) needed referral than urban people (0.5 per cent). Pain and infection was a common reason needing referral

Except for solitary and isolated instances Guntur and Khammam district people did not require immediate care or referral. Chittoor (4.3 per cent) Vishakapatnam (1.5 per cent) , Rangareddy (1.2 per cent) subjects had problems which needed referral in the order described.

The need for referral was not confined to any particular age group but was noticed in all the ages

Table 6.25 Percent distribution of subjects with life threatening and painful conditions requiring immediate care and referral by age, sex and geographical area. State : Andhra Pradesh

Need For Care & Referral		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	164	144	*308*	160	146	*306*	158	149	*307*	148	160	*308*	135	168	*303*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.6	***0.3***
Pain or infection		0.0	1.5	***0.8***	0.0	0.0	***0.0***	0.7	2.7	***1.7***	1.3	3.0	***2.2***	3.0	2.2	***2.6***
Other condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.7	***0.4***	0.0	0.6	***0.3***
Referral		0.0	0.8	***0.4***	0.0	0.0	***0.0***	0.7	2.7	***1.7***	0.5	1.6	***1.1***	1.6	1.5	***1.6***
Region 2	n=	173	148	*321*	166	157	*323*	169	150	*319*	163	182	*345*	157	153	*310*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.5	0.0	***0.3***
Pain or infection		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Other condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Referral		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 3	n=	182	121	*303*	165	138	*303*	163	134	*297*	173	148	*321*	146	164	*310*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.8	***0.4***	0.0	0.0	***0.0***
Pain or infection		1.9	0.0	***1.0***	3.5	6.6	***5.1***	5.0	0.8	***2.9***	4.6	5.4	***5.0***	2.3	4.3	***3.3***
Other condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Referral		1.9	0.0	***1.0***	2.1	5.7	***3.9***	3.6	0.8	***2.2***	3.3	4.7	***4.0***	1.5	4.3	***2.9***
Region 4	n=	165	142	*307*	168	144	*312*	162	149	*311*	143	159	*302*	143	155	*298*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.9	***0.5***	0.0	0.0	***0.0***	0.5	0.0	***0.3***
Pain or infection		0.0	0.0	***0.0***	0.7	0.0	***0.4***	1.1	0.4	***0.8***	3.4	0.4	***1.9***	0.8	2.7	***1.8***
Other condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.8	***0.4***	0.0	0.0	***0.0***	4.6	3.9	***4.3***
Referral		0.0	0.0	***0.0***	0.7	0.0	***0.4***	1.2	1.2	***1.2***	0.9	0.4	***0.7***	3.8	2.3	***3.1***
Region 5	n=	157	140	*297*	156	145	*301*	163	135	*298*	145	158	*303*	137	135	*272*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Pain or infection		0.0	0.0	***0.0***	0.9	0.0	***0.5***	0.0	0.0	***0.0***	1.0	0.0	***0.5***	1.9	1.2	***1.6***
Other condition		0.0	0.6	***0.3***	0.5	0.6	***0.6***	0.5	0.0	***0.3***	0.0	0.5	***0.3***	0.0	0.0	***0.0***
Referral		0.0	0.6	***0.3***	0.9	0.0	***0.5***	0.0	0.0	***0.0***	1.0	0.0	***0.5***	1.9	1.2	***1.6***
Region 6	n=	180	141	*321*	160	152	*312*	166	149	*315*	146	168	*314*	149	163	*312*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.0	***0.2***	0.0	0.0	***0.0***
Pain or infection		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	0.0	***0.4***	0.0	0.0	***0.0***
Other condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Referral		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	0.0	***0.4***	0.0	0.0	***0.0***
State Rural	n=	678	583	*1261*	646	619	*1265*	646	611	*1257*	646	640	*1286*	611	633	*1244*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***
Pain or infection		0.1	0.2	***0.2***	0.4	0.3	***0.4***	0.5	0.4	***0.5***	1.1	0.6	***0.9***	1.0	1.3	***1.2***
Other condition		0.0	0.1	***0.1***	0.1	0.1	***0.1***	0.1	0.2	***0.2***	0.0	0.2	***0.1***	0.7	0.8	***0.8***
Referral		0.1	0.2	***0.2***	0.3	0.3	***0.3***	0.5	0.5	***0.5***	0.4	0.3	***0.4***	1.3	1.2	***1.3***
State Urban	n=	343	253	*596*	329	263	*592*	335	255	*590*	272	335	*607*	256	305	*561*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.7	***0.4***	0.4	0.0	***0.2***	0.9	0.0	***0.5***
Pain or infection		0.0	0.0	***0.0***	0.6	0.0	***0.3***	0.3	0.6	***0.5***	1.6	0.6	***1.1***	0.3	0.8	***0.6***
Other condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	1.1	0.6	***0.9***
Referral		0.0	0.0	***0.0***	0.6	0.0	***0.3***	0.3	0.6	***0.5***	1.6	0.6	***1.1***	1.1	0.5	***0.8***
State Total	n=	1021	836	*1857*	975	882	*1857*	981	866	*1847*	918	975	*1893*	867	938	*1805*
Life threatening condition		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.1	0.0	***0.1***	0.2	0.1	***0.2***
Pain or infection		0.1	0.2	***0.2***	0.5	0.2	***0.4***	0.5	0.4	***0.5***	1.3	0.6	***1.0***	0.7	1.1	***0.9***
Other condition		0.0	0.1	***0.1***	0.1	0.1	***0.1***	0.1	0.1	***0.1***	0.0	0.1	***0.1***	0.8	0.8	***0.8***
Referral		0.1	0.1	***0.1***	0.4	0.2	***0.3***	0.4	0.5	***0.5***	0.8	0.4	***0.6***	1.1	0.9	***1.0***



ANNEXURES

DENTAL COUNCIL OF INDIA

EXECUTIVE COMMITTEE

Dr. R K Bali
President
New Delhi

Dr. C. Bhasker Rao,
Vice President,
Dharwad.

Dr. Anil Kohli
New Delhi

Dr. Ravindra Ratolikar,
Hyderabad

Dr. S. G. Damle
Mumbai

Dr. B. H. Sripathi Rao
Mangalore.

Dr. J. R. Sabharwal
New Delhi

Dr. S. P. Agarwal,
New Delhi

OUTGOING MEMBERS

Dr. Mahesh Verma, New Delhi.

Dr. V. Surindra Shetty, Mangalore.

Dr. B. Suresh Chandra, Mangalore.

SUPPORT STAFF

Mr. A. L. Miglani, Secretary (Retd.)

Mr. S.S. Arora, Secretary I/c.

Mr. C.L. Bhatia

Mr. K. V. Abraham

Mr. P. K. De

Mr. Shiv Kumar

Mr. Praveen Kumar

Mr. S. S. Kanyal

Mr. Puneet Bansal

Mr. Anil Kumar

NOHS SECRETARIAT

Mrs. Sarita Verma

ANNEXURE - 1

CENTRAL SURVEY TEAM

Dr. R. K. Bali

Dr. V. B. Mathur

Prof. P. P. Talwar

Mr. H. B. Chanana

ANNEXURE - 2

TECHNICAL WORKING GROUP

Dr. R. K. Bali, President, DCI

Dr. V.B. Mathur

Dr. Shankar Aradhya

Dr. K.V.V. Prasad

Dr. M.B. Aswathnarayana

Prof. P.P. Talwar

Dr. Amrit Tiwari

LIST OF STATES, REGIONS WITHIN STATES AND SELECTED DISTRICTS

ANNEXURE - 3

Sr. No	State	Regions	Region Code	Selected Districts
1	Andhra Pradesh	North Coastal Andhra	01	Vishakapatnam
		South Coastal Andhra	02	Guntur
		Nellore	03	Nellore
		Rayalseema	04	Chittoor
		S Telangana	05	Ranga Reddy
		N Telangana	06	Khammam
2	Assam	N Eastern Hills	01	Karbi Anglong
		Lower Brahamputra	02	Kamrup
		Upper Brahamputra	03	Jorhat
3	Gujarat	S Hills	01	Bulsar
		S Gujarat	02	Surat
		M Gujarat	03	Baroda
		N Gujarat	04	Ahmedabad
		N W Arid	05	Kutch
		N Saurashtra	06	Jamnagar
		Saurashtra	07	Junagarh
4	Haryana	Foot Hills of Shivalik	01	Yamunanagar
		Plains	02	Rohtak
		Arid	03	Sirsa
5	Himachal Pradesh		01	Simla
			02	Kinnaur
6	Punjab	N Punjab	01	Roppas (Ropar)
		C Punjab	02	Patiala
		S Punjab	03	Sangrur
7	Chandigarh	Chandigarh	01	Chandigarh
8	Delhi	Delhi	01	Delhi
9	Karnataka	N Dry Region	01	Dharwad
		Central Region	02	Bangalore
		S Region	03	Mysore
		Hills & Coastal Region	04	Kodagu
10	Kerala	Coastal Midland	01	Malappuram
		Midlands	02	Kottayam
		Hills	03	Wayanad
11	Madhya Pradesh	Bundelkhand	01	Chattarpur
		Chattisgarh Hills	02	Mandla
		Keymora Plateau & Satapura Hills	03	Jabalpur

Sr. No	State	Regions	Region Code	Selected Districts
		Vindhya Plateau	04	Bhopal
		Satpura Plateau	05	Chindwara
		Central Narmada Valley	06	Hoshangabad
		Gird	07	Guna
		Malwa & Nimar (?) Plateau	08	Indore
12	Maharashtra	E Vidharba	01	Bhandara
		W Hills & Plains	02	Nasik
		Scarcity Region	03	Ahmednagar
		C Plateau	04	Amrawati
		C Vidharba	05	Wardha
		Konkan	06	Thane
13	Goa	Goa	01	Goa
14	Orissa	Inland	01	Dhankonal
		N Plateau Hills	02	Keonjar
		S W Hills	03	Koraput
		Coastal	04	Cuttack
		Ganjan	05	Ganjam
15	Rajasthan	N Arid	01	Ganganagar
		S Plains	02	Udaipur
		E Plains	03	Jaipur
		S Plateau	04	Jhalawar
		W Arid	05	Sikar
16	Tamil Nadu	N Region	01	Salem
		C Region	02	Coimbatore
		NE Coastal	03	Chennai
		Delta	04	Thanjavur
		SE Coastal	05	Tirunevalli
		S Region	06	Kanyakumari
		Hills Region	07	Nilgiri
17	U P	N E Plains	01	Gonda
		E Plains	02	Ballia
		C Plains	03	Sitapur
		N W Plains	04	Ghaziabad
		S W Plains	05	Aligarh
		Bundelkhand	06	Banda
18	J & K	Ladhakh	01	Ladakh
		Kashmir Valley	02	Srinagar
		Jammu	03	Jammu
19	Pondicherry	Pondicherry	01	Pondicherry

ANNEXURE - 4

LIST OF PARTICIPATING DENTAL COLLEGES

1.	Regional Dental College, Guwahati, (Assam)
2.	Govt. Dental College & Hospital, Ahmedabad (Gujarat)
3.	Dental College & Hospital, Delhi
4.	B.R.S. Dental College & Hospital Panchkula (Haryana)
5.	Dental College, Rohtak (Haryana)
6.	H.P. Govt. Dental College, Shimla (H.P.)
7.	College of Dental Surgery, Kasturba Medical College, Mangalore (Karnataka)
8.	Govt. Dental College, Bangalore
9.	Bharati Vidyapeeth Dental College & Hospital, Pune
10.	Dental Wing, S.C.B. Medical College, Cuttak (Orissa)
11.	Mahatma Gandhi Dental College & Hospital, Pondicherry.
12.	Dental College & Hospital, Lucknow
13.	Govt Dental College, Indore (M.P)
14.	Principal, Sri Sai College of Dental Surgery, Vikarabad – 501 101 (R.R. Dist. – A.P.)
15.	Govt. Dental College, Srinagar (J&K)
16.	Pacific Dental College, Udaipur, Rajasthan

ANNEXURE - 5

REGIONAL COORDINATORS

S. No.	State	Regional Coordinator
1.	Andhra Pradesh	Dr. A. Jayakumar, Principal Sri Sai College of Dental Surgery, Vikarabad
2.	Assam	Dr. Rubi Kataki Deptt. of Conservative Dentistry, Regional Dental College, Guwahati
3.	Delhi	Dr. Mahesh Verma, Principal, Dental College & Hospital, Maulana Azad Medical College,New Delhi
4.	Gujarat	Dr. Jayesh K. Parikh Govt. Dental College & Hospital, Ahmedabad.
5.	Himachal Pradesh, Punjab, Haryana, Chandigarh	Dr. N.C. Rao H.P. Govt. Dental College & Hospital, Shimla Deptt. of Community Dentistry,
6.	Jammu & Kashmir	Dr. Tara Singh Govt. Dental College, Srinagar.
7.	Karnataka	Dr. S.S. Hiremath Deptt. Of Community Dentistry, Govt. Dental College, Bangalore.
8.	Kerala	Dr. K. Nanda Kumar, Dental College, Medical Campus, Trivandrum
9.	Madhya Pradesh	Dr. S.V. Dhodapkar, Professor & Head of the Deptt. of Periodontics, College of Dentistry, Indore.
10.	Maharashtra, Goa	Dr. S.G. Damle, Dean, Nair Hospital Dental College, Mumbai.
11.	Orissa	Dr. Ashok K. Mahapatra Deptt. of Community Dentistry, S.C.B. Medical College, Cuttack.
12.	Tamil Nadu, Pondicherry	Dr. M.B. Aswathnarayanan, Deptt. of Community Dentistry, Govt. Dental College & Hospital, Chennai.
13.	Rajasthan	Dr. G. V. N. Ramesh, Principal, Pacific Dental College, Udaipur

NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING

ANNEXURE - 6

TEAM MEMBERS (ANDHRA PRADESH)

S. No.	Name	Place	Name of the team
1.	Dr. Ravindra Babu, BDS	Gitam, Vizag	Team 001
2.	Dr. A.G.L.N.Raju, BDS	Gitam, Vizag	Team 001
3.	Dr. Ashok Kumar, BDS	GDC, Vijaywada	Team 002
4.	Dr. Durga Raju, BDS	GDC, Vijaywada	Team 002
5.	Dr. Rita Ravindra, BDS	Gitam, Vizag	Team 003
6.	Dr. Ramlal, BDS	CKS, Tirupati	Team 004
7.	Dr. Shalini, BDS	CKS, Tirupati	Team 004
8.	Dr. Suresh Babu, BDS	CKS, Tirupati	Team 006
9.	Dr. Naveen Kumar Reddy, BDS	CKS, Tirupati	Team 006
10.	Dr.Ajay Reginald, MDS	Narayana, Nellore	Team 007
11.	Dr. Vijaysankar, BDS	Narayana, Nellore	Team 007
12.	Dr. T.S. Balaji, BDS	Narayana, Nellore	Team 008
13.	Dr. Sesha Reddy, BDS	Narayana, Nellore	Team 008
14.	Dr. Suresh, BDS	Mamata, Khammam	Team 009
15.	Dr. Swapna, BDS	Mamata, Khammam	Team 009
16.	Dr. Sahiti Prasad, BDS	Mamata, Khammam	Team 010
17.	Dr. Sampath, BDS	GDC, Vijaywada	Team 010
18.	Dr. Sri Priya, BDS	SSCDS, Vikarabad	Team 011
19.	Dr. Rajender Reddy, BDS	SSCDS, Vikarabad	Team 011
20.	Dr. S. Chakrapani, MDS	Sibar, Guntur	Team 012
21.	Dr. S. Vasavi, BDS	Sibar, Guntur	Team 012
22.	Dr. S. Kiran Kumar, BDS	Sibar, Guntur	Team 013
23.	Dr. M. Gangadhar, BDS	Sibar, Guntur	Team 013
24.	Dr. Hormuz Vakil, MDS	Army College	Team 014
25.	Dr. Praveen Kumar, BDS	Army College	Team 014
26.	Dr. Md. Ali, MDS	Army College	Team 015
27.	Dr. Chitra Prasad, MDS	Army College	Team 015

ANNEXURE - 7

DENTAL COUNCIL OF INDIA, NEW DELHI
भारतीय दंत चिकित्सा परिषद, नई दिल्ली
NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING 2002
राष्ट्रीय मुख स्वास्थय सर्वेक्षण तथा फ्लोराइड मैपिंग 2002

(A NATIONAL EPIDEMIOLOGICAL STUDY OF ORAL HEALTH PROBLEMS AND FLUORIDE ESTIMATION IN WATER SAMPLES)
(मुख स्वास्थय समस्याओं सम्बन्धी महामारी विज्ञान का राष्ट्रीय अध्ययन तथा जल–नमूनों में फ्लोराइड एस्टीमेशन)

DATE / तिथि | | | | | 0 | 2 |
(DAY) (MONTH) (YEAR)

FORM NO. फार्म संख्या | 1 | 0 | (1-2)

STATE / राज्य (6-7)

TEAM NO. दल संख्या (टीम) (3-5)

ZONE / क्षेत्र (ज़ोन) (8-9)

DISTRICT / जिला (10)

NAME OF VILLAGE / URBAN BLOCK _____ (11-12)
गांव/शहरी ब्लाक का नाम

VILLAGE CODE **R / U /** आर/यू **R = 1, U = 2** | 1 | 2 | (13)
R U

SERIAL NO. OF HOUSEHOLD VISITED (14-16)
सर्वेक्षण किये गये (सर्वेक्षित) घरों की क्रम संख्या

NAME OF HEAD OF HOUSEHOLD Mr. / Mrs. _____
घर के मुखिया का नाम

NAME OF SPOUSE _____
पत्नी का नाम

ADDRESS OF THE HOUSEHOLD _____
घर का पता

_____

NAME OF INTERVIEWER _____
साक्षात्कार कर्ता का नाम **(NAME) /** नाम **(SIGN) /** हस्ताक्षर

FIELD CHECKED BY _____
क्षेत्र जांचकर्ता **(NAME) /** नाम **(SIGN) /** हस्ताक्षर **(SUPERVISOR) /** (सुपरवाइजर)

SCRUTINISED BY _____
जांचकर्ता **(NAME) /** नाम **(SIGN) /** हस्ताक्षर **(SUPERVISOR) /** (सुपरवाइजर)

CHECKED BY _____
जांचकर्ता **(NAME) /** नाम **(SIGN) /** हस्ताक्षर **(COORDINATOR) /** (संयोजक)

A. SOCIO-ECONOMIC & DEMOGRAPHIC CHARACTERISTICS OF THE FAMILY
अ. परिवार की सामाजिक–आर्थिक विशिष्टताएं

FORM NO. फार्म संख्या | 1 | 1 |

S. No./ क्रम सं.	Question / प्रश्न	Code / कोड	
1.	***Name of Respondent and his/her relationship with Head of HH*** उत्तरदाता का नाम तथा घर के मुखिया से उसका सम्बन्ध	***(Head of Household)*** ***Self/*** स्वयं ..... ***1*** ***FATHER/*** पिता ..... ***2*** ***MOTHER/*** माता ..... ***3*** ***BROTHER/*** भाई ..... ***4*** ***OTHER/*** अन्यं ***5***	
2.	***Age of Respondent (in completed years)*** उत्तरदाता की आयु (पूर्ण वर्षों में)	☐☐ ***Yrs./*** वर्ष	(17-18)
3.	***Sex of the Respondent*** उत्तरदाता का लिंग	***M=1/*** पु. ☐ ***M=2/*** स्त्री ☐	(19)
4.	***Religion of the Household*** धर्म *(Tick One)/* (एक पर चिन्ह लगायें)	***Hindu/*** हिन्दू ..... ***1*** ***Muslim/*** मुस्लिम ..... ***2*** ***Sikh/*** सिख ..... ***3*** ***Christian/*** ईसाई ..... ***4*** ***Others/*** अन्यं ***5***	(20)
5.	***Caste of the Household*** जाति *(Tick One)/* (एक पर चिन्ह लगायें)	***SC/*** अनु. जाति ..... ***1*** ***ST/*** आदिम जाति ..... ***2*** ***OBC/*** अन्य पिछड़ा वर्ग ..... ***3*** ***Others/*** अन्यं ***4***	(21)
6.	***What is the highest educational level completed by the Head of the HH?*** मुखिया का शिक्षा स्तर	***Illiterate*** अशिक्षित ..... ***1*** ***Primary*** प्राइमरी ..... ***2*** ***Middle*** मिडिल ..... ***3*** ***High School*** हाईस्कूल ..... ***4*** ***Graduate*** स्नातक ..... ***5*** ***Professional*** व्यवसायिक ***6***	(22)
7.	***How much is the TOTAL Monthly Expenditure of the Household?*** घर का कुल मासिक व्यय कितना है?	***TOTAL Rs.*** कुल रु. ☐☐☐☐☐	(23-27)
8.	***Type of House (Observe & record)*** मकान किस प्रकार का है? (देखें व लिखें)	***Kuccha/*** कच्चा ..... ***1*** ***Semi-Pucca/*** आधा–पक्का ..... ***2*** ***Pucca/*** पक्का ***3***	(28)

S. No./ क्रम सं.	Question / प्रश्न	Code / कोड	
9.	**Total No. of members in the family (probe and record the number)** परिवार में कुल सदस्यों की संख्या (जांच करें व लिखें)	**M** / पु.	**F** / स्त्री (29-30)
10.	**No. of persons 5 years old** पांच वर्ष की आयु के व्यक्तियों की संख्या	**M** / पु.	**F** / स्त्री (31-32)
11.	**No. of persons 12 years old** बारह वर्ष की आयु के व्यक्तियों की संख्या	**M** / पु.	**F** / स्त्री (33-34)
12.	**No. of persons 15 years old** पन्द्रह वर्ष की आयु के व्यक्तियों की संख्या	**M** / पु.	**F** / स्त्री (35-36)
13.	**No. of persons 35-44 years old** 35–44 वर्ष की आयु के व्यक्तियों की संख्या	**M** / पु.	**F** / स्त्री (37-38)
14.	**No. of persons 65-74 years old** 65–74 वर्ष की आयु के व्यक्तियों की संख्या	**M** / पु.	**F** / स्त्री (39-40)

B. FOOD HABITS / खाद्य सम्बन्धी आदतें

S. No./ क्रम सं.	Question / प्रश्न	Code / कोड	
15.	**What is your staple (main) food in the Household?** आपका मुख्य अन्न क्या है? *(Tick One)/* (एक पर चिन्ह लगायें)	**Wheat** / गेंहू ..... 1 **Rice** / चावल ..... 2 **Maize** / मक्का ..... 3 **Jowar** / ज्वार ..... 4 **Bajra** / बाजरा ..... 5 **Others** / अन्य 6	(41)
16.	**What is your main source of drinking water? (Take a sample of water in the given jar if the source of water is different from the one where earlier sample was collected)** आपका पीने के पानी का मुख्य स्रोत क्या है? (पूर्व घर में एकत्रित नमूने से यदि यहाँ का स्रोत भिन्न है तो जार में पानी का नमूना लें) *(Tick One)/* (एक पर चिन्ह लगायें)	**Pipe/Tap** / पाईप/टोटी ..... 1 **Tubewell/Handpump** / टयूबवैल ..... 2 **Draw Well** / हैंड पम्प ..... 3 **Pond** / कूआं ..... 4 **River** / नदी ..... 5 **Others** / अन्य 6	(42)
17.	**Identification of the drinking water source as marked on jar or bottle in which sample collected from this HH source or one before (if source is same)** पानी के नमूने की संख्या?		(43)
18.	**Is your family predominantly Veg./Non-Veg.** क्या आपका परिवार मुख्य रूप से शाकाहारी/सामिस्र है? *(Tick One)/* (एक पर चिन्ह लगायें)	**Veg.** / शाकाहारी ..... 1 **Non-Veg.** / सामिस्र 2	(44)

FORM NO. फार्म संख्या | 1 | 2 |

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		Interviewee's Age / साक्षात्कार देने वाले की आयु					
					5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	
A.	**Socio-demographic cherecteristics of the individual**									
अ.	व्यक्ति की सामाजिक विशिष्टताएं									
19.	Name of Individual (Interviewee) / साक्षात्कार देने वाले व्यक्ति का नाम									
20.	Name of Respondent and his/her relationship with Individual (Interviewee)/ उत्तरदाता का व्यक्ति से संबंध	Self / स्वयं ..... 1 FATHER/ पिता ..... 2 MOTHER/ माता ..... 3 BROTHER/ भाई ..... 4 OTHER/ अन्य 5				N.A.	N.A.	N.A.	N.A.	(45-49)
21.	Age of Individual (Interviewee) (in completed years) / साक्षात्कार देने वाले की आयु (पूर्ण वर्षों में)				5 Yrs.	12 Yrs.	15 Yrs.			(50-59)
22.	Sex / लिंग	M=1 F=2 पुरुष–1 स्त्री–2			M = 1 F = 2	M = 1 F = 2	M = 1 F = 2	M = 1 F = 2	M = 1 F = 2	(60-64)
23.	What is the level of Education attained by you? / आप की शिक्षा का स्तर क्या है? (Tick One)/ (एक पर चिन्ह लगायें)	Illiterate / अशिक्षित ..... 1 Primary / प्राइमरी ..... 2 Middle / मिडिल स्कूल ..... 3 High School / हाई स्कूल ..... 4 Graduate / स्नातक ..... 5 Professional / व्यवसायिक 6			NOT TO BE ASKED	(MENTION CODE 1-6 AS APPLICABLE AGAINST EACH AGE GROUP)				(65-69)

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	
24.	Your occupation or Profession ? / आपका रोजगार या व्यवसाय?	Farmer ..... 1 कृषक Agriculture Labour ..... 2 कृषि श्रमिक Business ..... 3 व्यापार Professional ..... 4 व्यवसाय White Collar Worker ..... 5 व्हाईट–कालर कार्य Skilled Worker ..... 6 सीखा हुआ कर्मचारी Unskilled Worker ..... 7 बिना सीखा हुआ कर्मचारी Other (Specify) ..... 8 अन्य			A S K E D	A S K E D				(70-74)
25.	How often do you read a Newspaper? / आप समाचार–पत्र कब पढ़ते है?	Daily ..... 1 प्रतिदिन Sometime ..... 2 कभी–कभी Not at all ..... 3 कभी नहीं			B E	B E				(75-79)
26.	How often do you listen to Radio? / आप रेडियो कब सुनते हैं?	Daily ..... 1 प्रतिदिन Sometime ..... 2 कभी–कभी Not at all ..... 3 कभी नहीं			O	O				(80-84)
27.	How often do you watch to TV? / आप टी वी कब देखते हैं?	Daily ..... 1 प्रतिदिन Sometime ..... 2 कभी–कभी Not at all ..... 3 कभी नहीं			T	T				(85-89)
28.	How often do you watch Cinema in a Hall? / आप सिनेमा हाल में कब देखते हैं? (Tick One)	Once in 3 months ..... 1 3 माह में एक बार Less often ..... 2 बहुत कम Not at all ..... 3 कभी नहीं			N O T	N O T				(90-94)

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	

B. Abnormal Oral Habits

ब. मुख सम्बन्धी असामान्य आदतें

29.	***Does the interviewee generally breathe by nose or mouth ? /*** आप साधारणतया नाक से सांस लेते हैं या मुँह से?	***Nose/*** नाक	***1***							(95-99)
		Mouth/ मुँह	***2***							
		Can't Say/ कह नहीं सकता	***3***							
30.	***Did/does the interviewee have a habit of sucking or biting his/her fingers or Thumb?*** क्या आपको अपनी उँगली चूसने या दांतों से दबाने की आदत हैं या थी? (देखें और लिखें)	***No/*** नहीं	***1***							(100-104)
		Yes/ हां	***2***							
		Can't Say/ कह नहीं सकता	***3***							
31.	***Did/does the interviewee have a habit of thrusting his/her tongue on his/her teeth? (Observe & Record) /*** क्या आपको अपनी जीभ दांतों पर दबाने की आदत है या थी? (देखें और लिखें)	***No/*** नहीं	***1***							(105-109)
		Yes/ हां	***2***							
		Can't Say/ कह नहीं सकता	***3***							
32.	***Did/does the interviewee have a habit of bitting nails, lips or objects like a pencil*** क्या साक्षात्कार देने वाले को नाखून, होंठ या पेन्सिल जैसी चीजें चबाने की आदत है या थी?	***No/*** नहीं	***1***							(110-114)
		Yes/ हां	***2***							
		Can't Say/ कह नहीं सकता	***3***							
33.	***Did/does the interviewee have a habit of gritting or grinding his/her teeth consciously, unconsciously, during sleep or moments of stress? /*** क्या आपको जाने–अनजाने सोते समय या किसी दबाव के समय अपने दांत रगड़ने की आदत है या थी?	***No Habit/*** आदत नहीं	***1***							(115-119)
		In Sleep/ नींद में	***2***							
		In Stress/ दबाव में	***3***							
		Can't Say/ कह नहीं सकता	***4***							

C. Eating Habits

स. खान–पान की आदतें

34.	***How many times between today & yesterday have you taken anything sweet? (Help to recall number of times sweet taken during last 24 hrs.) /*** आपने कल और आज के बीच कितनी बार मीठा खाया? (पिछले 24 घंटों के दौरान कितनी बार मीठा खाया, याद दिलाने में सहायता करें)	***1 times/*** एक बार	***1***							(120-124)
		2 times/ 2 बार	***2***							
		3 times/ 3 बार	***3***							
		4 times/ 4 बार	***4***							
		5 times/ 5 बार	***5***							
		> 5 times/ 6 बार	***6***							
		Not taken/ नहीं खाई	***7***							

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	
35.	When were these sweet eaten ? / मीठा कब–कब खाया गया?	During Meals ..... भोजन के समय In Between Meals ..... भोजन के समय के बीच During & In Between Meals ..... भोजन के समय व बीच में N.A. / लागू नहीं होता	1 2 3 4							(125-129)

D. Oral Hygiene Practices
द. मुख की सफाई

36.	How do you generally clean your teeth?/ सामान्यतः आप अपने दांत कैसे साफ करते हैं?	Finger/ उंगली से ..... Brush/ ब्रुश से ..... Datun/ दातुन ..... Others (Specify) ..... अन्य	1 2 3 4	If Code chosen either 3 or 4, go to Q. 42.						(130-134)
37.	How often do you clean your teeth in a day ? / दिन में आप कितनी बार दांत साफ करते हैं?	Once/ दिन में एक बार ..... Twice/ दिन में दो बार ..... After every meal ..... प्रति भोजन के बाद Don't clean every day ..... प्रतिदिन साफ नहीं करते	1 2 3 4							(135-139)
38.	What are your timings of cleaning teeth ? / दांत साफ करने का समय क्या है?	Morning only/ केवल प्रातःकाल ..... Night only (before going to bed) ..... केवल रात में सोने से पहले Morning & Night ..... प्रातःकाल व रात After meals ..... भोजन के बाद Others (Specify) ..... अन्य	1 2 3 4 5							(140-144)
39.	What material do you generally use to clean teeth ? / सामान्यतः आप अपने दांत किस चीज से साफ करते हैं?	Toothpaste ..... टूथपेस्ट Toothpowder ..... टूथपाउडर Others (Specify) ..... अन्य	1 2 3	If Code chosen 3, go to Q. 41						(145-149)

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	
40.	***Check tooth paste/powder used and record whether it is fluoridated or non-fluoridated?*** प्रयुक्त किये गए टूथ पेस्ट / पाउडर को चैक करें व लिखें वह फ्लोराइड–युक्त है या फ्लोराइड रहित?	***Fluoridated*** ..... 1 फ्लोराइड–युक्त ***Non-Fluoridated*** ..... 2 फ्लोराइड–रहित ***Can't Say*** ..... 3 कह नहीं सकता ***None*** 4								(150-154)
41.	***(Ask only if code in Q. 36 was 2.)*** ***How often do you change your toothbrush?*** आप अपना टूथ ब्रश कितने समय बाद बदलते हैं?	***1-3 months/*** 1–3 माह ..... 1 ***4-6 months/*** 4–6 माह ..... 2 ***6 + months/*** ..... 3 6 से अधिक ***NA (Not using/ Brush)*** 4								(155-159)
42.	***How often you rinse your mouth with water after eating? /*** क्या भोजन करने के बाद आप पानी से कुल्ला करते हैं।	***Never*** ..... 1 कभी नहीं ***Sometimes*** ..... 2 कभी–कभी ***Always*** ..... 3 सर्वदा								(160-164)
43.	***Do you use any other oral hygiene aids?*** क्या आप मुँह साफ करने के लिए किसी अन्य साधन का इस्तेमाल करते हैं? ***(Tick as many as reported)*** **(जितना बताएं सब लिखें)**	***Dental Floss*** ..... 1 डेन्टल फ्लॉश ***Interdental Brush*** ..... 2 इन्टरडेन्टल ब्रुश ***Toothpicks*** ..... 3 टूथ पिक्स ***Fluoride Mouthrinse*** ..... 4 फ्लोराइड माउथरिन्स ***Other*** ..... 5 ***Mouthwash/Rinse (Specify)*** अन्य माउथवाश / रिन्स लिखें ***None/*** कोई नहीं 6								(165-184)

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	

E. Pattern of Practices for Dental Treatment

द. दंत–चिकित्सा के तरीके

44.	***Have you suffered from any mouth or teeth problems in the last one year?/*** क्या पिछले एक वर्ष में आपको मुख या दांत सम्बन्धी कोई बीमारी हुई है?	***No/*** नहीं ..... ***Yes*** / हां ..... ***Can't Say/*** ..... कह नहीं सकता	***1*** ***2*** ***3***	**If No. Go to Q. 47**						(185-189)
45.	***What were or was the problem?*** यदि हां, तो समस्या क्या थी या है? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***Dental decay*** ..... दंत–क्षय ***Gum disease*** ..... मसूड़ों की बीमारी ***Foul breath*** ..... दुर्गन्धित सांस ***Bleeding gums*** ..... मसूड़ों से खून बहना ***Trauma*** ..... ट्रोमा (चोट) ***Abscess*** ..... एबसेस (फोड़ा) ***Crooked teeth*** ..... टेढ़े–मेढ़े दांत ***Ulcer*** ..... अल्सर ***Others (Specify)*** ..... अन्य (लिखें)	***1*** ***2*** ***3*** ***4*** ***5*** ***6*** ***7*** ***8*** ***9***							(190-209)
46.	***Who was or were consulted?*** आपने किससे राय ली? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***None/*** कोई नहीं ..... ***Friend/Neighbour*** ..... मित्र / पड़ोसी ***Relative/*** रिश्तेदार ..... ***Med. Practitioner*** ..... मेडिकल प्रेक्टिश्नर ***Pharmacist/*** ..... ***Chemist*** फारमासिस्ट / कैमिस्ट ***Untrained Dentist*** ..... अनट्रेण्ड डेन्टिस्ट ***Trained Dentist*** ..... टेण्ड डेन्टिस्ट ***Others (Specify)*** ..... अन्य	***1*** ***2*** ***3*** ***4*** ***5*** ***6*** ***7*** ***8***							(210-229)

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	
47.	***Are you suffering or have you ever suffered from one or more of the following :*** क्या आपको कभी निम्न बीमारियाँ थीं या हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***None/*** कोई नहीं ***Hypertension*** हाईपरटेन्शन ***Diabetes*** डाईबिटीज़ ***Epilepsy*** एपिलेप्सी ***Jaundice*** जोन्डिस ***Asthma*** अस्थमा ***Others (Specify)*** अन्य ***Can't Say/*** कह नहीं सकता	***1*** ***2*** ***3*** ***4*** ***5*** ***6*** ***7*** ***8***							(230-249)
48.	***What is or are the availability of dental treatment facilities in your area? /*** आपके क्षेत्र में दंत–चिकित्सा सम्बन्धी क्या सुविधाएं उपलब्ध हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***None/*** कोई नहीं ***Govt. Hosp./ Dispensary*** सरकारी हस्पताल / डिस्पेन्सरी ***Private Hospitals*** निजी हस्पताल ***Private Practitioner*** प्राइवेट प्रेक्टिशनर ***Don't Know*** नहीं जानते	***1*** ***2*** ***3*** ***4*** ***5***							(250-269)
49.	***How accessible are the Oral health facilities with available transport?*** उपलब्ध परिवहन द्वारा मुख–स्वास्थ्य सुविधाओं तक पहुंच का समय।	***Less than ½ hour*** आधा घण्टा से कम ***½ to 1 hour*** आधा से 1 घण्टा ***> 1 hour*** 1 घण्टा से अधिक ***Can't Say*** कह नहीं सकता	***1*** ***2*** ***3*** ***4***							(270-274)

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	
F. Awareness and Knowledge of Dental Health Problems एफ. दंत–स्वास्थ्य समस्याओं की जानकारी व जागरूकता										
50.	***What, in your opinion, are the common problems associated with mouth and teeth? /*** आपकी राय में मुख व दांतों से सम्बन्धित सामान्य समस्याएँ क्या हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***Tooth Decay*** ..... 1 दंत–क्षय ***Gum Disease*** ..... 2 मसूड़ों की बीमारी ***Bad Smell*** ..... 3 दुर्गन्ध ***Crooked teeth*** ..... 4 टेढ़े–मेढ़े दांत ***Mouth Ulcers*** ..... 5 मुख का अल्सर ***Stained teeth*** ..... 6 गन्दे दांत ***Others (Specify)*** ..... 7 अन्य ***Don't Know*** ..... 8 नहीं जानता			A S K E D					(275-294)
51.	***What, in your opinion, are the major factors which cause dental problems?/*** आपकी राय में, किन मुख्य कारणों से दांतों की समस्याएँ पैदा होती हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***Eating sweets icecreams/chocolates*** ..... 1 मिठाई / आइसक्रीम / चाकलेट खाना ***Not brushing regularly*** ..... 2 नियमित रूप से ब्रुश न करना ***Not rinsing*** ..... 3 पानी से मुख साफ न करना ***Consuming Tobacco products/*** ..... 4 तम्बाकू उत्पाद खाना ***Others (Specify)*** ..... 5 अन्य ***Don't Know*** ..... 6 नहीं जानता			N O T T O B E					(295-314)

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	
52.	***How can you prevent dental problems?/*** आप किस प्रकार दांतों की बीमारियों को रोक सकते हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***Not consuming tobacco products /*** तम्बाकू उत्पादों का इस्तेमाल न करके	1		ASKED					(315-334)
		Regular cleaning of teeth with brush ब्रुश द्वारा दांतों की नियमित सफाई	2							
		Visiting dentist regularly दंत–चिकित्सक द्वारा नियमित जांच	3							
		Using Fluoride Toothpaste फ्लोराइड टूथ–पेस्ट का इस्तेमाल	4							
		Avoiding sweets icecreams/chocolates मिठाई, आइसक्रीम व चाकलेट छोड़कर	5							
		Others (Specify) अन्य तरीके	6							
		Don't Know नहीं जानता	7							

G. Tobacco Smoking and Chewing Habits
जी. तम्बाकू चबाने व पीने की आदतें

53.	***Do you smoke? /*** क्या आप धूम्रपान करते हैं?	***No/*** नहीं	1	**In case NO go to Q. 61**	ASKED					(335-339)
		Yes/ हां	2							
54.	***What do you smoke? /*** आप कौन सा धूम्रपान करते हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***Chillum/*** चिलम	1		NOT ASKED					(340-359)
		Hookah/ हुक्का	2							
		Cigars/ सिगार	3							
		Cigarettes/ सिगरेट	4							
		Bidis/ बिड़ी	5							
		Others (Specify)/ अन्य	6							

S. No./ क्रम सं.	Question / प्रश्न	Response / उत्तर	Code/कोड		5 Yrs. / 5 वर्ष	12 Yrs. / 12 वर्ष	15 Yrs. / 15 वर्ष	35-44 Yrs./ 35–44 वर्ष	65-74 Yrs./ 65–74 वर्ष	
55.	***Whether it is with or without Filter?*** क्या यह फिल्टर सहित हैं या फिल्टर रहित?	***With Filter/*** फिल्टर युक्त ***Without Filter/*** फिल्टर रहित ***Don't Know/*** नहीं जानता	***1*** ***2*** ***3***		D					(360-364)
56.	***How many times a day do you normally Smoke? /*** एक दिन में सामान्यतः कितनी बार धूम्रपान करते हैं?	***< 5 times/*** पांच बार तक ***5-10 times/*** पांच से दस बार ***10-20 times/*** दस से बीस बार ***> 20 times/*** बीस से अधिक	***1*** ***2*** ***3*** ***4***		E K					(365-369)
57.	***Did you or do you chew pan with tobacco? /*** क्या आप पान तम्बाकू के साथ चबाते हैं या चबाते थे?	***No/*** नहीं ***Yes/*** हाँ ***Don't Know/*** पता नहीं	***1*** ***2*** ***3***	**If No, Go to Q. 61**	S A					(370-374)
58.	***Did you or do you chew pan-masala with tobacco? /*** क्या आप पान–मसाला तम्बाकू के साथ चबाते हैं या चबाते थे?	***No/*** नहीं ***Yes/*** हाँ ***Don't Know/*** पता नहीं	***1*** ***2*** ***3***		E					(375-379)
59	***How long have you been in the habit of chewing pan or pan masala with tobacco? /*** आप कब से पान या पान–मसाला तम्बाकू के साथ चबाते रहें हैं? (एक पर टिक लगायें)	***< 5 Yrs./*** 5 साल से ***5-10 Yrs./*** 5–10 साल से ***> 10 Yrs./*** 10 साल से अधिक	***1*** ***2*** ***3***		B O					(380-384)
60.	***How often do you chew tobacco in a day? /*** एक दिन में आप तम्बाकू कितनी बार चबाते हैं? (एक पर टिक लगायें)	***< 5 times/*** 5 बार ***5-10 times/*** 5–10 बार ***> 10 times/*** 10 से अधिक	***1*** ***2*** ***3***		T					(385-389)
61.	***Did you or do you take Alcohol? /*** क्या आप अल्कोहल (शराब) लेते थे या लेते हैं? (एक पर टिक लगायें)	***No/*** नहीं ***Yes/*** हाँ	***1*** ***2***	**If No, End the interview here**	N O T					(390-394)
62.	***How often do you take Alcohol/*** आप अल्कोहल (शराब) कितनी बार लेते हैं या लेते थे? (एक पर टिक लगायें)	***Daily/*** प्रतिदिन ***3 times a week/*** सप्ताह में 3 बार ***Occasionally/*** कभी–कभी ***< 3 times a week/*** सप्ताह में 3 बार से अधिक	***1*** ***2*** ***3*** ***4***							(395-399)

DENTAL COUNCIL OF INDIA, NEW DELHI

NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING

(A NATIONAL EPIDEMIOLOGICAL STUDY OF ORAL HEALTH PROBLEMS AND FLUORIDE ESTIMATION IN WATER SAMPLES)

DATE | | | | | 0 | 4 |
(DAY) (MONTH) (YEAR)

FORM NO. 2 0 (1-2)

STATE (6-7)

ZONE (8-9)

TEAM NO. (3-5)

DISTRICT (10)

NAME OF VILLAGE / URBAN BLOCK _____ (11-12)

CODE

RURAL / URBAN 1 (R) 2 (U) (13)

SERIAL NO. OF HOUSEHOLD VISITED (14-16)

NAME OF HEAD OF HOUSEHOLD Mr. / Mrs. _____

NAME OF SPOUSE _____

ADDRESS OF THE HOUSEHOLD _____

_____

EXAMINER _____ (NAME) (SIGN)

RECORDER _____ (NAME) (SIGN)

NAME OF INTERVIEWER _____ (NAME) (SIGN)

FIELD CHECKED BY _____ (NAME) (SIGN)

SCRUTINISED BY _____ (NAME) (SIGN)

CHECKED BY _____ (NAME) (SIGN)

WHO ORAL HEALTH ASSESSMENT FORM (1997)

GENERAL INFORMATION

Name .....

Date of birth (17) Year Month (20)

Age in years (21) (22)

Sex (M = 1, F = 2) (23)

Ethnic group (24)

Occupation (25)

Geographical location (26) (27)

Location type : (28)

1 = Urban
2 = Periurban
3 = Rural

OTHER DATA (specify and provide codes)

..... (29)

..... (30)

CONTRAINDICATION TO EXAMINATION

Reason..... (31)

..... 0 = No
1 = yes

CLINICAL ASSESSMENT (32)

EXTRA-ORAL EXAMINATION

0 = Normal extra-oral appearance
1 = Ulceration, sores, erosions, fissures (head, neck, limbs)
2 = Ulceration, sores, erosions, fissures (nose, checks, chin)
3 = Ulceration, sores, erosions, fissures (commissures)
4 = Ulceration, sores, erosions, fissures (vermilion border)
5 = Cancrum oris
6 = Abnormalities of upper and lower lips
7 = Enlarged lymph nodes (head, neck)
8 = Other swellings of face and jaws

TEMPOROMANDIBULAR JOINT ASSESSSMENT

SYMPTOMS
0 = NO
1 = Yes
9 = Not recorded
(33)

SIGNS
0 = No
1 = Yes
9 = Not recorded

Clicking (34)
Tenderness (on palpation) (35)
Reduced jaw mobility (< 30 mm opening) (36)

ORAL MUCOSA

CONDITION

0 = No abnormal condition
1 = Malignant turmour (oral cancer)
2 = Leukoplakia
3 = Lichen Planus
4 = Ulceration (aphthous, herpetic, traumatic)
5 = Acute necrotizing gingivitis
6 = Candidiasis
7 = Abscess
8 = Other condition (specify if possible).....
9 = Not recorded

(37) (40)
(38) (41)
(39) (42)

LOCATION

0 = Vermilion border
1 = Commissures
2 = Lips
3 = Sulci
4 = Buccal Mucosa
5 = Floor of mouth
6 = Tongue
7 = Hard and / or soft palate
8 = Alveolar ridges / gingiva
9 = Not recorded

ENAMEL OPACITIES/HYPOPLASIA

Permanent teeth

0 = Normal
1 = Demarcated opacity
2 = Diffuse opacity
3 = Hypoplasia
4 = Other defects
5 = Demarcated and diffuse opacities
6 = Demarcated opacity and hypoplasia
7 = Diffuse opacity and hypoplasia
8 = All three conditions
9 = Not recorded

14 13 12 11 21 22 23 24
(43) (50)
(51) (52)
46 36

LOSS OF ATTACHMENT*

0 = Normal
1 = Questionable
2 = Very mild
3 = Mild
4 = Moderate
5 = Severe
8 = Excluded
9 = Not recorded

(53)

COMMUNITY PERIODONTAL INDEX (CPI)

0 = Healthy
1 = Bleeding
2 = Calculus
3 = Pocket 4-5 mm (black band on probe) partially visible)
4* = Pocket 6 mm or more (black band on probe not visible)
X = Excluded sextant
9 = Not recorded

*Not recorded under 15 years of age

17/16 11 26/27
(54) (56)
(57) (59)
47/46 31 36/37

LOSS OF ATTACHMENT*

0 = Healthy
1 = 4-5 mm (cementoenamel junction (CEJ) within black band)
2 = 6-8 mm (CEJ between upper limit of black band and 8.5 mm ring)
3 = 9-11 mm (CEJ between 8.5 mm and 11.5 mm rings)
4 = 12 mm or more (CEJ beyond 11.5 mm ring)
X = Excluded sextant
9 = Not recorded

*Not recorded under 15 years of age

17/16 11 26/27
(60) (62)
(63) (65)
47/46 31 36/37

DENTITION STATUS AND TREATMENT NEED

Identification Number

55 54 53 52 51 61 62 63 64 65
18 17 16 15 14 13 12 11 21 22 23 24 25 26 27 28

Crown (66) (81)
Root (82) (97)
Treatment (98) (113)

85 84 83 82 81 71 72 73 74 75
48 47 46 45 44 43 42 41 31 32 33 34 35 36 37 38

Crown (114) (129)
Root (130) (145)
Treatment (146) (161)

Primary teeth Crown	Permanent teeh Crown/Root		STATUS
A	0	0	Sound
B	1	1	Decayed
C	2	2	Filled, with decay
D	3	3	Filled, no decay
E	4	-	Missing, as a result of caries
-	5	-	Missing, any other reason
F	6	-	Fissure sealant
G	7	7	Bridge abutment special crown or veneer/implant
-	8	8	Unerupted tooth, (Crown) / unexposed root
T	T	-	Trauma (fracture)
-	9	9	Not recorded

TREATMENT

0 = None
P = Preventive, caries arresting care
F = Fissure sealant
1 = One surface filling
2 = Two or more surface fillings
3 = Crown for any reason
4 = Veneer or laminate
5 = Pulp care and restoration
6 = Extraction
7 = Need for other care (specify).....
8 = Need for other care (specify).....
9 = Not recorded

PROSTHETIC STATUS

Upper Lower (162) (163)

0 = No Prosthesis
1 = Bridge
2 = More than one bridge
3 = Partial denture
4 = Both bridge (s) and partial denture (s)
5 = Full removable denture
9 = Not recorded

PROSTHETIC NEED

Upper Lower (164) (165)

0 = No Prosthesis needed
1 = Need for one-unit prosthesis
2 = Need for multi-unit prosthesis
3 = Need for a combination of one- and/or multi-unit prostheses
4 = Need for full prosthesis (replacement of all teeth)
9 = Not recorded

DENTOFACIAL ANOMALIES

DENTITION

☐ (166) ☐ (167) Missing incisor, canine and premolar teeth-maxillary and mandibular - enter number of teeth

SPACE

☐ (168)
Crowding in the incisal segments.
0 = No crowding
1 = One segment crowding
2 = Two segments crowding

☐ (169)
Spacing in the incisal segments:
0 = No spacing
1 = One segment spaced
2 = Two segments spaced

☐ (170)
Diastema in mm

☐ (171)
Largest anterior maxillary irregulaity in mm

☐ (172)
Largest anterior mandibular irregularity in mm

OCCLUSION

☐ (173)
Anterior maxillary overjet in mm

☐ (174)
Anterior mandibular overjet in mm

☐ (175)
Vertical anterior openbite in mm

☐ (176)
Antero-posterior molar relation :
0 = Normal
1 = Half cusp
2 = Full cusp

175

NEED FOR IMMEDIATE CARE AND REFERRAL

Life-threatening condition ☐ (177)
Pain or infection ☐ (178)
Other condition (specify)..... ☐ (179)

0 = Absent
1 = Present
2 = Not recorded

Referral
0 = No
1 = Yes
9 = Not recorded
☐ (180)

NOTES