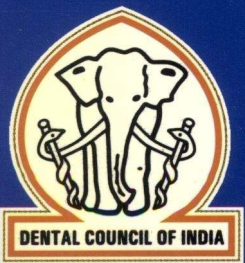
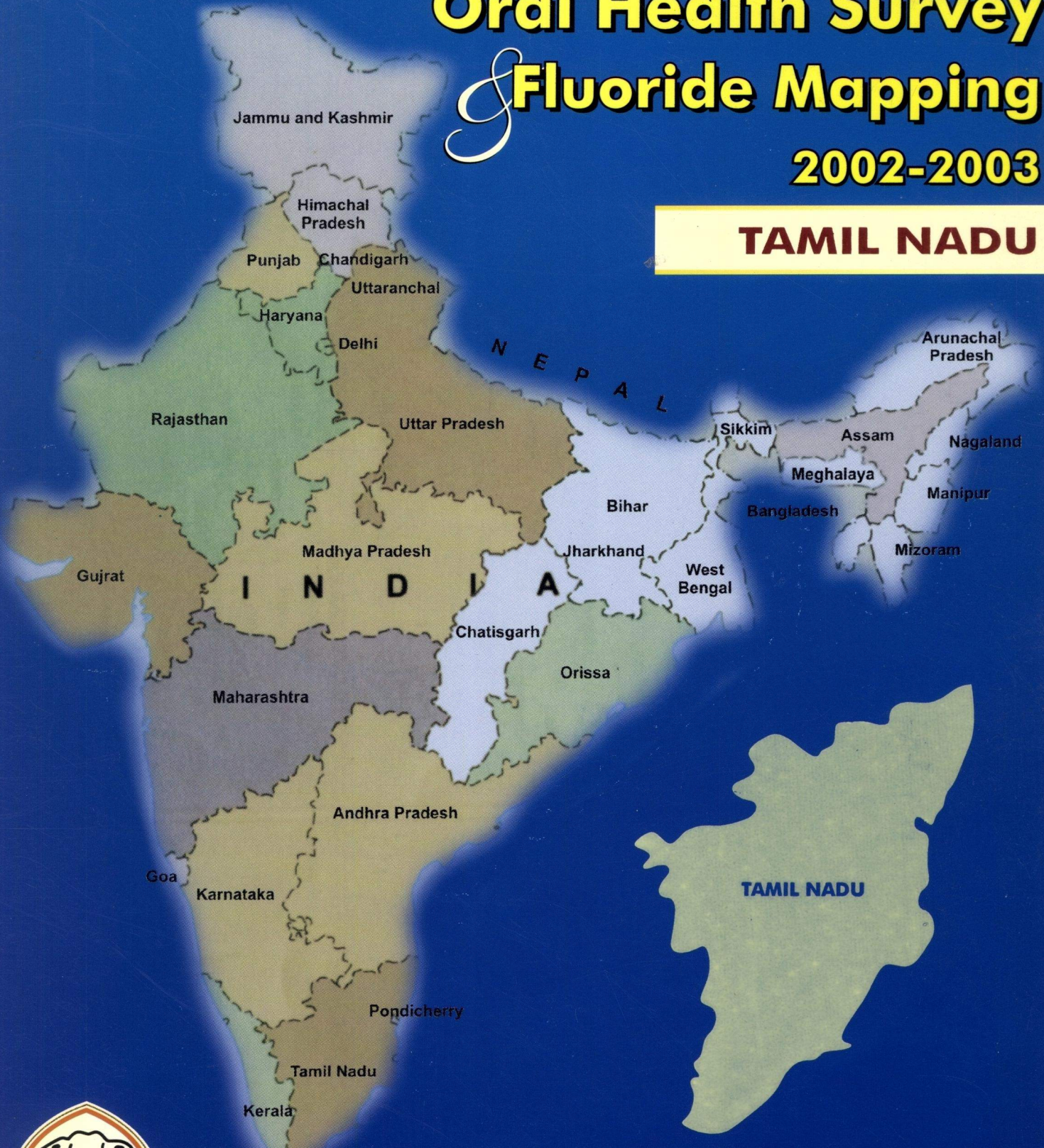


National Oral Health Survey & Fluoride Mapping 2002-2003

TAMIL NADU



Dental Council of India
New Delhi
2004

NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING

2002-2003

TAMIL NADU

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Project Supported by :

Colgate - Palmolive Co. U.S.A.

Colgate - Palmolive (India) Ltd.

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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 liaise 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 Arundeeep 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.

July 2004.

Dr. R. K. Bali

Dr. V. B. Mathur

Prof. P. P. Talwar

H.B. Chanana

ACKNOWLEDGEMENTS

It gives me immense pleasure as the State Co-ordinator to acknowledge the following members in the successful completion of such a mammoth task:

I am greatly indebted to the Government of Tamil Nadu headed by the Governor, His Excellency Shri.Ramanamohan Rao and the Honorable Chief Minister Dr.J Jayalalithaa for being the patrons of this survey. Under their stewardship Tamil Nadu has set benchmarks in the field of medicine. Their achievements have encouraged me to undertake this herculean task.

I thank the Honorable Ministers of Health & Family Welfare, Government of Tamil Nadu, Shri Semmalai and Shri Thalavaisundram for their kind permission.

I thank the former and present Secretaries, Ministry of Health & Family Welfare, Shri Syed MunirHoda, IAS, Smt.GirijaVaidyanathan, IAS, and Smt.ShielaRani Chunkath, IAS, for their overview.

I thank the Director of Medical & Rural Health Services, Director of Public Health & Preventive Medicine & Directors of Medical Education who ably guided and helped me during the last two years.

I thank the collectors of the seven districts, Shri Abdul Salam, IAS, Shri. N. Muruganandam, IAS, Shri. Gangadeep Singh Bedi, IAS, Shri.Radhakrishna, IAS, Shri Kosalaraman, IAS, Shri Supriya Sahu, IAS, and Shri Sunil Patawal, IAS, for their active support and participation.

I thank the Principals of Tamil Nadu Government Dental College & Hospital Dr. Nandagopal, Dr.Venkatesan, Dr. Padamanbhan, Dr. Manivannan and Dr.Sudarshan for always being with me in every capacity and giving me the freedom to carry out this survey.

I thank Shri M R V Krishna Rao, Shri Chandrasekar and Shri Ravindran of the Census office, Government of India at Chennai for sharing the demographic data required for this survey.

I would like to thank Mr. Palanichamy Gounder of Ooty and Mr. A. Mony of Kanayakumari who made arrangements for the teams in these districts.

A work of this large magnitude needs a battalion of foot soldiers whose tireless work made my job easier. I thank Dr. Aruna, Dr. Anslemn, Dr. Annamalai, Dr. Umadevie, Dr. Jothimani and Dr. Arvinth Magesh who worked day and night to complete this survey.

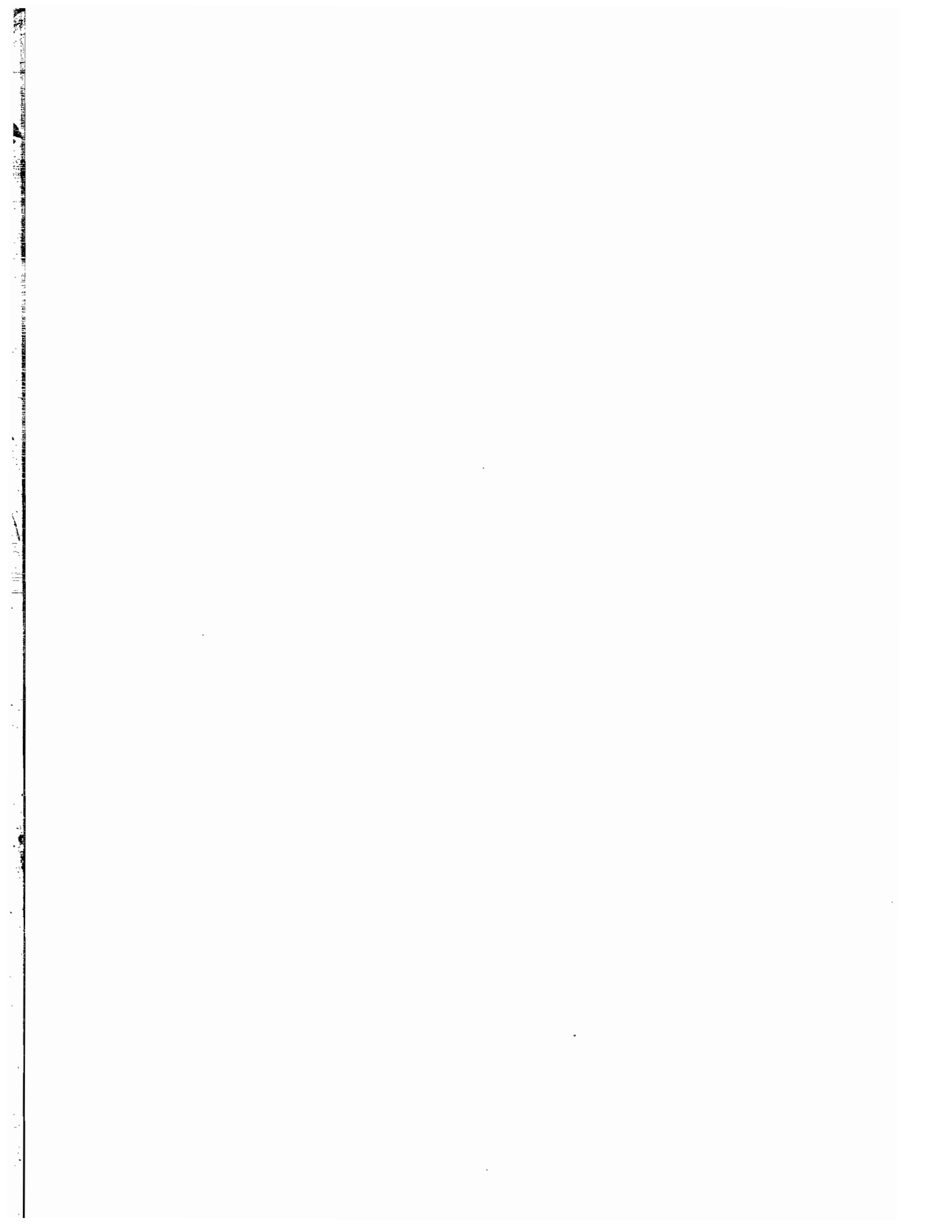
Ragas Dental College & Hospital, Chennai in Tamil Nadu and Mahatma Gandhi Dental College & Hospital, Pondicherry helped host the calibration workshops. I thank the Principals of these institutes, Dr. Ramachandran and Dr. Shyamsingh, for their unflinching and invaluable help and guidance.

My thanks to the supervisors Drs. Ajith Krishnan, Shivakumar, Harikiran and Chandrasekhar, their team members and the colleges which sent them. Without them, this survey would not have happened at all.

I thank Shri Rham for printing the Tamil questionnaires at very short notice. I thank my family whose invaluable support in putting up with my intolerable demands on their time and energy enabled me to complete this work.

Finally I thank the Almighty for giving me the courage and leading me the right way throughout.

Dr. M B Aswath Narayanan



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CHAPTER 0

EXECUTIVE SUMMARY

1. GENESIS

Oral health is a very important component of general health. However, it is one component about which there is very little awareness and little clear understanding of the implications of the consequences of ill-health. The high prevalence of dental diseases, like dental caries, periodontal diseases, various stages of malocclusion, besides lack of access to the required services leads to significant absenteeism and economic loss, apart from the ill-effects on the health of the person afflicted. In view of the adverse effects of poor oral health, it is important to take preventive measures and create the required 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 formulation of oral health policies and implementation of appropriate programmes to improve the awareness and knowledge of general public about the preventive aspects of oral health, to create the required services and to train the necessary dental manpower to meet these needs.

The Dental Council of India has been greatly concerned about this gap in knowledge and the resultant lack of appropriate policies and programmes. There has been a long-felt need for an epidemiological study on oral health problems, which would also include a study of the related oral health practices besides mapping fluoride levels in drinking water from various sources in the country. Such a study may help bring about a balance between the oral health needs of the people and the services provided, and help plan and organise need-based services to improve the level of oral health of the people.

Keeping this in view, the Dental Council of India undertook a national-level epidemiological study, "National Oral Health Survey and Fluoride Mapping," to assess the oral health problems of the people and practices they adopt in this regard. The present study is a community-based survey with the objectives of assessment of (1) awareness and knowledge of people about 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. The survey, initiated in 2002, aimed at knowing the ground situation to 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:

1. Prevalence of oral health problems,
2. Fluoride levels in drinking water,
3. Eating habits affecting oral health,

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

It must be noted that this survey delved into areas much beyond the usual ambits of oral health surveys, which generally focus on the levels and problems of oral health in the community. This survey, on the other hand, collected data on many more dimensions so as to enable an understanding of the practices that cause oral health problems and the steps people 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 designed and conducted so that state-wise oral health problems and related practices could be determined. This is to help the formulation and implementation of state-wise policies and programmes.

3.1 Sample size

Three considerations were kept in mind while deciding upon 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 possible to complete the survey of the proposed sample within the limited budget available. In view of these, 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 rural areas and 105 from urban areas. Thus, 105 males and 105 females were examined in each of the five age groups from the rural areas, and 53 males and 53 females in each age group from 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 the Census Commissioner and the 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 almost equal population). In the next stage, 7 households were selected from each CEB. Again, 105 subjects from each age group (5, 12, 15, 35-44 and 65-74) were to be examined, with males making up half the number, and females the other half.

4. STUDY TOOLS

In order to encompass all the objectives 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 **Annexures**.

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 the questionnaire related to etiological factors.

Great care was taken to ensure that the quality of the data collection met stringent standards. Besides a state coordinator, supervisors were appointed to move with the teams when they went for data collection. The coordinators, supervisors, of the dental colleges, were given total responsibility for the 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.

Besides, water samples were taken from the selected households for testing fluoride levels, and all such tests on these 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 is very important, and very thorough training was imparted for it, so that all field teams adopted uniform assessment methods in recording dental problems. A workshop on report writing was also organised in Mumbai to standardise the format & writing of each state report. This was necessary because some coordinators undertook responsibility of writing reports for their respective state. Of course some state reports were prepared by the Central Survey Unit.

7. AREA COVERAGE IN SURVEY

The National Oral Health Survey, was designed to cover all Agro-Climatic regions of the state. This state is divided into seven Agro-Climatic regions and all were covered in this survey.

8. FINDINGS (ORAL HEALTH KNOWLEDGE AND PRACTICES)

8.1 Characteristics of households surveyed

- About 51 per cent households live in Semi-Pucca houses while another 28 per cent live in Pucca houses. Pucca houses were more in urban areas (47 per cent).
- A majority of the households (73 percent) had a monthly expenditure less than or equal to Rs. 2,500.
- About 92 per cent households of the state was of Hindu, followed by 4 per cent Muslims and 3 per cent Christians. Also, 55 per cent households belonged to Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Castes (OBCs) categories
- The staple food was rice, with almost 72 per cent of the people being non-vegetarians.
- Almost 51 per cent of the subjects reported getting drinking water from pipe/taps.

8.2 Profile of population across age groups

- The percent illiterates increased from 8 percent to 50 percent with the increase in the age of respondents. On an average about 28 per cent of the respondents across age groups were illiterate.
- With regard to exposure to media, TV was found to be the most popular media. As regard to habits of viewing different media, across age groups it revealed that on an average 63 per cent watched TV while 28 per cent listened to the radio and 22 per cent read newspapers daily.
- Exposure to cinema was lower, with only 17 per cent respondents across age groups reported watching cinema once in 3 months.

8.3 Abnormal oral health habits across age groups

- Except the occurrence of habits "sucking or biting fingers/thumbs" "biting nails/lips/object like pencil" in 14 percent & 7 percent of 5 year olds subjects respectively & "habit of "grinding/gritting teeth" in 9 percent areas all age groups, the prevalence of each of habit of across age group was generally low with increase in age of respondents.

8.4 Sweet/sugar-taking habits across age groups

- About 18 per cent of the subjects, across all ages and sexes reported taking sugar at least once in the last one day. There was not much difference in sugar intake of males and females. Overall, it was observed that people, both in rural and urban, were aware of the consequences of sugar consumption.

- About 33 per cent respondents across age groups had not taken sugar or sweets at all in the last 24 hours. However, it was seen that intake decreased with age in both rural and urban areas.

8.5 Oral hygiene practices across age groups

- The practice of cleaning teeth was universal.
- On an average about 57 per cent across all age groups, both sexes and more in urban areas reported using toothbrush to clean their teeth.
- About 96 per cent, across both sexes and more people in rural areas cleaned their teeth once a day. More people reported cleaning teeth twice a day in urban areas.
- On an average about 61 per cent, across all ages and both sexes, and more in urban areas reported the use of toothpaste. Usage was more in NE Coastal and Hills Region.
- On an average about 40 per cent, across all ages and both sexes, and more in urban areas reported the use of fluoridated toothpaste/powder. Greater use of fluoridated toothpaste/powder was reported in NE Coastal region.
- On an average about 63 per cent, across all ages, more males and more in urban areas changed their toothbrush once in 1-3 months. The change was less frequent in rural areas – four to six months or even after six months.
- On an average about 46 per cent of the respondents, across all ages and both sexes, and more in urban areas reported rinsing their mouth after every meal. The practice was more prevalent with increase in age. This percentage was also higher in the Hills Region.

8.6 Dental problems and treatment practices across age groups

- On an average around 19 per cent of the respondents, across both sexes, suffered from dental problems in the last one year. Reporting was more in rural areas. There were no clear differentials among regions.
- The most common problem reported was dental decay (over 85 per cent). The problem of gum disease was reported by less than 4 per cent of aged 15 and below and 17 per cent in the higher age groups.
- On an average one-third subjects, across all ages, consulted trained dentist. This was found to be more in NE Coastal and Hills Region. However, only 13 per cent subjects, across all ages and both sexes, but more in urban areas were aware of availability of Governmental dental facility.
- Most respondents reported less than half-an-hour to reach the private dental health facilities. This was especially so in urban areas.

8.7 Awareness of dental health problems across age groups

- On an average about 53 per cent of subjects across ages and both sexes, but more in urban areas, were aware of oral health problems in the state.

- On an average about 55 per cent of respondents were not aware of the factors that can cause oral health problems.
- Of those who were aware, most of them reported “eating sweets/ice cream” (40 per cent) followed by “not brushing regularly” (15 per cent) as two important factors.
- About preventive measures in regard to oral health problems, again 55 per cent subjects across all ages and sexes reported no knowledge.

8.8 Tobacco smoking and chewing habits across age groups

1. About 10 per cent in the 35-44 and 65-74 age groups had the habit of smoking tobacco in the state. The habit was more prevalent among males and in rural areas. Higher percentages were reported from Delta. More than half of them, more males and more from rural areas, smoked cigarettes. Around 80 per cent of smokers, across both sexes and place of residence, said they smoked less than 10 times in a day.
2. About 12 per cent, across all ages and place of residence, but more males said they chewed pan or pan masala with tobacco. A majority of those who chewed tobacco or pan masala with tobacco said they been doing so for 5-10 years.
3. About 7 per cent, across all ages, but more males and more in rural areas, said they were consuming alcohol.

9. FINDINGS (ORAL HEALTH ASSESSMENT)

9.1 Dental caries

- 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 21.6 indicating a loss of nearly 10 of the normally present 32 teeth in an average mouth. About 17.7 per cent subjects across both sexes in the age group of 65-74 years were edentulous or without natural teeth.
- The prevalence of caries in 5 year olds (primary teeth) was 49.8 percent. The prevalence (permanent teeth), was approximately 52.2 per cent in the age groups 12 years; 60.9 percent in 15 years; 80.4 percent in 35-44 years; and 84.6 percent in 65-74 years, respectively.
- In the 5 year age group, where only primary teeth are present, the mean dmft value is 2.3. 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 2.5 in 12 year olds; 3.4 in 15 year olds; 5.8 in 35-44 year olds; and 13.3 in 65-74 year olds. The decayed teeth (DT) component contributed most to the DMFT in the age groups of 12 and 15 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 two-and-one-half 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 29.2 while at 12 years, it was 5.0.

- The percentage of subjects with root caries was approximately 13.3 and 16.4 respectively in the age groups 35-44 year and 65-74 year. The mean number of teeth with root caries was in the range of one tooth (0.6 and 1.1 respectively) in both age groups. There were no subjects with root fillings in the state.
- There were no marked gender related, or rural and urban differentials. The pattern of distribution of caries by dmft/ DMFT values was similar in rural and urban areas and in between regions.

The high levels of mean number of teeth decayed and missing, together with negligible numbers of filled teeth indicate that either there was little priority for treatment of decayed teeth or it is not affordable for most people. Another possibility is the inaccessibility (difficult to reach facilities) or non-availability of dental services in the area where the subjects live.

9.2. Treatment need

- Approximately 48.2 percent subjects aged 5 years required some treatment. This percentage was 64.1 per cent (12 year olds); 66.6 (15 year olds); 79.2 per cent (35-44 year olds); and 81.7 (65-74 year olds).
- The most prevalent need was for one or more surface fillings followed by the need for extractions, and preventive treatment. 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.
- The mean number of teeth which required treatment was highest in the highest age group of 65-74 years (13.8) and lowest in the subjects aged 5 years (2.7). The mean number of teeth needing treatment at 12 years was 3.0. 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: 44.8 percent in 12 year olds; 61.7 percent in 15 year olds; 87.8 percent in 35-44 year olds; and 88.2 percent in 65-74 year olds. Bleeding and calculus, in that order, were the two most prevalent conditions in 12 year olds. In 35-44 and 65-74 year olds, calculus was more prevalent than bleeding.
- 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 (5.5 percent) and highest in 65-74 years (63.8 percent) 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.

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.
- Definite or severe malocclusion ranged from 11.9 percent in 12 year olds to about 11.1 percent in 15 year olds. The very severe form of malocclusion was prevalent in about 15.6 percent subjects aged 12 years, and 14.7 per cent subjects aged 15 years.

9.5 Oral cancer & oral mucosal lesions

Mucosal lesions were present in about (3-8)% of individuals. Oral cancer seen in 4% of such individuals.

9.6 Dental fluorosis status

On an average 10% of population is affected by Dental Fluorosis & mostly of the mild form.

9.7 Other lesions

9.7.1 Extra oral lesions

Less than 2% of individuals had extra oral lesions with ulcerations, sores & trismus being the commonest finding.

9.7.2 T M joint symptoms and signs

Less than 1% of the population is affected by TMJ disorders. Clicking and tenderness are the commonest finding.

9.7.3 Enamel defects (opacities, hypoplasia)

On an average 20% of individuals below 35 yrs & 5% individuals above 35 yrs had enamel defects.

Demarcated opacity was the commonest finding.

9.8 Prosthetic status & need

3% of people in (35 – 44) age group and 10.5% in (65 – 74) had prosthesis in upper arch / lower arch.

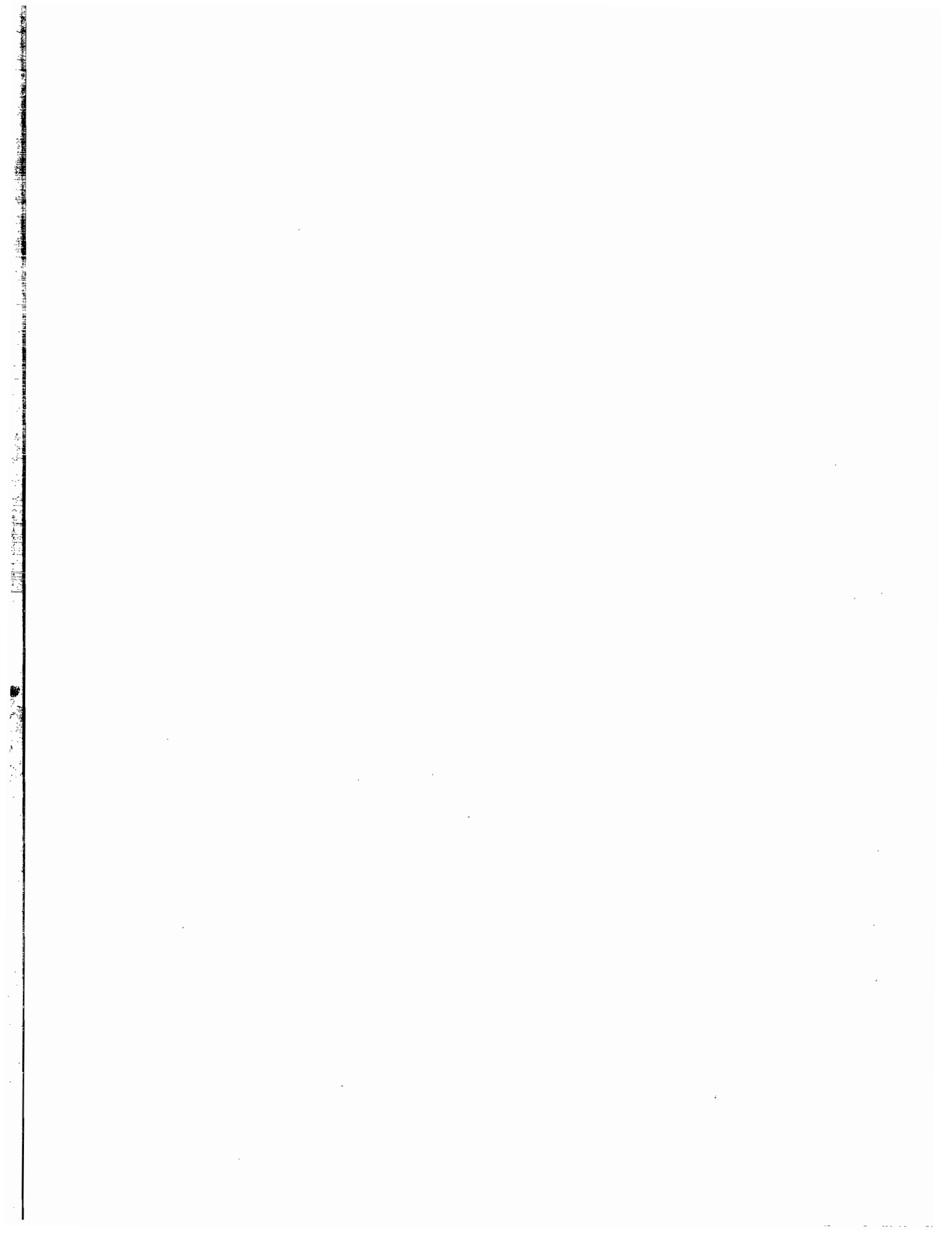
15 yrs had no prosthesis almost 60% of prosthetic needs were unmet, 25% of individuals need complete dentures.

9.9 Community need for immediate care and referrals

Less than 1% needed immediate care.

Summary of findings of important oral health conditions and practices by age in Tamil Nadu

	Findings	Age in years				
		5	12	15	35-44	65-74
1.	Oral disease conditions					
1.1	Dental Caries					
	% Prevalence	49.8	52.2	60.9	80.4	84.6
	Mean DMFT	2.3	2.5	3.4	5.8	13.3
	SiC Index	6.2	5.0	6.8	12.0	29.2
1.2	Periodontal disease					
	Bleeding, calculus or pockets					
	% Prevalence	23.4	44.8	61.7	87.8	88.2
	Mean no of Sextants affected	-	1.5	2.5	4.2	3.2
1.3	Loss of attachment					
	% Prevalence	NA	NA	94.6	61.9	29.2
	Mean no of Sextants affected	NA	NA	0.2	1.5	2.2
1.4	Malocclusion (% prevalence)	0.1	35.9	32.4	39.1	NA
1.5	Dental Fluorosis (% prevalence)	4.5	18.5	17.8	8.0	4.5
1.6	Oral mucosal conditions (Nos.)	56	55	57	95	114
1.7	Oral Cancer (Nos.)	37	39	35	39	39
1.8	Edentulousness (%)	NA	NA	0.1	0.4	21.7
2	Oral Health Practices					
2.1	Sugar Intake in last 24 hours					
	Once	17.8	18.6	19.9	18.5	19.2
	Two & more times	52.3	52.0	49.8	43.6	41.0
2.2	Clean teeth with					
	Tooth Brush	61.4	63.4	65.0	60.4	35.3
	Fingers	28.3	25.5	21.7	26.0	42.1
2.3	Rinsing mouth					
	Always	35.3	39.0	45.0	55.4	57.7
	Sometimes	39.7	44.8	42.7	37.7	31.8
2.4	Tobacco smoking	NA	NA	NA	10.4	11.4
2.5	Frequency of tobacco smoking					
	Less than 10 times	NA	NA	NA	91.0	81.1
	10 or more times	NA	NA	NA	9.0	19.0



CHAPTER I

INTRODUCTION

1.1 BACKGROUND OF THE STATE

1.1.1 Geographical location

Tamil Nadu has a linguistic and cultural history that dates back about 6,000 years. The present state of Tamil Nadu was part of the Madras Presidency during the period of British rule in India. After India attained independence, the state of Madras was formed during the reorganization of states on a linguistic basis in 1956. The state included parts of present-day Andhra Pradesh and Kerala. In 1969, Madras state was renamed Tamil Nadu.

Tamil Nadu, the land of Tamil, is the seat of Dravidian culture and tradition. The major language is Tamil, which is also the official language of the state. Telugu, Kannada, Malayalam, and Urdu are other languages spoken in the state.

1.1.2 Population and demographic profile

According to the provisional population tables from the 2001 Census, Tamil Nadu had a population of 62.1 million, accounting for 6 percent of the total population of India (Office of the Registrar General and Census Commissioner, 2001). The total population of the state was 41.2 million in 1971, 48.4 million in 1981, and 55.9 million in 1991. Except for Kerala, Tamil Nadu recorded the lowest population growth rate in 1991-2001 among all the states and union territories in India. Population density per Km² in Tamil Nadu increased from 317 in 1971 to 372 in 1981, 429 in 1991, and 478 in 2001. The population density in Tamil Nadu (478) is much higher than the density from the country as a whole (324), which indicates substantial pressure on land and other resources. Tamil Nadu's share in India's land area is 4 per cent.

According to 2001 Census, Tamil Nadu has become one of the most urbanized states in the country. The percentage of the population living in urban areas increased from 33 per cent in 1981 to 34 per cent in 1991 and 44 per cent in 2001, which is substantially higher than the 2001 level of urbanization for India (28 per cent).

Hindus (89 per cent) constitute a large majority of the population. Christians (5 per cent) and Muslims (6 per cent) are the other major religious groups in the state.

According to the 1991 Census, the proportion of the total population belonging to scheduled castes was 19.2 per cent, which is slightly higher than that in the country as a whole (16.7 per cent). The proportion of the total population belonging to scheduled tribes in the state is very low (only 1 per cent, compared with 8 per cent in India as a whole).

For 1996-2001, life expectancy in Tamil Nadu is projected to be 65.2 years for males and 67.6 years for females, a substantial increase from the estimates of 57 years for both males and females in 1981-86 (Ministry of Health and Family Welfare, 1999a). The projected increase in life expectancy is more for females than for males.

1.1.3 Socio-economic characteristics

Tamil Nadu is one of the educationally more advanced states in the country. According to the 2001 Census, the literacy rate among the population age seven and above was 73 per cent, compared with 65 per cent for India as a whole. The literacy rates were 82 per cent for males and 65 per cent for females in Tamil Nadu, compared with 76 per cent for males and 54 per cent for females in India as a whole.

Tamil Nadu is one of India's economically and industrially more developed states. Although it continues to be predominantly an agriculture state, Tamil Nadu's economy has been changing rapidly into an industrial economy. The contribution of the agricultural sector to the net state domestic produce (NSDP) declined from 25 percent in 1980-81 to 19 percent in 1996-97. The share of other sectors increased from 48 percent in 1980-81 to 59 percent in 1996-97 (EPW Research Foundation, 1998). At the time of the 1991 Census, the agricultural sector provided a livelihood to 61 percent of the working population in the state as cultivators and agricultural laborers (Office of the Registrar General and Census Commissioner, 1992).

Tamil Nadu is also one of the largest maritime states in India. The two harbours, Chennai and Tuticorin, have more than 51,000 sailing vessels (1998-99) conducting foreign and coastal trade. Tamil Nadu has a good public transport system with more than 90 percent of villages covered by all-weather (pucca) roads. Most of the villages in the state have been electrified. Tamil Nadu has very good health infrastructure in both rural and urban areas. As per the Relative Infrastructure Development Index, Tamil Nadu ranks third among the 17 major states of India (Center for Monitoring Indian Economy, 1997).

The average annual per capita net domestic product in the state increased from Rs.1,498 in 1980-81 to Rs.2,880 in 1996-97 at constant (1980-81) prices or Rs.11,215 at current prices (EPW Research Foundation, 1998). As per the estimates provided by the Planning Commission for 1993-94, 32 percent of the rural population and 40 percent of the urban population was living below the poverty line (Central Statistical Organisation, 1999).

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 percent of children and 95-100 percent adult population suffer from periodontal disease at a point in time. About 35 percent of children suffer from misaligned teeth and jaws affecting their proper functioning. These children lose their school time, and suffer from pain of dental origin. This not only affects their routine life activities but also causes a good deal of discomfort to their parents in several ways. These dental problems are initially painless but become chronic and self-destructive later, thus leading to gradual tooth loss. The dental caries has a crippling effect on the functional components of oral cavity that leads to malnutrition because of incapacity to chew any coarse food available to them. Unfortunately, this is still not considered

a public health problem and thus no action is taken to correct it. In other words, there is need to make people aware of preventive and curative aspects of oral health so that quality of life of people could be improved.

The oral diseases also have an adverse effect on the vital organs of the body. The pus oozing pockets in advanced periodontal disease in adults act as a focus of infection for other vital organs of body like kidney, heart, lungs, brain etc. Limited information available from the micro level studies suggests that 35-40 percent of 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, now, has been recognized and thus all efforts should be afoot to improve oral health of the people.

Several adverse effects of poor oral health necessitate preventive, curative and educational services/ activities. It requires an understanding of people's knowledge and awareness, attitudes towards oral health and their oral health practices besides the magnitude of the problems and corrective and treatment-seeking measures people adopt. This information is basic for the formulation of policy, developing strategic measures and meeting appropriate manpower needs, and creating programmes for improvement of 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 the 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 in India. These services range from rudimentary & 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 the existing services on the oral health of the people. The vacuum of an effective monitoring and evaluation system is being felt; the dental professionals are very keen to fill this gap between the emerging needs and the existing services. A strong need exists to understand the oral health care practices and treatment-seeking behaviours of people and to assess the existing oral health care services. An appropriate and relevant oral health policy for the country should address the local problems in the broad context of the overall 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, tooth paste or any other source. This will help to bring out area specific policies to meet fluoride needs of the people.

In summary, two types of studies are needed. One, on the incidence/ prevalence of oral health problems, and the knowledge and behavioural practices of people for prevention as well as treatment of oral health problems. Second, the existing facilities and infrastructure need to be assessed for their cost effectiveness and utilization patterns. Such studies and their analysis will ultimately help in bringing about a balance between the needs and the services to meet these 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 the oral health issues of the country, and, on the other, been raising its concern for the poor oral health situation in the country with the Government. The idea is to work at both the stakeholders for improving oral health in the country. It has been making recommendations and suggesting ways and means to bring about improvement in the overall oral health situation in the country.

1.4 NATIONAL ORAL HEALTH SURVEY

As indicated above, there is need to conduct two types of studies on oral health to bring about a balance between the oral health needs of the people and services to meet those needs. The first is a community survey to assess (i) knowledge of the people on appropriate dental health promoting behaviors including treatment seeking behaviors, and (ii) the oral health status of the population concerned. The second is the survey and assessment of available dental care services. The Dental Council of India undertook a community survey, National Oral Health Survey, to assess the dental problems and practices related to oral health in 2002. This report presents the result of this survey where a representative sample of community members in all the states have been contacted to assess their dental service needs and understand their knowledge and behavior in regard to practices affecting oral health. Priority and need for such a survey was recommended as early as 1991 in the National Workshop on "Exploring New Frontiers in Dental Public Health: Planning for the Future" organized by the Dental Council of India under the Presidentship of Dr R K Bali. This Workshop had highlighted the lack of data and a framework for planning the oral health manpower and services in our country and recommended a nation-wide oral health survey to assess 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

This proposal was submitted to Ministry of Health & Family Welfare, Govt. of India for (i) seeking their formal approval, and (ii) grant of financial assistance and necessary logistic support. After several meetings between the President of the Dental Council of India and officials of the Ministry of Health & Family Welfare, Govt. of India, the importance and need of the national survey was recognized but the Government, in view of its other, more pressing commitments, could not provide financial assistance. However, the Ministry of Health & 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, approached the Colgate India/ International for funding this Survey and after a series of meetings in Delhi, Mumbai and the USA, the management of the Company, recognizing the need for such a survey, 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 this large survey itself and thus decided to carry it out by collaborating with the 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 in survey methodology. **(Annexure-1)** They formed the Central Survey Team for the National Oral Health Survey & Fluoride Mapping located in the office of the Dental Council of India in New Delhi. It was decided that the Central Survey Team will 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 then, later on, for its report writing. This model was thought to be the best for involvement of the dental colleges to ensure their sense of ownership of the survey and their commitment. The colleges participated enthusiastically and generated, shared and pooled local level resources to supplement the grant for the survey. The President of the Dental Council of India sent a copy of the proposal/ protocol of the National Oral Health Survey to these colleges; they were requested for their support and participation. As expected, almost all resource persons and Deans/ Principals of Dental Colleges readily agreed with his request and expressed willingness to participate in this national endeavor.

The Dental Council of India 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 this oral health survey could provide scientific estimates of the prevalence of various oral health problems and knowledge and behavioural practices of people. The members of the committee are listed in the appropriate section in the annexure in this report. **(Annexure-2)**

1.5 SCOPE OF THE SURVEY

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

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

The scope of data collection was enlarged in the sense that it would collect data not only on 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.

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

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

It also explores 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 people in India. It was done by collecting enough information for formulation of national oral health policy and for implementation of oral health programs in each state. All its dimensions of preventive, promotive and curative oral health care were 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

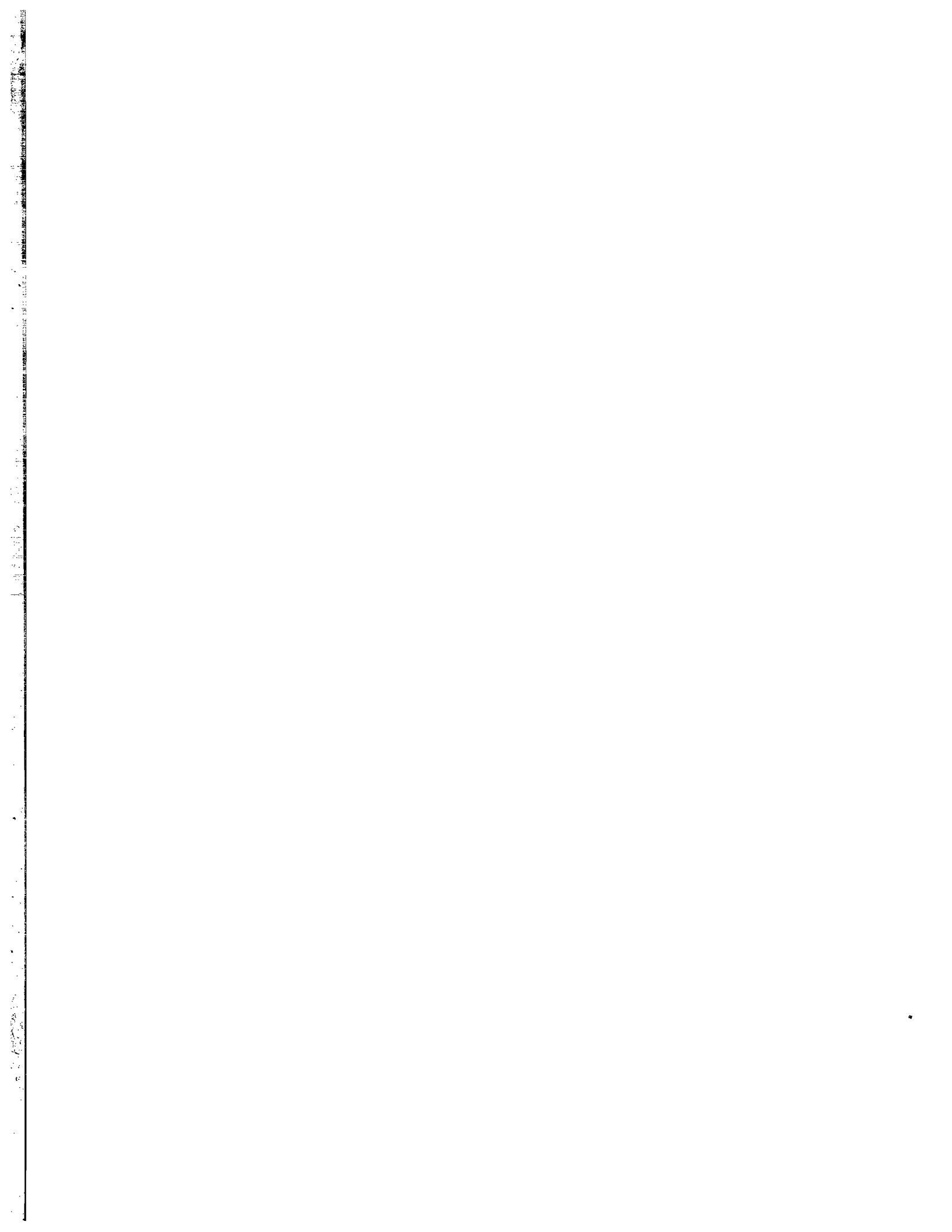
1.6.4 To determine treatment seeking behaviour of people for their oral health problems.

It was presumed that the data collected would lead to development of programs 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 the dental programs could be assessed in the future years.

1.7 CHAPTERIZATION PLAN

The report for the state 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. Oral Health Knowledge and Practices
6. Status of Oral Health



CHAPTER II

METHODOLOGY AND DATA COLLECTION

2.1 BASIC CONSIDERATIONS IN DESIGNING THE SURVEY

The following considerations were taken into account to design the survey:

1. The estimates of oral health problems and related practices need to be made at state level.
2. The study should be able to capture intra-state regional variations in oral health problems. That is, 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 the states should be able to formulate state-wise oral health policies and programmes. It means that information should be collected on
 - Levels of oral health problems
 - Etiological factors which affect oral health
 - Behavioural practices in regard to dental cleaning practices
 - Awareness of dental problems and practices followed to seek treatment, and
 - Fluoride mapping and issues related to fluoride in tooth paste/ powder
4. Available financial resources (limited) should be able to carry the survey in all the states of the country 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:

- The estimates should be valid at state level, and
- Intra-state regional variations in the oral health problems and related practices may be captured.

The World Health Organisation (WHO) has recommended a sample of 300-600 dental examinations of people of ages 5, 12, 15, 35-44 and 65-74 from a homogeneous region of a state. Hence, this sample size was kept in mind while deciding on 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 of households would give 315 respondents/examinees of each of the five ages 5, 12, 15, 35-44 and 65-74. In case this number of respondents (315 in each of the five ages) was not available from 315 households selected, then more households were covered to get these numbers of examinees/ respondents. It may be pointed out that though this is a lower limit of the sample size recommended by WHO, this study had to settle for this sample size because of the financial constraints under which this study was undertaken.

It may be restated that the sample size of 315 households or more was taken from each homogeneous region within a state. Therefore, there was much larger sample size at the state level; it depended on the number of homogeneous regions in which the state has been divided. For instance, if the state has five homogeneous regions, then the total sample size of the households for the state would be $5 \times 315 = 1575$ or more households to cover 1575 respondents/ examinees of each of the five ages. In all, 7875 oral examinations were to be done in the above example.

In order to give representation to urban population, which formed a small proportion of the total population in most of the regions in India/state, urban sample was over-sampled so as to get estimates with a reasonable margin of sampling error of the parameters under study. It was decided that two-thirds of the sample would come from rural areas and one-third from urban. Thus 210 households were selected from rural areas and 105 from the urban. 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 give a sample of 315 individuals from the ages 5, 12, 15, 35-44 and 65-74, yet instructions were given to the field teams that 315 respondents/ examinees from each age were to be covered from each region even if larger number of households needed to be visited and interviewed/ examined.

It was also decided to have 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 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 ages with equal number of males and females.

2.2.2 Selection of sample

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

2.2.2.1 Rural sample

In order to get a sample of rural households in a stratum (region), three-stage sampling method was adopted. At the first stage, one district was selected from the group of districts in that particular region; the second stage was selection of 15 villages from the selected district and the third stage was selection of 14 households from the villages selected in the second stage. The selection of the district was done randomly. For the selection of villages, all the villages in the selected district were arranged in an array by size of the village to get cumulative total of village population. This cumulative total array was divided into three sections, each having equal population size. Five villages with probability proportional to the population size (pps) of the

village were selected from each of three sections. Thus 15 villages were selected in the second stage. 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 with seven or more household from each part) to get a sample of 14 respondents/examinees from each of the five ages – 5, 12, 15, 35-44 and 65-74, half of them were to be males. Thus a sample of 210 or more households from rural areas of the district/ region was selected to interview 14 members from each of the five ages 5,12,15,35-44 & 65-74. Half of them were to be males/females in each age.

2.2.2.2 Urban sample

As regards the urban sample, again, three stage sampling design was adopted to select urban households from the selected districts. 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 the list of CEBs in the 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 7 or more households to get seven members of each of the five ages 5, 12, 15, 35-44 and 65-74. Half of them were to be males in each age. 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 were 28, 665 or more to cover 28,665 respondents/ examinees in each of the five ages 5, 12, 15, 35-44 and 65-74. Half of them were to be males. The total number of examinations to be done were 1, 43, 325. The actual coverage comes to a minimum of 19845 households. That is, 92,225 examinations were done. Their state-wise, rural/urban distribution is shown in Table- 2.1

Table 2.1. State, 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 Tamil Nadu

Table 2.1(a) Statement showing regions/districts within regions and sampled district in the state of TAMIL NADU

Code	Region	Districts	Sampled District	Coverage as per design No. of Households			Actual Coverage No. of Households		
				Rural	Urban	Total	Rural	Urban	Total
1	North Region	i) Dharmapuri							
		ii) Salem	Salem	210	105	315	210	105	315
		iii) Nellore							
		iv) Nillupuram							
		v) Namakhal							
		vi) Kartur							
2	Central Region	i) Coimbatore	Coimbatore	210	105	315	210	105	315
		ii) Madurai							
		iii) Tiruchirapalli							
		iv) Erudi							
		v) Dindignal							
		vi) Theru							
3	North East Coastal Region	i) Chennai	Chennai	210	105	315	210	105	315
		ii) Kancheepuram							
		iii) Thiruvallai							
		iv) Tiruvanamalai							
4	Delta	i) Thanjavur	Thanjavur	210	105	315	210	105	315
		ii) Guddalore							
		iii) Paramhalur							
		iv) Nagapatnam							
		v) Ariyalur							
		vi) Thruvarrur							
5	South East Coastal Region	i) Ramanathpuram							
		ii) Tirunelveli	Tirunevalli	210	105	315	210	105	315
		iii) Toothukur							
		iv) Pundnkkottai							
		v) Shivganga							
		vi) Viridhunagar							
6	South Region	i) Kanyakumari	Kanyakumari	210	105	315	210	105	315
7	Hills Region	i) Nilgiri	Nilgiri	210	105	315	210	105	315
Total	7	30	7	1470	735	2205	1470	735	2205

It may be noted that sample size shown, both on the basis of design and actual coverage, is for minimum number of households. They were 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.

2.3 STUDY TOOLS

In order to cover the total scope of the study, two types of questionnaire/ schedules were used for data collection: Oral Health Assessment Questionnaire (WHO, 1997)) for recording the result of the examination of oral health of the individuals and Individual Questionnaire (Especially developed by DCI for this survey) for collecting information on etiologic factors related to oral health awareness, knowledge and practice of individuals on factors affecting oral health and their treatment seeking behaviour. These questionnaires were pre-tested and finalized by the Central Survey Unit in Delhi with the help of 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 World Health Organization, Geneva. It followed all the instructions given in the WHO publication, "Oral Health Surveys: Basic Methods". By keeping the WHO form as it is, it was considered possible to collect data comparable to other sets of data in the Data Bank of WHO.

2.3.2 Questionnaire on oral health knowledge and practices

As indicated above, this survey did not limit itself to mere oral health assessment because the goal of this survey 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 people.

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

1. Socio-economic and demographic characteristics of 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 the individuals of different ages and sex were to be examined/ interviewed (for oral health problems), it was necessary that dentists should be involved in the data collection teams. Therefore, it was decided that dental colleges, particularly Departments of Community Dentistry of the dental colleges should be involved in the data collection work. It was also hoped that their involvement will help reduce cost of the survey as not only their manpower but also their infrastructure and equipments could be deployed in the survey work. This was based on the

assumption that they were willing to cooperate with the task of national survey, the Dental Council of India had taken up, as well as their own professional interest in this long over-due activity for the dental profession. Keeping this in mind, the technical group formed for this survey identified dental colleges and individuals with such an interest in each state whose involvement could be helpful in quality data collection work. The President, Dental Council of India, wrote to these identified individuals and dental colleges to seek their interest in this national effort. The response was very positive and almost all the invitees were very enthusiastic about their involvement. A list of the participating dental colleges is annexed (**Annexure-4**).

The first stage in this data collection work was to set up a Central Survey Unit at the Dental Council Office in Delhi to coordinate all the activities related to this survey in each state. Because of the limited resources, a small nucleus was set up in the office of DCI. This nucleus consisted of an experienced and senior public health dental surgeon whose services were requisitioned on deputation from the Municipal Corporation of Delhi, 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 the minimum cost. It was decided to send two field teams together in one vehicle to cover one village in a day. Based on the pre-test and the experience of WHO Assessment Form, it was found that two field teams, each of two dentists and one worker of social science background could complete the field work in one village where 14 or more households were to be covered to interview/examine 14 individuals of each of the five ages in one day. A team of two dentists were to examine mouth of the respondent and complete the WHO Assessment Form – one was to examine the mouth and the other was to record the observations. They were to interchange their roles in order to reduce the fatigue factor. The social science—background worker, the third member of the field 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 the data collection work. They were to help the team not only to select the households (as per the study design) whose members were to be interviewed/ examined but will scrutinize the filled in forms before sending them to the state headquarter. Therefore, keeping in view the constraints of funds, it was decided that number of supervisors would be in the ratio of one supervisor for four field teams so that they can 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 a team involved in the survey in each state. Three types of persons were needed from each state, a Coordinator, a Supervisor and dentists to form field teams. The former was to coordinate all survey activities at state level and was to liaise with the Central Survey Unit. The latter was to supervise and guide the fieldwork activities of the state field teams (each consisting of two dentists and one with social science background), working under the overall direction of the state Coordinator. The Coordinators were all very senior, experienced persons with research bent of mind – the principals, deans or professors of the departments of Community Dentistry of the dental colleges. (**Annexure -5**). The Technical Committee of the survey identified them. These Coordinators were asked to identify senior dental surgeons from the dental colleges as their field team supervisors in the ratio of one supervisor for four teams.

These Coordinators and Supervisors were to identify field teams for the fieldwork. The number of field teams was to be equal to the number of homogeneous zones/ regions in the state so that field work in a district could be completed in two-month period by one team. Again, two dentists/ dental surgeon/ interns for each team were to be taken from the dental colleges in the state. This was not only to reduce cost of salaries of these dentists but was meant to give them field experience in examination of the mouth under the guidance of supervisors.

2.5 CALIBRATION AND TRAINING

Before start of the work at state level, it was necessary that standardization should be done in the examination and recording of the dental problems. The examiners should have common standards for identifying the dental problems. The Dental Council of India collaborated with the Manipal Academy of Higher Education (MAHE) to organize a three-day training cum calibration Workshop at Manipal, Karnataka during March 2002. All the State Coordinators and their identified Supervisors were invited to this workshop. They were explained the sampling design, various study tools and the field logistics of data collection. They were taken to the field to practice selection of the sample households and fill the questionnaire related to the practices that affect the oral health. They were also taken to the dental chairs of the dental college of Manipal to examine mouths of the patients to decide the dental problems patients had. A good deal of discussion was held along with the Coordinators and the Supervisors to ensure that every body had a common and uniform understanding of the dental problems to record in the form. This exercise was continued till it was felt that every body (Coordinators and Supervisors) had a uniform understanding on how to measure dental problems. This calibration workshop helped in standardization of measurement of the dental problems, which was necessary to ensure comparability of data from state to state. This training of the Coordinators and Supervisors was the first stage; they had to train their field teams who were, actually, to collect data in the field.

2.6 CLINICAL ASSESSMENT AND CONSIDERATIONS

The information on the questions on behavioural practices was asked directly to the respondents and their answers recorded on the prescribed proforma. In the case of clinical assessment of oral health status, there was need for common and uniform understanding of recording criteria amongst field teams. Therefore, special efforts were made to standardize 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 as 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 the clinical data (column no. 32 to column no.180) were filled up by the teams in the field while conducting the survey for each individual.

The main instruments and utilities which formed a part of the field kit bag 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 sterilizing solution was used in field conditions for the instruments although the sets of instruments 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 placed aligned with the back of 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 the oral and dental tissues in the mouth. The examiner stood behind and on side of the subject while examining the subject. The combination of natural and torchlight was used to provide consistency of lighting during examinations of different subjects and provide sufficient light for clear visibility in the mouth. 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 Manipal training workshop to adopt this method. The teams in all states were trained to use this method to ensure that the approach and results were uniform and widely comparable.)

Clinical oral examinations were carried out by previously trained and calibrated dental surgeons who worked in pairs in the field while surveying subjects. The dental surgeons working in the field were normally interns, junior residents or other dental surgeons drawn from regional dental colleges carefully chosen for the task 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 of examination clearly. The other member was the Recorder, who again called out or repeated the scores loudly and clearly for the examiner to hear and either confirm or correct, as necessary, and then enter it in the appropriate place in the paper proforma for each subject examined. In order to avoid monotony and fatigue, the roles of the examiner and recorder were interchanged from time to time; they did not exchange their role during the course of any one examination.

The teams used instruments and utilities as mentioned above for the detection of caries, periodontal disease and most other conditions. Sufficient numbers of instruments were carried everyday by field teams after proper sterilization so that work was not interrupted due to the need to re-sterilize instruments.

The data was collected by the field teams led by their supervisors and scrutinized by the State Coordinators who forwarded the filled up forms to the Central Project Cell in the office of the Dental Council of India in New Delhi. In Delhi, the clinical data forms were scrutinized again by the central project team before sending them for analysis and preparation of tables.

The clinical findings are presented in Chapter VI of this report 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 :

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 is 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 teeth decayed, missing or filled. Further, the dentition has been divided into 4 equal parts (quarters) on the basis of the number of teeth (maximum being 20 for primary teeth and 28 or 32 for permanent teeth). Each quarter represents 25% of the teeth normally present. 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 four quarters or 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 has been presented based on the Dental Aesthetic Index (DAI) scores for the age groups 12 yr, 15 yr and 35-44 yr which were computed as per the WHO's instructions and are presented in the report.

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:

$$\begin{aligned}
 & (\text{missing visible teeth} \times 6) + (\text{crowding}) + (\text{spacing}) + (\text{diastema} \times 3) + (\text{largest anterior} \\
 & \text{maxillary irregularity}) + (\text{largest anterior mandibular irregularity}) + (\text{anterior maxillary} \\
 & \text{overjet} \times 2) + (\text{anterior mandibular overjet} \times 4) + (\text{vertical anterior openbite} \times 4) + \\
 & (\text{antero-posterior molar relation} \times 3) + 13
 \end{aligned}$$

2.7 FLUORIDE ESTIMATION IN DRINKING WATER SAMPLES

As stated earlier, the analysis of the drinking water samples from various states were directly sent 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 analysis procedure was based on the Ion Chromatographic separation in Anion Exchange mode and Suppressed Conductivity detection. The basic separation is performed by anion exchange mechanism of water samples on high efficiency Ionpac AG 11RC and IonPac AS 11RC connected in series and elution (process of extracting one material from another by washing 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 filtered through a 0.45 u Nylon membrane. The effluent was collected into a clean dry conical glass tube. This was used for the fluoride estimation. The actual water sample was loaded into the mobile phase container in the equipment where the container is connected to a pump and made to run on the system. After about 20 minutes of stabilization period, the actual concentration of Fluoride ion in the water is 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 FIELD WORK 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 of field teams

Three teams were formed, each consisting of two dentists and one social scientist. The dentists were taken from the dental faculty of the Regional Dental College while the social scientists were taken from the Faculty of Social Sciences of the university. **Annexure - 6**

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 Regional Dental College 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.

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 SURVEYED POPULATION

3.1 CHARACTERISTICS OF HOUSEHOLDS

The characteristics of households are shown in Table 3.1. It may be noted that about 51 per cent households live in Semi-Pucca houses while another 28 per cent live in Pucca houses. Pucca houses were 20 per cent in rural areas and 47 per cent in urban areas. Another 20 per cent of the households live in Kuccha houses in the state. In the NE Coastal region, 75 per cent live in Pucca houses.

Most of the households (about 73 per cent) had a monthly expenditure (proxy for household income) less than or equal to Rs. 2,500. This expenditure level was found more among rural respondents. In the case of urban areas, almost 33 per cent households reported their monthly expenditure in the range of Rs. 2,501-5,500. More in N Region and Delta region reported monthly expenditure of Rs. 2,500 & below.

About 92 per cent households in the state and in each region except 62 percent in S. Region, were of Hindus, followed by 4 per cent Muslims and 3 per cent Christians.

Also, 55 per cent households were of Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Castes (OBCs) categories – the breakup was 6 per cent, 2 per cent and 47 per cent, respectively. C. Region had a higher percentage of OBCs (58 per cent) while Hills Region had a higher percentage from other categories (77 per cent).

About 51 per cent of the households cited taps as their main source of drinking water, while 34 per cent were using tubewells or handpumps. Piped water supply was much higher in urban areas (70 per cent) compared to in rural areas (46 per cent). The supply of piped water was the highest in Hills Region (92 per cent). In the Delta region, 65 per cent reported getting drinking water from tubewells or handpumps.

Rice was the staple food of the people. Almost 72 per cent of the households reported that they were non-vegetarians.

Table : 3.1 Percent distribution of the households by characteristics and geographical area. STATE : Tamil Nadu

	Household Characteristics	n=	REGIONS							STATE		
			1	2	3	4	5	6	7	R	U	T
1	Type of household		800	371	84	304	799	653	412	2475	948	3423
	Kuccha		27.8	5.9	0.0	37.9	12.0	9.9	4.6	24.4	6.5	20.4
	Semi Pucca		55.1	51.4	25.0	49.8	58.6	34.9	54.1	55.7	46.1	51.2
	Pucca		17.1	42.6	75.0	12.3	29.5	55.2	41.3	19.8	47.3	28.4
2	Monthly expenditure (in Rs.)											
	<= 2,500		86.4	64.7	19.0	79.7	68.8	65.8	61.6	81.3	55.8	73.2
	2,501 - 5,500		10.7	33.3	36.9	18.7	28.5	28.5	30.9	16.9	32.6	21.8
	5,501 - 10,000		1.7	1.4	39.3	1.3	1.9	4.2	7.0	0.8	10.1	3.9
	10,000 +		1.2	0.6	4.8	0.3	0.8	1.5	0.5	0.9	1.5	1.1
3	Religion											
	Hindus		93.7	90.7	94.0	93.7	89.5	61.5	81.5	92.8	87.5	91.8
	Muslims		3.2	4.8	1.2	3.0	5.8	12.1	10.3	2.9	7.3	4.0
	Sikhs		0.1	0.7	0.0	0.0	0.5	0.2	0.2	0.4	0.1	0.3
	Christians		2.8	3.8	2.4	3.0	3.5	26.2	7.6	3.6	4.7	3.6
4	Caste											
	Scheduled Caste		9.4	3.1	0.0	11.2	4.0	5.9	2.8	7.6	3.9	6.7
	Scheduled Tribe		1.9	1.2	0.0	7.3	0.6	1.5	1.9	2.1	1.2	2.0
	Other Backward Class		36.1	58.0	57.1	54.9	52.4	33.0	17.4	49.2	42.5	47.0
	Others		52.6	37.8	42.9	26.6	42.9	59.6	77.9	41.1	52.4	44.4
5	Sources of drinking water											
	Pipe/tap		36.8	83.4	48.8	33.2	66.9	78.6	91.9	46.6	71.5	51.3
	Tubewell/handpump		49.0	6.3	22.6	65.2	12.8	11.2	4.2	40.1	11.7	34.2
	Others		14.2	10.3	28.6	1.6	20.3	10.3	4.0	13.4	16.8	14.5
6	Staple food											
	Wheat		0.4	2.1	4.8	0.7	4.4	2.2	1.9	2.1	2.1	2.0
	Rice		97.4	97.5	95.2	99.3	95.2	97.0	96.8	96.9	97.9	97.2
7	Nature of food											
	Vegetarian		43.6	3.9	22.6	43.2	16.0	16.3	34.7	28.9	23.8	28.5
	Non-vegetarian		56.4	96.1	77.4	56.8	84.0	83.7	65.3	71.1	76.2	71.5

CHARACTERISTICS OF HOUSEHOLDS SURVEYED (SUMMING UP)

- About 51 per cent households live in Semi-Pucca houses while another 28 per cent live in Pucca houses. Pucca houses were more in urban areas (47 per cent).
- A majority of the households (73 percent) had a monthly expenditure less than or equal to Rs. 2,500.
- About 92 per cent households of the state was of Hindu, followed by 4 per cent Muslims and 3 per cent Christians. Also, 55 per cent households belonged to Scheduled Castes (SC), Scheduled Tribes (ST) and Other Backward Castes (OBCs) categories
- The staple food was rice, with almost 72 per cent of the people being non-vegetarians.
- Almost 51 per cent of the subjects reported getting drinking water from pipe/taps.

3.2 PROFILE OF POPULATION

3.2.2 12 year olds

3.2.2.1 Educational levels

About 8 percent, little more females & little more in rural was illiterate. Another 87 percent across both sexes & more in urban had education up to middle. Other about 5 percent, more males in rural were high school & above in the state. There were more illiterates irrespective of sex in NE Coastal & Delta regions. **Table : 3.2.2**

3.2.3 15 year olds

3.2.3.1 Educational levels

The literacy level in this age group was about 94 per cent. About 56 per cent of the respondents had education up to the middle and 36 per cent reported education up to high school and above (Table 3.2.3). Illiteracy was much higher in the Delta region (20 per cent). The picture was similar for both males and females. Rural and urban differentials were more in high school and above.

3.2.3.2 Exposure to media

About 17 per cent of respondents in this 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, 15 per cent rural respondents reported reading newspapers daily. Also, the urban/rural differential in percentages of subjects not reading newspapers at all was large – more than 66 per cent in the rural areas compared to 50 per cent in the urban areas.

Exposure to radio was limited in the state – more than 38 per cent reported no exposure to radio. In contrast, only 12 per cent of the respondents reported no exposure to TV. The exposure to cinema, at least once in three months or less often, was 23 per cent. Exposure to both radio and TV was more in NE Coastal.

Table 3.2.2 Percent distribution of 12 year olds by educational level and media exposure, sex & geographical area.

STATE: Tamil Nadu

AGE: 12 yrs

Educational level & Media Exposure	MALES						FEMALES						STATE TOTAL										
	REGIONS						REGIONS						STATE										
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T			
	164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840		
1 Educational level	n=																						
Illiterate	5.4	0.4	16.1	22.1	2.4	2.2	10.2	6.9	5.1	6.4	5.8	2.2	17.2	19.7	11.6	2.9	6.5	9.4	7.1	8.7	7.6		
Upto middle	90.8	87.1	77.4	76.1	97.0	90.5	88.6	85.4	91.8	87.3	89.7	91.8	69.0	78.6	88.4	94.2	92.1	86.6	88.0	87.0	87.2		
High school & above	3.8	12.5	6.5	1.8	0.6	7.3	1.2	7.7	3.0	6.3	4.6	6.0	13.8	1.7	0.0	2.9	1.4	4.1	4.9	4.3	5.3		
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: Tamil Nadu

Educational level & Media Exposure	MALES										FEMALES										STATE TOTAL
	REGIONS										REGIONS										
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T	
1 Educational level	178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	129	621	248	869	1801
Illiterate	9.7	0.0	3.7	20.4	4.3	5.2	0.9	8.3	4.5	7.2	7.5	0.4	7.1	18.6	3.8	5.3	0.0	7.4	3.8	6.4	6.8
Upto middle	52.3	54.6	63.0	41.6	71.0	42.1	71.3	53.1	59.5	54.9	53.4	61.0	64.3	49.6	73.9	55.1	62.8	52.9	69.8	57.7	56.3
High school & above	38.0	45.4	33.3	38.1	24.7	52.6	27.8	38.6	36.0	37.9	39.1	38.6	28.6	31.9	22.3	39.7	37.2	39.6	26.4	35.9	36.9
2 Newspaper reading habits																					
Daily	22.6	10.9	33.3	14.7	32.1	43.8	25.5	19.0	25.1	20.7	10.6	6.5	39.3	16.8	20.5	22.6	32.9	12.0	18.4	13.8	17.3
Sometimes	17.4	31.1	25.9	9.0	23.8	16.5	27.6	18.1	28.2	20.9	18.6	25.4	28.6	6.2	31.2	34.9	21.5	19.0	27.4	21.4	21.2
Not at all	59.9	57.9	40.7	76.4	44.2	39.7	46.9	62.9	46.7	58.4	70.8	68.1	32.1	77.0	48.3	42.5	45.6	69.0	54.2	64.8	61.6
3 Radio listening habits																					
Daily	33.3	18.1	63.0	34.2	35.1	49.9	17.9	31.3	32.7	31.7	33.3	16.4	75.0	23.9	27.5	29.9	29.3	27.9	31.2	28.8	30.3
Sometimes	31.6	35.1	18.5	27.7	28.4	23.5	41.6	27.1	36.1	29.6	31.7	34.8	14.3	40.7	34.4	34.2	46.6	32.0	34.8	32.8	31.2
Not at all	35.1	46.8	18.5	38.1	36.5	26.7	40.6	41.6	31.2	38.7	35.0	48.8	10.7	35.4	38.2	35.8	24.1	40.1	34.0	38.3	38.5
4 TV watching habits																					
Daily	61.3	87.0	88.9	55.2	76.8	73.3	68.3	67.7	80.5	71.3	65.4	86.4	85.7	54.9	84.9	78.9	75.9	71.4	81.8	74.3	72.8
Sometimes	20.8	8.8	7.4	17.1	16.5	12.8	20.8	15.9	13.8	15.3	19.4	10.0	10.7	22.1	10.1	8.5	10.4	14.6	14.3	14.5	14.9
Not at all	17.9	4.3	3.7	27.7	6.7	13.9	10.9	16.3	5.7	13.4	15.2	3.6	3.6	23.0	5.0	12.6	13.8	14.1	4.0	11.2	12.3
5 Cinema watching habits																					
Once in 3 months	20.2	32.6	22.2	14.7	30.0	12.5	6.3	24.6	24.1	24.5	15.5	30.5	39.3	8.8	24.0	12.2	11.5	19.1	27.0	21.3	22.9
Less often	45.4	28.4	59.3	30.1	35.1	44.5	45.9	33.0	45.7	36.6	38.7	31.4	35.7	27.4	36.3	39.4	30.0	29.4	42.5	33.1	34.9
Not at all	34.4	39.0	18.5	55.2	34.9	43.0	47.9	42.3	30.2	38.9	45.7	38.1	25.0	63.7	39.7	48.4	58.5	51.5	30.5	45.6	42.3

3.2.4 35-44 year olds

3.3.4.1 Educational level

About 22 per cent respondents in this age group more females, more in the rural areas was illiterate. There were more illiterate in N. Region and Delta region than in remaining regions. (Table 3.2.4). More males in this age group had achieved educational level of high school and above than the females. While they were equal in respect of educational level up to middle.

3.2.4.2 Exposure to media

About 30 per cent of respondents in this age group reported reading newspapers daily (21 per cent females and 39 per cent males). Urban areas had much greater exposure than rural areas. Daily exposure to radio was 30 per cent.

TV viewership in this population grouping was 63 per cent, which was much higher in urban areas. Exposure to TV was found to be higher in NE Coastal, Hill region and C. Region. Not much differences were observed between males and females. Also, not much exposure was found to cinema, with about 17 per cent viewing cinema once in three months. This percentage was higher in the urban areas.

3.2.5 65-74 year olds

3.2.5.1 Educational levels

In this age group, about 51 per cent of the respondents were illiterate (64 per cent females and 38 per cent males) (Table 3.2.5). As expected, literacy level was higher in the urban areas and among males. Among regions, the S. Region followed by hills region had the highest literacy levels.

3.2.5.2 Exposure to Media

Educational levels clearly affect the reading habits of a population. Only 18 per cent of the respondents in this age group was reading newspaper daily with more males (27 per cent) than females (9 per cent). 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 16 per cent females as against 25 per cent males reported listening to radio daily. Similarly, 48 per cent females and 56 per cent males said they watched TV daily. In urban areas, overall exposure was quite high: 33 per cent to the radio and about 62 per cent to TV. Exposure to radio was least in C. Region.

Exposure to cinema was low, only about 12 per cent respondents more rural & more in urban had watched cinema once in 3 months.

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: Tamil Nadu

Educational level & Media Exposure	MALES														FEMALES														STATE TOTAL
	REGIONS							STATE							REGIONS							STATE							
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T									
1 Educational level	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907							
Illiterate		26.4	3.1	3.1	29.9	8.6	5.9	1.9	20.0	5.3	15.6	44.6	11.1	25.8	34.9	13.8	6.1	6.3	32.8	16.9	28.4	22.0							
Upto middle		37.4	40.7	21.9	37.2	51.5	37.5	37.7	43.9	33.1	40.7	31.5	50.7	22.6	45.4	56.1	48.4	39.5	44.2	38.9	42.7	41.7							
High school & above		36.2	56.2	75.0	32.9	39.9	56.6	60.5	36.1	61.6	43.6	23.9	38.2	51.6	19.7	30.1	45.5	54.1	23.0	44.3	28.9	36.3							
2 Newspaper reading habits																													
Daily		34.9	40.6	81.3	27.3	44.2	43.1	45.3	31.9	54.7	38.7	17.3	21.5	58.1	11.6	23.9	26.1	30.8	15.5	34.1	20.6	29.7							
Sometimes		22.7	25.8	12.5	9.7	30.3	19.1	18.0	22.3	22.5	22.3	9.2	26.8	19.4	10.7	29.0	19.9	18.0	14.9	24.3	17.5	19.9							
Not at all		42.4	33.6	6.3	63.0	25.5	37.8	36.7	45.8	22.7	39.0	73.4	51.7	22.6	77.6	47.1	54.0	51.1	69.7	41.6	62.0	50.5							
3 Radio listening habits																													
Daily		28.5	23.7	71.9	27.3	41.1	36.7	51.5	28.6	38.8	31.6	31.6	19.7	71.0	23.3	28.3	26.7	27.1	25.7	37.5	29.0	30.3							
Sometimes		34.1	47.8	12.5	34.8	32.4	29.7	30.9	40.1	30.8	37.4	23.9	43.6	16.1	32.2	29.6	30.5	46.0	30.9	29.7	30.6	34.0							
Not at all		37.4	28.5	15.6	38.0	26.5	33.6	17.6	31.3	30.4	31.0	44.6	36.7	12.9	44.5	42.1	42.8	26.9	43.4	32.8	40.5	35.8							
4 TV watching habits																													
Daily		53.5	68.6	90.6	52.5	65.4	68.5	74.5	58.4	71.3	62.2	58.0	77.0	71.0	48.1	69.8	64.8	69.2	59.4	73.6	63.3	62.8							
Sometimes		27.5	25.0	9.4	21.6	26.8	15.5	15.5	24.7	22.9	24.2	18.6	20.3	19.4	26.9	17.1	12.8	22.0	20.7	17.8	19.9	22.1							
Not at all		19.0	6.4	0.0	25.9	7.8	16.1	10.0	17.0	5.7	13.6	23.4	2.7	9.7	25.1	13.2	22.3	8.8	19.9	8.6	16.8	15.2							
5 Cinema watching habits																													
Once in 3 months		14.3	21.3	34.4	15.4	32.4	19.0	6.1	18.2	25.7	20.4	10.9	11.7	29.0	9.8	21.8	19.7	8.9	11.7	19.6	13.9	17.2							
Less often		42.9	34.1	43.8	28.1	35.7	36.8	36.3	33.9	41.5	36.1	36.8	37.2	41.9	29.5	26.8	31.1	40.7	31.6	39.3	33.7	34.9							
Not at all		42.8	44.6	21.9	56.6	31.9	44.2	57.5	48.0	32.8	43.5	52.3	51.1	29.0	60.6	51.4	49.2	50.3	56.7	41.1	52.4	48.0							

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: Tamil Nadu**

Educational level & Media Exposure	MALES												FEMALES												STATE TOTAL
	REGIONS						STATE						REGIONS						STATE						
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T					
1 Educational level	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834			
Illiterate		49.0	28.3	35.5	44.5	27.8	14.0	16.2	40.6	29.7	37.6	82.5	45.8	45.2	72.6	54.8	32.1	23.5	69.4	49.4	63.6	50.6			
Upto middle		32.1	59.0	29.0	45.4	54.3	47.4	43.6	47.3	42.6	46.0	13.7	46.2	38.7	24.8	36.1	54.9	52.7	24.9	41.3	29.7	37.9			
High school & above		18.9	12.7	35.5	10.1	17.8	38.5	40.2	12.2	27.7	16.5	3.8	8.0	16.1	2.6	9.1	13.0	23.8	5.8	9.2	6.8	11.7			
2 Newspaper reading habits																									
Daily		22.0	24.7	67.7	22.7	30.3	35.8	29.6	21.5	40.1	26.7	8.7	8.2	29.0	4.3	8.7	20.9	15.8	4.9	17.7	8.6	17.7			
Sometimes		10.9	24.9	16.1	7.6	24.4	24.2	20.0	15.4	21.4	17.0	6.8	20.7	9.7	5.1	19.5	10.2	18.6	11.3	15.8	12.6	14.8			
Not at all		67.1	50.4	16.1	69.7	45.3	40.0	50.4	63.1	38.5	56.3	84.5	71.1	61.3	90.6	71.8	68.9	65.5	83.8	66.6	78.8	67.6			
3 Radio listening habits																									
Daily		24.2	18.6	77.4	30.3	28.0	33.0	29.9	24.6	35.8	27.7	19.4	20.0	58.1	17.9	18.7	28.6	28.3	16.4	32.4	21.0	24.4			
Sometimes		24.7	45.8	12.9	21.0	31.2	35.7	41.7	31.7	28.9	30.9	16.3	36.1	19.4	26.5	17.7	17.8	35.7	22.7	25.8	23.6	27.3			
Not at all		51.2	35.6	9.7	48.7	40.8	31.3	28.3	43.7	35.3	41.4	64.3	43.9	22.6	55.6	63.5	53.5	36.0	60.9	41.8	55.4	48.4			
4 TV watching habits																									
Daily		52.9	59.9	80.6	45.4	56.1	66.8	69.4	52.6	64.9	56.0	33.3	59.8	77.4	41.9	56.2	53.4	59.6	44.1	58.8	48.3	52.2			
Sometimes		12.5	26.3	9.7	21.0	20.0	20.7	15.7	19.7	17.2	19.0	20.7	23.7	12.9	29.1	12.9	20.6	20.4	20.4	21.1	20.6	19.8			
Not at all		34.6	13.8	9.7	33.6	23.9	12.5	14.8	27.7	17.9	25.0	46.0	16.5	9.7	29.1	30.9	26.0	20.0	35.5	20.1	31.1	28.1			
5 Cinema watching habits																									
Once in 3 months		12.4	10.1	12.9	11.8	16.0	20.6	1.5	12.9	12.0	12.7	5.1	8.2	29.0	5.1	17.3	12.7	5.3	9.2	11.4	9.9	11.3			
Less often		15.3	29.4	35.5	23.5	22.8	22.1	27.2	20.7	28.2	22.7	17.1	22.3	35.5	23.9	15.8	17.3	29.3	19.2	23.2	20.4	21.6			
Not at all		72.3	60.5	51.6	64.7	61.2	57.3	71.3	66.4	59.8	64.6	77.7	69.5	35.5	70.9	67.0	70.0	65.4	71.5	65.4	69.8	67.2			

PROFILE OF POPULATION ACROSS AGE GROUPS (SUMMING UP)

- The percent illiterates increased from 8 percent to 50 percent with the increase in the age of respondents. On an average about 28 per cent of the respondents across age groups were illiterate.
- With regard to exposure to media, TV was found to be the most popular media. As regard to habits of viewing different media, across age groups it revealed that on an average 63 per cent watched TV while 28 per cent listened to the radio and 22 per cent read newspapers daily.
- Exposure to cinema was lower, with only 17 per cent respondents across age groups reported watching cinema once in 3 months.

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.

Note: Tamil Nadu has been divided into seven agro-climatic regions. Their boundaries and districts within them may be seen in the state map. The results of water samples were received for N. Region, C. Region, S. Region and Hills Region (Regions I, II, VI, and VII, respectively). The estimates for the state fluoride levels have been worked out on the basis of data obtained from these four regions.

Levels of ppm	Regions							State
	I	II	VI	VII	Rural	Urban	Total	
8.01+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
4.01-8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2.01-4.00	9.0	3.1	1.0	0.0	8.0	0.4	4.1	21.5
1.51-2.00	58.6	9.0	2.6	21.1	30.0	7.0	17.3	25.0
1.01-1.50	27.8	14.4	14.3	21.0	24.4	9.8	32.2	25.0
0.51-1.00	4.7	31.8	48.9	55.9	28.8	26.8	41.7	32.2
0.0-0.5	0.0	41.7	33.2	2.0	8.8	56.2	41.7	32.2

Table 4.1 Percent distribution of water samples by levels of fluoride in rural, urban and total TAMIL NADU

4.1. A graphical representation of prevailing fluoride levels is given in Fig. 4.1

The fluoride levels in different regions, rural, urban areas and total Tamil Nadu are shown in Table

4.4 FINDINGS

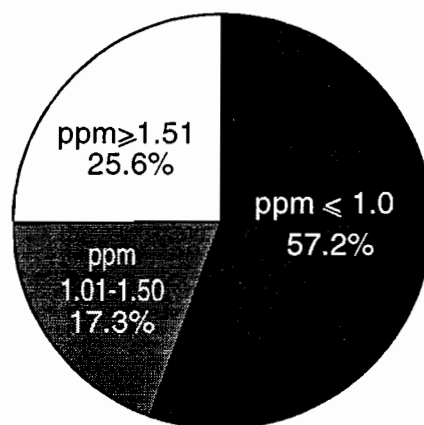
The methodology M/s Medlar Labs adopted for analysing the fluoride levels has been described in section 2.3.3 of the chapter on Methodology and Data Collection.

M/s Medlar Labs, Mumbai for such analysis. Health Survey having also provided financial assistance for it, agreed to his request and nominated 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 also provided financial assistance for it, agreed to his request and nominated M/s Medlar Labs, Mumbai for such analysis.

4.3 ANALYSIS OF WATER SAMPLES

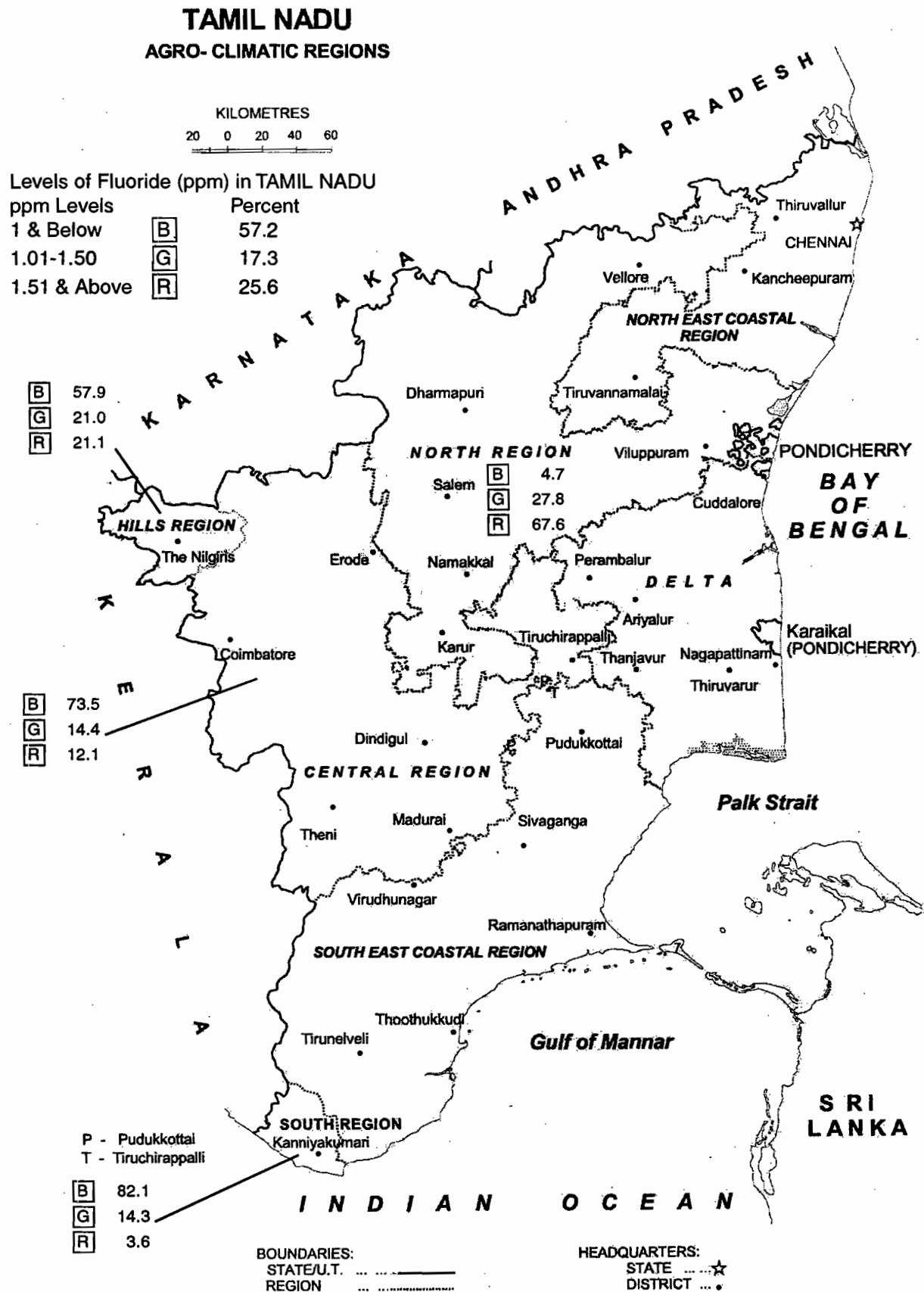
4. This linkage of the water sample with other information from the household was done for two purposes. The first was that the collected household drinking water samples would represent the situation of water supply in rural and urban households in the zone and ultimately that of the state (after proper 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.

Fig. 4.1 Drinking water levels of fluoride in TAMIL NADU



About one-quarter of the households in Tamil Nadu use drinking water with fluoride levels of 1.5 or more ppm. This percentage is much higher in rural areas. The N. Region seems to have much higher levels of fluoride in water than other regions – almost two-thirds of the households had fluoride levels of more than 1.5 ppm.

Fig. 4.2 Drinking water levels of Fluoride (ppm) in TAMIL NADU, 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 during the survey. Prevalence of each of these practices in 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/thumb”. “thrusting tongue on teeth”, “biting nails, lips or objects like pencil”, and “habit of grinding/gritting teeth” were enquired from each respondent (from his/her caretaker in case of 54 year olds child). Responses are reported in Table 5.1.

The prevalence of each of abnormal habits across age groups, except the habit of “sucking or biting fingers/thumbs” and “biting nails/lips or object like pencils” in 14 percent & 7 percent 5 year olds subjects respectively and habit of “grinding and gritting teeth” in 19 percent 5 year olds and 6-9 percent in older age groups, was generally low. But the occurrence of each of abnormal habit was comparatively more in 5 year olds subjects than in older ones.

ABNORMAL ORAL HEALTH HABITS ACROSS AGE GROUPS (SUMMING UP)

Except the occurrence of habits “sucking or biting fingers/thumbs” “biting nails/lips/object like pencil” in 14 percent & 7 percent of 5 year olds subjects respectively & “habit of “grinding/gritting teeth” in percent areas all age groups, the prevalence of each of habit of across age group was generally low with increase in age of respondents.

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

AGE: 5 yrs

STATE: Tamil Nadu

Habits affecting oral health	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		172	163	31	121	161	136	134	664	254	918	171	154	30	108	150	138	139	629	261	890	1808
1 Breathing from mouth		4.7	1.0	12.9	3.3	3.6	0.4	0.0	3.5	4.3	3.7	1.8	0.0	16.7	3.7	4.0	0.0	0.5	2.3	4.1	2.8	3.3
2 Sucking or biting fingers/thumb		9.9	12.1	6.5	19.0	13.5	3.7	1.4	12.8	10.2	12.1	14.2	17.1	6.7	23.2	14.7	2.3	0.5	13.7	17.4	14.8	13.5
3 Thrusting tongue on teeth		2.8	0.0	3.2	13.2	1.8	0.4	0.0	3.9	1.9	3.3	2.9	0.5	0.0	7.4	1.4	0.4	0.0	2.8	1.1	2.3	2.8
4 Biting nails/lips/objects like pencil		8.9	5.6	6.5	9.1	8.1	2.9	0.0	7.7	6.8	7.5	4.1	12.3	0.0	6.5	7.9	2.3	0.0	6.2	8.1	6.8	7.2
5 Grinding / gritting teeth		14.7	27.6	16.1	14.0	19.4	14.7	0.5	19.7	17.9	19.2	8.8	26.0	6.7	21.1	23.2	11.4	0.5	20.2	13.2	18.2	18.7

AGE: 12 yrs

STATE: Tamil Nadu

Habits affecting oral health	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840
1 Breathing from mouth		1.9	0.9	16.1	0.0	3.7	0.0	0.0	1.8	4.2	2.5	0.6	0.0	13.8	3.4	2.0	1.4	0.0	1.4	3.2	1.9	2.2
2 Sucking or biting fingers/thumb		1.2	3.5	0.0	1.8	4.9	0.0	1.2	2.8	2.1	2.6	4.3	3.2	0.0	3.4	5.1	1.7	0.0	4.3	2.4	3.8	3.2
3 Thrusting tongue on teeth		1.3	0.9	0.0	3.5	1.9	0.0	0.0	1.7	1.0	1.5	1.0	0.0	0.0	1.7	0.6	1.4	0.0	0.8	0.5	0.7	1.1
4 Biting nails/lips/objects like pencil		7.4	7.0	3.2	0.9	8.5	1.4	1.2	6.4	5.7	6.2	2.8	2.6	3.4	3.4	3.2	2.1	1.3	3.7	1.6	3.1	4.7
5 Grinding / gritting teeth		5.1	8.3	3.2	8.8	17.1	10.8	0.8	10.3	6.3	9.1	3.3	9.6	6.9	17.9	14.1	9.9	0.0	9.2	8.8	9.1	9.1

AGE: 15 yrs

STATE: Tamil Nadu

Habits affecting oral health	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	129	621	248	869	1801
1 Breathing from mouth		0.6	0.0	14.8	2.4	2.7	0.0	0.4	1.4	3.0	1.8	0.0	0.0	21.4	0.9	3.6	2.0	0.0	1.0	4.6	2.0	1.9
2 Sucking or biting fingers/thumb		1.2	0.0	0.0	1.6	4.5	0.0	0.9	2.2	0.0	1.6	1.7	3.8	0.0	0.0	1.4	1.6	0.0	1.4	2.7	1.8	1.7
3 Thrusting tongue on teeth		0.6	1.0	0.0	0.0	2.7	0.0	0.4	0.9	1.0	0.9	1.2	0.0	0.0	0.0	0.0	1.6	0.0	0.6	0.1	0.5	0.7
4 Biting nails/lips/objects like pencil		4.7	2.9	0.0	1.6	6.5	0.0	0.0	4.5	2.2	3.8	1.2	4.5	0.0	0.0	2.9	0.0	1.4	2.4	1.8	2.3	3.1
5 Grinding / gritting teeth		1.7	2.4	0.0	7.1	15.9	9.3	0.4	6.2	3.3	5.4	2.3	4.5	3.6	20.4	11.6	8.2	0.0	9.0	3.7	7.5	6.5

AGE: 35-44 yrs

STATE: Tamil Nadu

Habits affecting oral health	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907
1 Breathing from mouth		0.0	0.0	15.6	2.4	3.3	0.8	0.0	1.3	3.3	1.9	0.0	0.0	12.9	1.8	4.7	0.0	0.0	1.8	2.7	2.0	2.0
2 Sucking or biting fingers/thumb		0.6	0.0	0.0	0.0	1.9	0.0	0.0	0.8	0.0	0.6	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.1	0.4
3 Thrusting tongue on teeth		0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.1	0.1
4 Biting nails/lips/objects like pencil		1.8	1.2	0.0	0.0	2.0	0.0	0.0	1.4	0.9	1.3	0.5	0.5	0.0	0.0	1.2	0.3	0.0	0.9	0.0	0.6	1.0
5 Grinding / gritting teeth		4.1	1.6	0.0	9.7	10.8	9.6	0.5	6.4	2.6	5.3	2.6	1.2	0.0	18.5	12.1	14.3	0.4	7.9	2.7	6.5	5.9

AGE: 65-74 yrs

STATE: Tamil Nadu

Habits affecting oral health	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834
1 Breathing from mouth		0.0	0.5	19.4	1.7	3.1	1.3	0.0	1.3	4.6	2.2	0.0	0.0	6.5	1.7	3.4	0.0	0.0	1.3	1.3	1.3	1.8
2 Sucking or biting fingers/thumb		0.6	0.0	0.0	0.0	1.2	0.0	0.0	0.7	0.0	0.5	0.0	1.9	0.0	0.0	0.8	0.0	0.0	0.4	1.0	0.6	0.6
3 Thrusting tongue on teeth		0.0	0.0	0.0	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	0.0	0.0	0.3	0.1	0.1
4 Biting nails/lips/objects like pencil		0.6	1.0	0.0	0.0	0.0	0.4	0.0	0.3	0.7	0.4	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.1	0.3	0.3
5 Grinding / gritting teeth		3.6	1.5	0.0	9.2	12.1	11.4	0.0	7.6	1.5	5.9	2.8	3.3	3.2	19.7	10.0	9.6	0.4	8.0	3.9	6.8	6.4

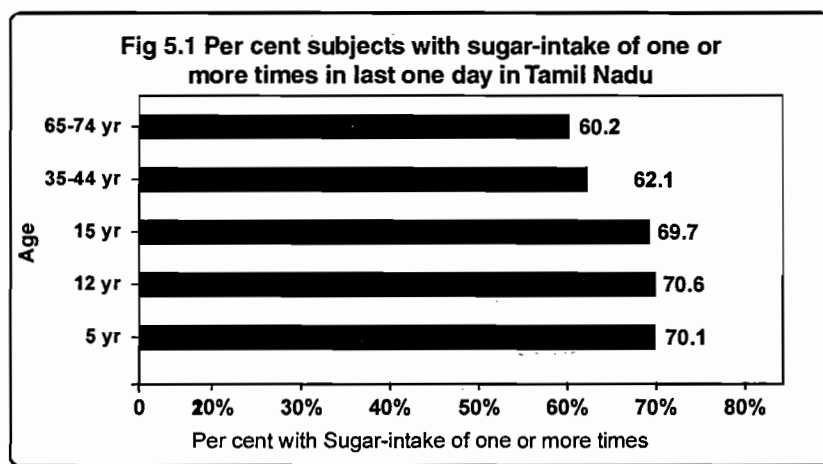
5.2 SWEETS-SUGAR- TAKING HABITS

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

- (1) On an average about 33 per cent respondents across age groups had not taken sugar or sweets at all in the last 24 hours. However, it was seen that intake decreased with age in both rural and urban areas.

In the urban areas, the percentage of subjects areas all age who had taken sugar/sweets more than two times was 20 per cent compared to 9 per cent in the rural areas.

- (2) There was significant differences on sugar intake among males and females.
- (3) Prevalence of the habit was found to be less in NE Coastal Region.



SWEET/SUGAR-TAKING HABITS ACROSS AGE GROUPS (SUMMING UP)

1. About 18 per cent of the subjects, across all ages and sexes reported taking sugar at least once in the last one day. There was not much difference in sugar intake of males and females. Overall, it was observed that people, both in rural and urban, were aware of the consequences of sugar consumption.
2. About 33 per cent respondents across age groups had not taken sugar or sweets at all in the last 24 hours. However, it was seen that intake decreased with age in both rural and urban areas.

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

AGE: 5 yrs

STATE: Tamil Nadu

Pattern of sugar intake in last one day	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		172	163	31	121	161	136	134	664	254	918	171	154	30	108	150	138	139	629	261	890	1808
1 Not taken		28.3	20.8	45.2	33.1	28.1	53.3	49.3	33.5	21.3	30.2	28.3	21.8	40.0	27.8	31.1	45.1	46.8	32.7	22.1	29.6	29.9
2 Taken one time		32.1	2.4	12.9	19.0	13.4	27.1	19.1	17.8	15.1	17.0	34.4	5.3	10.0	17.6	12.3	26.5	23.6	20.6	13.7	18.6	17.8
3 Taken two times		29.3	41.4	25.8	41.3	25.7	10.0	13.0	33.2	31.9	32.8	25.9	35.9	23.3	42.7	31.7	14.0	16.7	32.3	29.5	31.5	32.2
4 Taken 2+ times		10.3	35.5	16.1	6.6	32.7	9.6	18.7	15.6	31.7	20.0	11.5	37.0	26.7	11.8	24.9	14.4	12.9	14.4	34.7	20.2	20.1

AGE: 12 yrs

STATE: Tamil Nadu

Pattern of sugar intake in last one day	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840
1 Not taken		22.7	14.1	51.6	32.7	31.7	56.5	43.1	28.7	22.8	27.0	25.3	28.3	37.9	29.1	34.7	61.1	56.9	35.5	22.1	31.9	29.5
2 Taken one time		40.0	4.5	6.5	12.4	15.8	25.8	24.3	20.6	14.9	18.9	31.9	5.4	10.3	18.8	9.8	28.8	16.7	19.8	14.2	18.3	18.6
3 Taken two times		31.8	51.5	25.8	51.3	32.6	15.4	20.4	40.5	37.3	39.6	36.0	35.2	37.9	44.4	39.5	7.9	14.6	35.4	38.8	36.3	38.0
4 Taken 2+ times		5.6	29.9	16.1	3.5	19.9	2.3	12.2	10.3	25.0	14.5	6.9	31.1	13.8	7.7	15.9	2.2	11.9	9.3	24.9	13.5	14.0

AGE: 15 yrs

STATE: Tamil Nadu

Pattern of sugar intake in last one day	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	129	621	248	869	1801
1 Not taken		27.7	24.3	48.1	34.2	38.1	45.3	51.7	36.2	24.4	32.9	22.2	23.6	35.7	24.8	31.7	47.6	58.0	31.3	18.9	27.8	30.4
2 Taken one time		28.8	8.9	11.1	15.5	14.9	33.8	26.3	17.8	18.3	17.9	37.2	4.2	25.0	23.0	18.0	30.4	19.6	23.5	17.9	21.9	19.9
3 Taken two times		38.6	45.5	29.6	44.8	29.7	19.0	12.8	38.7	37.8	38.4	38.4	37.1	25.0	40.7	36.5	20.1	14.5	36.4	36.1	36.3	37.4
4 Taken 2+ times		4.9	21.3	11.1	5.5	17.3	1.8	9.1	7.3	19.6	10.8	2.2	35.1	14.3	11.5	13.8	2.0	7.9	8.8	27.2	14.0	12.4

AGE: 35-44 yrs

STATE: Tamil Nadu

Pattern of sugar intake in last one day	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907
1 Not taken		21.2	44.1	53.1	37.0	53.7	59.4	51.5	38.2	40.7	39.0	28.7	39.1	38.7	26.0	47.1	63.1	57.4	37.8	34.2	36.8	37.9
2 Taken one time		24.8	4.5	18.8	21.0	10.9	36.2	20.0	15.9	14.7	15.5	29.3	7.2	12.9	36.7	12.4	32.2	25.9	23.9	15.3	21.5	18.5
3 Taken two times		47.9	40.9	25.0	29.9	28.7	2.8	19.1	38.3	35.7	37.6	36.7	38.3	45.2	27.7	33.8	2.5	14.0	32.5	38.8	34.2	35.9
4 Taken 2+ times		6.2	10.6	3.1	12.1	6.6	1.6	9.4	7.5	8.9	7.9	5.3	15.5	3.2	9.6	6.7	2.2	2.8	5.9	11.7	7.5	7.7

AGE: 65-74 yrs

STATE: Tamil Nadu

Pattern of sugar intake in last one day	n=	MALE									FEMALE									State Total		
		Regions							State		Regions							State				
		1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T
		169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834
1 Not taken		25.1	44.5	54.8	31.9	51.1	53.0	74.1	37.3	44.1	39.2	27.8	47.8	41.9	33.3	51.3	67.7	63.2	41.5	38.9	40.7	40.0
2 Taken one time		30.4	5.1	12.9	27.7	12.3	41.5	20.1	19.3	17.4	18.8	25.6	8.0	16.1	33.3	14.7	27.7	20.7	21.0	16.2	19.6	19.2
3 Taken two times		40.5	44.3	25.8	29.4	25.9	3.1	4.8	36.8	31.2	35.3	41.9	37.1	35.5	25.6	28.3	3.4	10.9	32.7	37.2	34.0	34.7
4 Taken 2+ times		4.1	6.1	6.5	10.9	10.7	2.4	1.0	6.6	7.3	6.8	4.7	7.2	6.5	7.7	5.7	1.2	5.3	4.9	7.7	5.7	6.3

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 of the respondents.

5.3.1 5 year olds

About 61 per cent children in this age group reported the use of toothbrush in the state (about 53 per cent in rural areas and 84 per cent in urban areas) (Table 5.3.1). Usage was slightly more in males. Usage was also found to be more in NE Coastal and the Hills Region. About 65 per cent of the respondents across both sexes & more in urban reported change of their toothbrushes once in 1-3 months. Comparatively more (90 percent) changed tooth brushes once in 1-3 months in NE Coastal region than in remaining regions.

It was encouraging to note that almost everybody reported cleaning their teeth daily—about 98 per cent once a day and more in rural areas.

More than half the children reported the use of toothpaste (about 64 per cent). More subjects in urban areas were using toothpaste (82 per cent) than in the rural areas (55 per cent). The situation was the same across both sexes. Fluoridated toothpaste/powder was used by more in urban areas (52 per cent). Only 21 percent across both sexes & more in rural had used non fluoridated tooth paste/powder.

On rinsing practices, about 35 per cent reported doing so after every meal – there were no significant rural/urban differentials or between sexes. Another 40 percent had rinsed their mouth “sometimes”. Also, the practice of rinsing one’s mouth was more prevalent in N. Region and Delta Region.

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

AGE: 5 yrs

STATE: Tamil Nadu

Oral Hygiene Practices	MALES														FEMALES														STATE TOTAL																
	REGIONS							STATE							REGIONS							STATE																							
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R		U	T														
1 Clean teeth with	n=	172	163	31	121	161	136	134	664	254	918	171	154	30	108	150	138	139	629	261	890	1808	20.4	20.8	0.0	19.8	44.0	29.1	4.3	29.5	12.6	24.9	32.1	23.4	3.3	23.9	49.0	24.3	7.5	39.2	12.7	31.6	28.3		
finger		58.8	77.9	96.8	72.7	48.0	68.0	92.5	56.9	85.6	64.7	48.7	73.7	90.0	57.6	49.7	74.1	89.0	48.3	82.0	58.0	61.4	20.7	1.3	0.0	6.6	8.1	0.8	3.2	13.4	1.0	10.0	17.9	2.9	6.7	16.7	1.3	1.2	3.1	11.5	5.4	9.7	9.9		
brush		0.0	0.0	3.2	0.8	0.0	2.0	0.0	0.2	0.8	0.3	1.2	0.0	0.0	1.9	0.0	0.4	0.5	1.0	0.0	0.7	0.5	138	160	30	112	148	132	131	604	247	851	139	150	28	88	148	134	135	573	249	822	1673		
2 Frequency of cleaning teeth	n=	93.0	100.0	80.0	96.4	98.6	88.6	93.3	97.4	92.5	96.0	98.6	99.5	78.6	97.7	99.3	92.1	91.3	98.8	94.4	97.4	96.7	6.2	0.0	20.0	3.6	1.4	11.4	6.7	2.3	7.5	3.8	1.4	0.5	21.4	2.3	0.7	7.9	1.2	5.6	2.6	3.2			
Once a day		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	After every meal																						
Twice a day		67.2	69.9	90.0	66.1	51.5	69.3	96.5	58.6	80.1	65.0	59.4	71.6	100.0	56.7	50.5	71.4	94.9	52.3	83.7	61.8	63.4	3 Material used for cleaning teeth																						
After every meal		27.5	30.1	10.0	24.1	39.5	11.8	3.0	35.6	16.8	29.9	37.7	27.0	0.0	38.8	42.5	13.7	5.1	43.8	13.5	34.6	32.3	Tooth paste																						
3 Material used for cleaning teeth		131	160	30	101	135	111	130	566	232	798	135	147	28	84	138	117	135	548	236	784	1582	Tooth powder																						
4 Type of toothpaste/ powder	n=	28.1	45.0	60.0	43.6	37.5	18.9	24.8	32.2	50.5	37.8	25.8	42.3	75.0	39.1	36.5	17.7	22.7	28.6	51.9	35.8	36.8	Flouridated																						
Flouridated		33.2	8.5	23.3	20.8	13.3	44.4	36.7	20.4	18.4	19.8	37.7	13.8	10.7	13.1	15.3	46.7	48.2	22.7	19.8	21.8	20.8	Non flouridated																						
Non flouridated		103	117	30	88	77	91	122	420	208	628	85	101	27	62	74	104	126	375	204	579	1207	5 Change of toothbrush once in																						
5 Change of toothbrush once in	n=	66.6	61.5	90.0	72.7	51.4	61.8	62.5	62.7	70.3	65.5	72.3	56.4	85.2	69.4	58.0	55.9	49.4	65.4	64.9	65.2	65.4	1-3 months																						
1-3 months		24.2	30.2	6.7	14.8	39.8	29.6	23.2	25.1	24.7	25.0	21.9	39.0	11.1	12.9	35.2	38.2	38.4	26.1	30.0	27.7	26.4	4-6 months																						
4-6 months		9.2	5.4	3.3	10.2	8.8	8.0	13.7	10.4	4.1	8.1	5.8	3.2	3.7	17.7	5.5	5.8	12.2	8.2	4.2	6.5	7.3	6 + months																						
6 + months		172	163	31	121	161	136	134	664	254	918	171	154	30	108	150	138	139	629	261	890	1808	6 Rinse mouth after eating																						
6 Rinse mouth after eating	n=	32.1	46.0	58.1	34.7	51.8	51.1	19.9	35.4	53.6	40.4	28.4	47.0	60.0	28.5	52.5	46.1	21.0	33.9	51.5	39.0	39.7	Sometimes																						
Sometimes		37.3	31.5	29.0	32.2	34.5	37.9	71.5	36.3	31.0	34.8	37.2	38.4	20.0	33.4	33.4	44.6	70.5	35.7	35.7	35.7	35.3	Always																						
Always																																													

5.3.2 12 year olds

About 63 per cent in this age group reported the use of toothbrush in the state – about 55 per cent in rural areas and 86 per cent in urban areas (Tables 5.3.2). About 62 per cent of respondents more males had changed their toothbrushes once in 1-3 months. There was not much difference between rural and urban areas. Comparatively more reported change of tooth brushes once in 1-3 months. NE Coastal than in remaining regions.

About 64 per cent in this age groups reported the use of tooth past and was more popular in urban areas where 82 per cent reported using the same. Use of fluoridated toothpaste/tooth powder was lower in the rural areas and slightly higher in the urban areas, where 55 per cent of the respondents reported its use.

About 96 per cent reported cleaning their teeth once a day – this was higher at 98 per cent in the rural areas as against 92 per cent in urban areas.

39 per cent of the respondents reported rinsing their mouth after every meal, both in the urban and rural areas. Another 44 per cent had rinsed their mouth “sometimes”. The practice of always rinsing the mouth after eating was more common in the S. Region and the Hills Region.

5.3.3 15 year olds

About 65 percent, more males & more in urban reported the use of tooth brush to clean teeth in the state. More than three fourth of subjects in all except North Region, SE Coastal, were using tooth brush to clean teeth.

About 63 percent, more males & more in urban had changed tooth brushes once in 1-3 months. While other 8 percent across both sexes & more in rural had changed tooth brushes once in after six months of use in the state. Comparatively more changed tooth brushes once in 1-3 months in NE Coastal & Delta Regions than in the remaining Regions. While more changed tooth brushes after six months in N. Region than in other Regions.

96 percent, across both sexes & more in rural reported cleaning teeth once a day. While other 4 percent, more in urban had cleaned teeth twice a day.

67 percent, more males & more in urban had used tooth paste to clean their teeth. While 29 percent, more females & more in rural were using tooth powder to clean teeth.

40 percent, who reported the use of tooth paste/tooth powder across both sexes & more in urban were using fluoridated tooth paste/ tooth powder. While other 20 percent across both sexes & places of residence reported the use of non-fluoridated tooth paste/powder.

45 percent across both sexes & places of residence reported rinsing mouth always in the state. Comparatively more reported rinsing mouth always in NE Coastal than in rest of Regions.

Table : 5.3.3

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

AGE: 12 yrs

STATE: Tamil Nadu

Oral Hygiene Practices	MALES													FEMALES							STATE TOTAL																							
	REGIONS							STATE						REGIONS								STATE																						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6		7	1	2	3	4	5	6	7	U	R	T												
1 Clean teeth with	n=	164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840	190	142	29	117	152	144	134	644	264	908	1840	190	142	29	117	152	144	134	644	264	908	1840
finger		19.9	20.1	6.5	21.2	52.4	22.6	4.3	33.3	12.0	27.1	18.2	18.9	0.0	22.2	43.8	27.0	1.8	28.7	11.1	23.9	25.5	18.2	18.9	0.0	22.2	43.8	27.0	1.8	28.7	11.1	23.9	25.5	18.2	18.9	0.0	22.2	43.8	27.0	1.8	28.7	11.1	23.9	25.5
brush		58.7	76.9	93.5	69.0	45.2	71.9	94.8	54.5	84.9	63.3	58.1	80.6	93.1	59.8	54.3	71.5	96.3	54.7	87.1	63.5	63.4	58.1	80.6	93.1	59.8	54.3	71.5	96.3	54.7	87.1	63.5	63.4	58.1	80.6	93.1	59.8	54.3	71.5	96.3	54.7	87.1	63.5	63.4
datun		18.1	3.1	0.0	8.0	2.4	3.7	0.8	10.3	3.0	8.2	23.1	0.5	6.9	16.2	1.9	0.7	1.4	16.0	1.8	12.1	10.2	23.1	0.5	6.9	16.2	1.9	0.7	1.4	16.0	1.8	12.1	10.2	23.1	0.5	6.9	16.2	1.9	0.7	1.4	16.0	1.8	12.1	10.2
others		3.2	0.0	0.0	1.8	0.0	1.8	0.0	1.8	0.1	1.3	0.6	0.0	0.0	1.7	0.0	0.7	0.5	0.7	0.0	0.5	0.9	0.6	0.0	0.0	1.7	0.0	0.7	0.5	0.7	0.0	0.5	0.9	0.6	0.0	0.0	1.7	0.0	0.7	0.5	0.7	0.0	0.5	0.9
2 Frequency of cleaning teeth	n=	130	164	31	102	157	133	150	598	269	867	147	141	27	96	149	140	130	569	261	830	1697	147	141	27	96	149	140	130	569	261	830	1697	147	141	27	96	149	140	130	569	261	830	1697
Once a day		97.7	99.1	77.4	97.1	98.6	90.6	95.6	98.5	93.1	96.8	96.6	99.5	66.7	97.9	96.6	89.3	90.3	97.4	91.4	95.5	96.2	96.6	99.5	66.7	97.9	96.6	89.3	90.3	97.4	91.4	95.5	96.2	96.6	99.5	66.7	97.9	96.6	89.3	90.3	97.4	91.4	95.5	96.2
Twice a day		2.3	0.9	22.6	2.9	1.4	9.4	4.0	1.5	6.9	3.1	3.4	0.5	33.3	2.1	3.4	10.7	9.7	2.6	8.6	4.5	3.8	3.4	0.5	33.3	2.1	3.4	10.7	9.7	2.6	8.6	4.5	3.8	3.4	0.5	33.3	2.1	3.4	10.7	9.7	2.6	8.6	4.5	3.8
After every meal		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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		66.8	75.1	96.8	61.8	44.2	76.9	94.8	56.2	83.7	64.7	67.0	66.6	88.9	59.4	52.2	70.6	94.4	55.5	79.2	62.8	63.8	67.0	66.6	88.9	59.4	52.2	70.6	94.4	55.5	79.2	62.8	63.8	67.0	66.6	88.9	59.4	52.2	70.6	94.4	55.5	79.2	62.8	63.8
Tooth powder		31.6	23.6	3.2	28.4	45.8	7.5	5.2	38.9	12.9	30.8	31.5	32.9	11.1	31.3	41.7	12.0	4.7	40.1	18.9	33.6	32.2	31.5	32.9	11.1	31.3	41.7	12.0	4.7	40.1	18.9	33.6	32.2	31.5	32.9	11.1	31.3	41.7	12.0	4.7	40.1	18.9	33.6	32.2
4 Type of toothpaste/ powder	n=	128	161	31	92	142	114	150	565	253	818	145	140	27	87	140	118	128	536	249	785	1603	145	140	27	87	140	118	128	536	249	785	1603	145	140	27	87	140	118	128	536	249	785	1603
Flouridated		28.9	46.3	83.9	52.2	30.3	14.6	19.6	31.2	56.8	39.2	29.0	50.2	74.1	31.0	37.2	14.4	23.2	30.7	53.3	37.8	38.5	29.0	50.2	74.1	31.0	37.2	14.4	23.2	30.7	53.3	37.8	38.5	29.0	50.2	74.1	31.0	37.2	14.4	23.2	30.7	53.3	37.8	38.5
Non flouridated		32.3	8.8	9.7	19.6	17.2	48.2	52.6	19.7	18.0	19.2	33.3	9.1	14.8	16.1	18.6	49.4	43.3	21.2	19.8	20.8	20.0	33.3	9.1	14.8	16.1	18.6	49.4	43.3	21.2	19.8	20.8	20.0	33.3	9.1	14.8	16.1	18.6	49.4	43.3	21.2	19.8	20.8	20.0
5 Change of toothbrush once in	n=	98	120	29	78	72	99	143	409	230	639	113	108	27	70	82	102	128	406	224	630	1269	113	108	27	70	82	102	128	406	224	630	1269	113	108	27	70	82	102	128	406	224	630	1269
1-3 months		63.3	56.0	86.2	74.4	62.7	65.4	54.4	63.4	65.6	64.3	60.2	57.8	96.3	61.4	52.1	59.7	50.3	56.2	68.2	60.7	62.5	60.2	57.8	96.3	61.4	52.1	59.7	50.3	56.2	68.2	60.7	62.5	60.2	57.8	96.3	61.4	52.1	59.7	50.3	56.2	68.2	60.7	62.5
4-6 months		24.3	38.2	10.3	15.4	29.1	28.3	32.7	26.8	27.9	27.2	30.8	34.5	0.0	22.9	35.7	35.3	32.9	31.3	25.9	29.2	28.2	30.8	34.5	0.0	22.9	35.7	35.3	32.9	31.3	25.9	29.2	28.2	30.8	34.5	0.0	22.9	35.7	35.3	32.9	31.3	25.9	29.2	28.2
6 + months		10.2	4.6	3.4	10.3	6.8	6.3	12.9	8.4	5.8	7.4	8.0	6.3	3.7	11.4	9.9	5.0	16.8	10.3	5.1	8.4	7.9	8.0	6.3	3.7	11.4	9.9	5.0	16.8	10.3	5.1	8.4	7.9	8.0	6.3	3.7	11.4	9.9	5.0	16.8	10.3	5.1	8.4	7.9
6 Rinse mouth after eating	n=	164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840	190	142	29	117	152	144	134	644	264	908	1840	190	142	29	117	152	144	134	644	264	908	1840
Sometimes		40.6	59.3	64.5	25.7	51.5	50.7	29.5	41.4	58.4	46.3	34.6	53.6	58.6	36.8	51.1	42.1	23.6	40.1	51.7	43.3	44.8	34.6	53.6	58.6	36.8	51.1	42.1	23.6	40.1	51.7	43.3	44.8	34.6	53.6	58.6	36.8	51.1	42.1	23.6	40.1	51.7	43.3	44.8
Always		38.6	34.4	32.3	38.9	40.5	42.3	67.0	38.6	36.2	37.9	38.5	38.8	24.1	43.6	42.3	52.6	74.5	41.3	36.9	40.1	39.0	38.5	38.8	24.1	43.6	42.3	52.6	74.5	41.3	36.9	40.1	39.0	38.5	38.8	24.1	43.6	42.3	52.6	74.5	41.3	36.9	40.1	39.0

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

AGE: 15 yrs

STATE: Tamil Nadu

Oral Hygiene Practices	MALES														FEMALES														STATE TOTAL																																							
	REGIONS							STATE							REGIONS							STATE																																														
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7		U	R	U	T																																			
1 Clean teeth with	n=	178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	129	621	248	869	1801	12.7	17.1	3.7	17.7	46.8	19.8	3.7	26.0	10.2	21.5	12.6	17.2	3.6	22.1	45.9	22.1	1.9	26.7	9.3	21.8	21.7																									
finger		64.1	79.7	88.9	70.9	49.2	74.2	94.2	59.6	84.7	66.6	57.8	78.5	92.9	61.9	49.8	75.1	95.1	54.9	85.2	63.4	65.0	22.6	3.3	7.4	8.1	2.7	2.5	0.0	13.0	5.0	10.7	27.8	4.3	3.6	12.4	2.1	2.4	16.2	5.4	13.1	11.9																										
brush		0.6	0.0	0.0	3.3	1.3	3.6	2.1	1.5	0.1	1.1	1.8	0.0	0.0	3.5	2.1	0.4	0.5	2.2	0.0	1.6	1.4	n=	138	151	25	109	145	137	145	591	259	850	125	153	27	95	132	124	125	544	237	781	1631	95.2	100.0	72.0	98.2	97.9	83.8	89.5	98.1	91.6	96.1	91.4	99.5	85.2	94.7	97.0	87.6	92.0	95.6	93.8	95.0	95.6			
Frequency of cleaning teeth		4.8	0.0	28.0	0.9	2.1	16.2	10.5	1.7	8.4	3.7	7.8	0.5	14.8	5.3	2.2	12.4	8.0	3.8	6.2	4.5	4.1	Once a day	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.2	0.0	0.1	0.9	0.0	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.4	0.3																								
Twice a day																							After every meal																																													
After every meal																							3 Material used for cleaning teeth																																													
Material used for cleaning teeth		71.9	79.3	96.0	67.8	50.1	77.2	93.2	62.4	85.2	69.2	74.2	69.3	92.6	60.0	46.8	72.9	94.5	56.9	82.6	64.9	67.1	Tooth paste	27.3	19.3	4.0	25.8	39.2	12.0	6.8	33.4	11.7	26.9	22.5	30.3	7.4	30.5	43.8	12.3	5.0	38.2	14.3	30.7	28.8																								
Tooth powder		137	148	25	102	130	123	145	564	246	810	121	152	27	86	120	109	124	516	223	739	1549	Flouridated	29.6	52.7	80.0	52.8	37.4	15.4	20.7	34.8	58.2	41.9	31.7	45.7	81.5	36.0	33.4	19.5	18.3	30.7	55.0	38.4	40.2																								
Type of toothpaste/ powder		34.1	9.6	12.0	22.6	14.8	45.7	46.3	22.5	17.7	21.0	28.7	14.8	18.5	12.8	18.5	44.9	44.4	17.2	24.2	19.4	20.2	Non flouridated	n=	116	117	24	87	74	108	140	442	224	666	103	117	26	70	68	99	123	399	207	606	1272	5 Change of toothbrush once in	61.4	61.7	83.3	78.2	67.5	58.1	54.0	64.7	68.0	65.9	62.2	52.4	84.6	68.6	55.5	59.7	59.4	58.7	63.3	60.5	63.2	
Change of toothbrush once in		27.3	30.1	12.5	13.8	28.6	34.6	32.5	24.5	26.6	25.2	28.4	40.0	7.7	14.3	38.7	34.8	23.5	31.0	28.8	30.2	27.7	1-3 months	10.5	7.0	4.2	8.0	3.9	7.3	13.1	10.8	4.1	8.4	8.4	6.3	7.7	12.9	4.4	5.5	17.1	8.5	7.0	7.9	8.2																								
1-3 months		178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	129	621	248	869	1801	4-6 months	37.5	52.7	66.7	34.8	43.0	39.7	30.4	42.6	47.0	43.8	38.3	45.6	50.0	36.3	47.2	44.3	23.1	39.2	47.6	41.6	42.7																								
4-6 months		48.2	45.0	22.2	35.0	51.6	57.0	67.5	45.1	44.5	44.9	44.4	47.8	39.3	39.8	47.2	46.0	75.4	44.7	46.2	45.1	45.0	6 + months	n=	178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	129	621	248	869	1801	6 Rinse mouth after eating	Sometimes	48.2	45.0	22.2	35.0	51.6	57.0	67.5	45.1	44.5	44.9	44.4	47.8	39.3	39.8	47.2	46.0	75.4	44.7	46.2	45.1	45.0
6 Rinse mouth after eating																							Always																																													

5.3.4 35-44 year olds

About 60 per cent of the respondents in this age group reported the use of toothbrush to clean their teeth. About 50 per cent in rural areas and 86 per cent in urban areas (Table 5.3.4). Among Regions, use of toothbrush was more common in NE Coastal and Hills Region. About 60 per cent of the respondents changed their toothbrushes once in 1-3 months. Another one third of the users replaced their toothbrushes once in four to six months. There was not much difference between males and females.

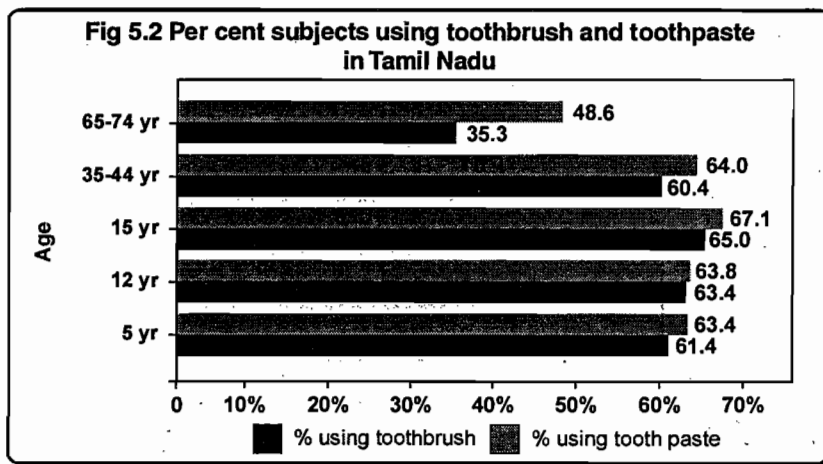
A high 94 per cent of the respondents across both sexes & more in rural said they cleaned their teeth once a day. Region-wise, more people in NE Coastal Region cleaned their teeth twice a day.

The use of toothpaste was reported by about 64 per cent (55 per cent in the rural areas against 84 per cent in the urban areas). Not much difference was noticed between the genders. Among Regions, usage of toothpaste was reported more in NE Coastal and Hills Region. The use of fluoridated toothpaste was reported by 40 per cent respondents – 32 per cent in rural areas and 55 per cent in urban areas. Again, gender differences were not found.

About 55 per cent of the subjects reported rinsing their mouth after every meal (nearly 56 per cent in rural areas and 53 per cent in urban areas). This practice was found to be most prevalent in the Hills Region followed by C. Region.

5.3.5 65-74 year olds

The use of toothbrush, in this age group was relatively low at 35 per cent — about 27 per cent subjects in rural areas and 56 per cent in urban areas (Table 5.3.5). Nearly two-thirds of the respondents said they had changed their toothbrushes once in 1-3 months. There was no difference between males and females in this regard, or between rural and urban areas. Subjects in NE Coastal and Delta tended to change their toothbrushes more often than in the other Regions.



About 97 per cent of the subjects, across sexes and areas, reported cleaning their teeth once a day. In the rural areas more people cleaned their teeth once a day. More subjects cleaned their teeth twice a day in S. Region.

About 49 per cent of the respondents in this age group (40 percent in rural & 66 percent in urban) reported using toothpaste. The use of fluoridated toothpaste/tooth powder was much less in the rural areas (26 per cent) than in the urban areas (52 per cent).

About 59 per cent respondents reported the habit of rinsing their mouth “always” after the meals while one-third reported rinsing “sometimes”.

Table 5.3.4 Percent 35-44 year olds by oral hygiene practices, sex & geographical area.
AGE: 35-44 yrs
STATE: Tamil Nadu

Oral Hygiene Practices	MALES														FEMALES							STATE TOTAL			
	REGIONS							STATE							REGIONS								STATE		
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7		R	U	T
1 Clean teeth with	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907			
finger		12.5	23.8	3.1	20.2	41.3	19.1	4.8	28.3	10.4	23.0	23.4	26.4	0.0	29.3	43.2	16.7	3.6	36.4	9.2	28.9	26.0			
brush		58.8	72.4	93.8	65.2	52.8	79.7	95.2	54.0	84.9	63.2	51.4	72.0	93.5	55.5	52.7	79.2	94.9	46.4	86.8	57.5	60.4			
datun		26.4	3.8	3.1	10.5	1.3	0.4	0.0	14.8	4.2	11.7	23.8	0.5	6.5	11.6	0.0	2.2	1.2	14.3	3.5	11.3	11.5			
others		2.4	0.0	0.0	4.0	4.7	0.8	0.0	2.9	0.6	2.2	1.5	1.1	0.0	3.6	4.1	1.9	0.4	2.9	0.5	2.3	2.3			
2 Frequency of cleaning teeth	n=	129	176	31	106	142	135	135	591	263	854	154	131	29	95	158	155	153	599	276	875	1729			
Once a day		90.6	99.2	64.5	93.6	97.2	85.6	88.8	94.6	90.5	93.2	94.9	100.0	75.9	94.7	95.6	82.1	88.2	95.9	91.9	94.6	93.9			
Twice a day		7.8	0.4	35.5	6.4	2.8	14.4	11.2	4.5	9.5	6.2	5.1	0.0	24.1	4.2	4.4	17.5	11.4	3.9	8.1	5.2	5.7			
After every meal		1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.5	0.0	0.0	0.0	1.1	0.0	0.3	0.4	0.2	0.0	0.2	0.4			
3 Material used for cleaning teeth																									
Tooth paste		73.2	66.2	96.8	68.8	50.5	78.8	94.8	55.8	85.3	65.5	68.7	65.3	89.7	64.1	47.6	79.2	92.7	53.8	81.9	62.4	64.0			
Tooth powder		25.9	31.8	3.2	20.8	35.9	10.4	5.2	37.9	11.9	29.4	25.8	34.2	10.3	26.4	42.2	16.9	6.0	38.6	16.7	31.9	30.7			
4 Type of toothpaste/ powder	n=	128	171	31	95	123	123	135	556	250	806	146	130	29	86	142	146	150	558	271	829	1635			
Flouridated		24.9	47.0	83.9	44.3	46.3	19.1	22.6	34.0	55.5	41.2	26.8	53.2	75.9	38.2	38.9	12.1	24.0	30.9	55.3	38.7	40.0			
Non flouridated		36.7	10.8	16.1	24.0	12.4	48.7	48.5	19.6	22.0	20.4	34.5	10.3	17.2	17.5	19.0	51.6	53.1	23.3	21.2	22.7	21.6			
5 Change of toothbrush once in	n=	107	121	30	81	79	108	127	421	232	653	107	82	29	62	86	120	146	387	245	632	1285			
1-3 months		60.8	54.1	83.3	70.3	55.4	66.4	58.1	56.3	66.5	60.3	59.7	45.5	79.3	69.4	50.1	62.3	46.8	53.4	61.1	56.6	58.5			
4-6 months		28.7	39.1	10.0	14.9	34.4	26.5	29.0	29.6	28.8	29.3	28.9	41.3	17.2	19.4	43.0	31.7	39.2	34.0	31.0	32.7	31.0			
6 + months		9.6	5.8	6.7	13.6	9.0	5.2	13.0	12.3	4.6	9.2	9.6	10.9	3.4	11.3	5.9	6.0	14.0	11.1	6.7	9.3	9.3			
6 Rinse mouth after eating	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907			
Sometimes		30.5	33.1	56.3	37.2	40.6	33.8	20.2	32.1	41.4	34.9	34.2	41.2	58.1	49.0	42.0	34.4	28.2	39.9	42.2	40.5	37.7			
Always		59.0	64.9	40.6	47.5	55.3	62.5	79.3	60.1	53.9	58.2	53.7	58.3	35.5	37.6	57.4	56.6	70.6	52.8	51.9	52.5	55.4			

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

AGE: 65-74 yrs

STATE: Tamil Nadu

Oral Hygiene Practices	MALES														FEMALES														STATE TOTAL
	REGIONS							STATE							REGIONS							STATE							
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T									
1 Clean teeth with	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834							
finger		24.3	57.0	3.2	33.6	62.5	29.0	32.5	44.9	31.9	41.3	26.1	55.6	9.7	28.2	73.0	34.9	29.9	47.4	31.7	42.9	42.1							
brush		25.6	38.6	87.1	49.6	28.7	62.5	59.9	28.9	56.2	36.5	27.0	36.5	83.9	53.8	18.6	52.4	64.0	25.2	55.7	34.1	35.3							
datun		47.1	4.4	9.7	10.9	3.1	6.0	0.0	22.8	9.9	19.2	38.5	7.4	3.2	12.8	0.8	5.4	1.2	19.9	10.9	17.3	18.3							
others		2.9	0.0	0.0	5.9	5.7	2.5	7.6	3.4	2.0	3.0	8.4	0.4	3.2	5.1	7.6	7.4	4.9	7.5	1.6	5.8	4.4							
2 Frequency of cleaning teeth	n=	86	144	28	99	146	132	119	523	231	754	101	145	29	96	130	117	141	519	240	759	1513							
Once a day		94.1	100.0	89.3	94.9	99.2	83.6	95.9	97.3	95.4	96.7	96.2	100.0	79.3	97.9	98.3	86.7	90.6	98.7	92.8	96.8	96.8							
Twice a day		5.9	0.0	10.7	4.0	0.8	16.0	4.1	2.4	4.6	3.1	3.8	0.0	20.7	2.1	0.8	13.3	9.4	1.3	6.8	3.1	3.1							
After every meal		0.0	0.0	0.0	1.0	0.0	0.4	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.3	0.1	0.2							
3 Material used for cleaning teeth																													
Tooth paste		56.6	46.2	89.3	60.6	34.5	62.2	74.0	40.1	69.5	49.3	52.6	47.0	89.7	59.4	25.8	57.1	71.5	40.0	63.9	47.9	48.6							
Tooth powder		29.7	47.4	10.7	28.3	46.9	24.7	12.9	46.3	23.8	39.2	33.8	47.9	10.3	30.2	56.4	17.8	13.9	49.1	26.8	41.7	40.5							
4 Type of toothpaste/ powder	n=	75	136	28	88	119	115	100	450	211	661	87	138	29	86	107	87	123	451	206	657	1318							
Flouridated		24.2	34.7	67.9	39.8	31.8	17.3	21.7	26.8	47.1	33.5	24.1	46.7	72.4	37.2	31.1	13.9	19.9	26.4	56.2	36.4	35.0							
Non flouridated		43.0	14.8	17.9	29.5	18.5	47.0	41.4	23.8	24.9	24.1	43.8	10.2	20.7	16.3	14.0	44.2	49.5	20.4	21.8	20.9	22.5							
5 Change of toothbrush once in	n=	45	50	27	59	46	84	79	245	145	390	52	44	26	63	26	68	101	234	146	380	770							
1-3 months		58.1	53.9	88.9	72.9	58.2	54.5	53.4	64.5	65.1	64.7	66.0	67.0	76.9	60.3	62.2	51.6	42.0	56.9	72.0	64.1	64.4							
4-6 months		25.9	40.9	3.7	13.6	33.1	34.9	33.6	22.2	27.9	24.6	23.5	30.3	19.2	20.6	30.4	35.0	30.5	25.9	24.7	25.4	25.0							
6 + months		15.9	3.9	7.4	13.6	4.2	10.6	9.8	11.9	6.4	9.5	10.4	0.0	3.8	14.3	7.4	12.6	26.1	14.9	2.0	8.8	9.2							
6 Rinse mouth after eating	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834							
Sometimes		27.6	27.6	45.2	39.5	26.5	32.7	20.1	27.5	35.3	29.7	34.5	36.2	48.4	35.9	27.5	24.0	27.7	31.2	40.3	33.8	31.8							
Always		58.8	69.5	35.5	39.5	69.2	56.7	78.9	61.6	55.6	59.9	50.2	62.0	38.7	45.3	66.4	70.9	71.9	56.0	54.4	55.5	57.7							

ORAL HYGIENE PRACTICES ACROSS AGE GROUPS (SUMMING UP)

1. The practice of cleaning teeth was universal.
2. On an average about 57 per cent across all age groups, both sexes and more in urban areas reported using toothbrush to clean their teeth.
3. About 96 per cent, across both sexes and more people in rural areas cleaned their teeth once a day. More people reported cleaning teeth twice a day in urban areas.
4. On an average about 61 per cent, across all ages and both sexes, and more in urban areas reported the use of toothpaste. Usage was more in NE Coastal and Hills Region.
5. On an average about 40 per cent, across all ages and both sexes, and more in urban areas reported the use of fluoridated toothpaste/powder. Greater use of fluoridated toothpaste/powder was reported in NE Coastal region.
6. On an average about 63 per cent, across all ages, more males and more in urban areas changed their toothbrush once in 1-3 months. The change was less frequent in rural areas – four to six months or even after six months.
7. On an average about 46 per cent of the respondents, across all ages and both sexes, and more in urban areas reported rinsing their mouth after every meal. The practice was more prevalent with increase in age. This percentage was also higher in the Hills Region.

5.4 DENTAL PROBLEMS AND TREATMENT ASPECTS

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 had problems like hypertension, diabetes, epilepsy, jaundice and 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 had oral health problems in the last one year. There were no significant rural-urban differentials. Females reported more dental problems. More problems reported in NE Coastal region. The problems mostly reported were dental decay (96 per cent).

About 35 percent (out of those suffered) more females & more in urban consulted trained dentist in the state. All those had dental problems consulted trained dentist in NE Coastal but none consulted in C region. 30 percent, across both sexes & more in rural were aware of Govt. dental care facility. 54 percent of them more males & more in urban reported less than half hour to reach dental care facility. Other about one third across both sexes & more in rural told half to one hour to reach dental care facility. **Table : 5.4.1**

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: Tamil Nadu

Nature of Dental Problems and Treatment related aspects	MALES														FEMALES							STATE TOTAL																							
	REGIONS							STATE							REGIONS								STATE																						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7		R	U	T																				
1 Suffered from oral health problems in last one year	n=	172	163	31	121	161	136	134	664	254	918	171	154	30	108	150	138	139	629	261	890	1808	6.7	2.8	22.6	9.9	7.9	2.5	3.2	7.8	6.6	7.5	6.7	4.5	20.0	16.5	8.6	3.6	4.8	8.7	8.2	8.5	8.0		
2 Type of oral health problems	n=	11	4	7	12	13	6	3	44	12	56	11	5	6	18	13	9	5	50	17	67	123	100.0	100.0	100.0	91.7	84.8	83.3	100.0	93.0	100.0	94.7	90.8	100.0	100.0	91.5	100.0	90.5	96.4	96.1	96.3	95.5			
Dental decay		0.0	0.0	0.0	8.3	0.0	16.7	0.0	2.4	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	3.9	1.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
Gum disease		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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	7.6	0.0	0.0	2.3	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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		54.5	100.0	0.0	58.3	30.5	50.0	42.5	51.9	22.6	44.8	35.5	89.9	0.0	56.4	23.6	55.6	9.5	37.3	44.4	39.3	42.1	18.2	0.0	100.0	25.0	23.8	16.7	57.5	18.7	77.4	32.9	46.1	0.0	100.0	26.7	23.6	22.2	90.5	30.9	55.6	37.7	35.3		
Trained dentist		172	163	31	121	161	136	134	664	254	918	171	154	30	108	150	138	139	629	261	890	1808	8.2	2.7	0.0	13.2	12.7	24.8	9.5	9.2	5.6	8.2	9.6	3.8	0.0	13.0	13.8	22.0	13.1	9.6	7.2	8.9	8.6		
Govt. facility		56.6	16.6	16.1	32.2	17.7	33.3	38.0	33.2	27.5	31.7	54.8	10.4	20.0	24.8	15.4	36.5	36.8	30.1	24.9	28.6	30.2	31.5	59.4	61.3	24.0	59.9	52.0	73.9	46.7	47.5	46.9	30.3	64.4	60.0	38.1	60.5	52.2	69.4	50.5	48.8	50.0	48.5		
Pvt. facility		5.3	22.3	22.6	30.6	11.5	2.5	3.7	12.0	22.0	14.7	7.5	22.4	20.0	24.1	10.9	3.5	0.9	10.5	22.3	13.9	14.3	149	130	24	68	123	91	114	505	194	699	142	122	24	68	114	105	114	495	194	689	1388		
Do not know		49.6	57.0	83.3	75.0	61.1	76.5	58.7	45.9	84.1	55.8	41.9	59.2	91.7	67.9	50.8	73.9	53.4	42.9	78.9	52.4	54.1	Less than 1/2 hr.																						
1/2 - 1 hr.		43.4	18.3	4.2	23.5	31.0	19.6	31.9	38.7	10.0	31.3	44.8	22.0	0.0	29.1	34.6	19.7	40.7	38.9	16.4	33.0	32.2	> 1 hr.																						
Cannot say		0.7	1.3	12.5	0.0	0.8	2.8	0.6	0.6	3.9	1.5	2.1	2.7	8.3	0.0	2.6	0.5	0.0	1.5	4.6	2.3	1.9	6 Ever suffered from	n=	172	163	31	121	161	136	134	664	254	918	171	154	30	108	150	138	139	629	261	890	1808
Hypertension		0.5	0.4	0.0	0.0	0.0	0.0	1.4	0.2	0.5	0.3	0.6	0.0	0.0	0.0	1.5	1.9	0.5	0.3	0.7	0.4	0.35	Hypertension		0.0	0.4	0.0	0.0	0.0	0.0	0.2	0.2	0.0	0.2	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	0.4	0.0	0.0	0.0	0.0	2.3	0.2	0.0	0.2	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.1	0.4	0.3	Diabetes		0.0	0.4	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.2	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	0.4	0.0	0.0	0.7	0.0	0.0	0.2	0.3	0.2	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.6	0.2	0.2	Epilepsy		0.0	0.4	0.0	0.0	0.0	0.0	0.2	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Jaundice		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.4	0.0	0.2	0.0	0.2	0.1	Jaundice		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Asthma		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Asthma		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

5.4.2 12 year olds

About 12 per cent of the respondents in this age group, across both sexes reported oral health problems in the last one year. There were no significant rural/urban differentials. A large percent of subjects reported problems in NE Coastal and Delta regions.

Most of those who had problems, reported dental decay (89 per cent) followed by gum disease (5 per cent). About 36 per cent of respondents who had faced problems did not consult anybody. While other 37 percent, more males & more in urban consulted trained dentist.

About 35 percent & 52 percent were aware of Govt. & Pvt. dental care facility respectively in their areas. As regard their access to these facilities, 52 percent more in urban reported less than half hour. While the remaining more in rural told half to more than one hour to reach dental care facility. **Table : 5.4.2**

5.4.3 15 year olds

13 per cent of the respondents, in this age group, more females and more in urban areas, reported dental problems in last one year. Comparatively more reported dental problems in NE Coastal & Delta regions than in the remaining regions. (Table 5.4.3). Most of them reported problems of dental decay (86 per cent), followed by bleeding gums (8 per cent). There was little difference in the prevalence of the problems between males and females, and between regions. About 29 per cent respondents in rural areas and 26 per cent in urban areas did not consult any dentist for their problems. Another 43 per cent of respondents, however, had consulted a trained dentist.

About 35 per cent, across both sexes & places of residence were aware of Govt. dental care facility. Majority of the respondents reported that it took less than half-an-hour to reach these facilities. There was not much difference between regions.

5.4.4 35-44 year olds

About 30 percent of the respondents in this age groups across both sexes, more in rural, reported dental problems in the last one year. Reporting was found to be much higher in NE Coastal and SE Coastal regions.

In the state, most of the respondents reported problems of dental decay and gum disease. Some percentage reported problems of foul breath and bleeding gums. The problem of bleeding gums was reported more in S. Region.

More from this age group had gone in for consultation than of earlier ages — more people in urban areas consulted a trained dentist (nearly 63 per cent) and less in rural areas (27 per cent).

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 facilities, with a reach time of half-an-hour & below.

The problem of hypertension and diabetes was reported by respondents of this age group. 5 percent & 2 percent reported hypertension and diabetes respectively. There were no significant rural/urban differentials or between sexes. **Table : 5.4.4**

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: Tamil Nadu**

Nature of Dental Problems and Treatment related aspects	MALES														FEMALES														STATE TOTAL
	REGIONS							STATE							REGIONS							STATE							
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T									
1 Suffered from oral health problems in last one year	n=	164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840							
		11.3	5.0	35.5	17.7	14.2	8.8	4.7	11.9	13.4	12.3	11.3	4.7	20.7	23.9	14.5	7.5	9.1	12.6	12.2	12.5	12.4							
2 Type of oral health problems	n=	18	6	11	20	23	12	6	66	30	96	22	7	6	28	22	15	10	79	31	110	206							
Dental decay		88.7	100.0	100.0	100.0	74.1	91.3	91.3	86.9	97.7	90.3	85.4	89.4	100.0	96.4	81.3	76.8	100.0	87.1	93.9	88.9	89.6							
Gum disease		5.6	0.0	0.0	0.0	21.2	4.3	0.0	10.4	0.0	7.1	4.9	0.0	0.0	3.6	5.0	9.7	0.0	4.0	2.7	3.6	5.4							
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	0.0	0.0							
Bleeding gums		0.0	0.0	0.0	0.0	4.2	4.3	0.0	1.7	0.0	1.2	0.0	10.6	0.0	0.0	0.0	0.0	0.0	1.6	0.0	1.2	1.2							
Others		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	13.7	0.0	0.0	5.2	2.7	4.5	2.3							
3 Consulted (out of those suffered)																													
None		44.4	81.6	0.0	30.0	30.7	45.7	33.3	36.1	29.8	34.1	59.0	65.9	0.0	35.7	18.7	51.3	0.0	39.7	33.5	38.0	36.1							
Trained dentist		21.8	18.4	100.0	35.0	30.7	54.3	66.7	26.4	68.0	39.5	13.9	10.6	100.0	32.1	40.7	29.2	100.0	30.1	44.9	34.1	36.8							
4 Availability of dental facility	n=	164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840							
None		6.9	3.1	0.0	15.9	10.3	4.2	7.9	8.3	4.6	7.2	4.9	2.1	6.9	12.8	4.6	3.9	17.1	6.6	3.5	5.7	6.5							
Govt. facility		54.5	17.9	6.5	31.9	24.4	54.7	42.2	32.8	28.8	31.7	65.5	17.4	20.7	28.2	25.5	52.6	33.5	39.1	34.6	37.9	34.8							
Pvt. facility		37.4	65.6	77.4	31.0	59.0	55.2	74.2	52.1	55.1	52.9	28.8	70.1	69.0	32.5	66.1	59.5	73.4	47.8	55.7	50.0	51.5							
Do not know		3.0	14.3	16.1	21.2	7.5	1.2	0.4	7.9	14.2	9.7	2.7	14.2	3.4	26.5	5.7	1.1	0.0	7.6	11.6	8.7	9.2							
5 Time taken to reach the facility	n=	148	145	26	71	133	128	137	550	238	788	176	124	26	71	137	133	107	542	232	774	1562							
Less than 1/2 hr.		44.5	54.8	84.6	74.6	51.7	61.6	51.6	43.0	75.3	52.1	45.4	60.3	92.3	63.4	54.7	64.7	56.7	42.2	81.7	52.9	52.5							
1/2 - 1 hr.		42.9	23.2	0.0	21.1	37.7	19.8	40.9	37.7	17.6	32.0	46.8	25.2	3.8	33.8	28.7	14.7	37.0	43.6	13.5	35.5	33.8							
> 1 hr.		11.3	22.0	0.0	4.2	6.6	5.2	5.8	18.7	1.0	13.7	7.2	13.2	0.0	2.8	10.7	4.1	6.3	12.6	1.0	9.4	11.6							
Cannot say		1.3	0.0	15.4	0.0	4.0	13.4	1.7	0.6	6.1	2.2	0.6	1.3	3.8	0.0	6.0	16.5	0.0	1.6	3.8	2.2	2.2							
6 Ever suffered from	n=	164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840							
Hypertension		0.0	0.0	0.0	0.0	0.6	0.0	0.4	0.2	0.0	0.1	0.6	0.5	0.0	0.0	0.7	0.4	2.3	0.5	0.4	0.5	0.30							
Diabetes		0.0	0.4	0.0	0.0	0.6	0.0	1.2	0.4	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.2							
Epilepsy		0.0	0.0	0.0	0.0	0.9	1.2	0.4	0.6	0.0	0.4	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.3							
Jaundice		0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.7	0.4	0.0	0.0	0.3	0.1	0.2							
Asthma		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	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1							

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: Tamil Nadu

Nature of Dental Problems and Treatment related aspects	MALES														FEMALES														STATE TOTAL
	REGIONS							STATE							REGIONS							STATE							
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T									
1 Suffered from oral health problems in last one year	n=	178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	621	248	869	1801								
		10.1	6.4	25.9	19.6	13.8	7.8	5.8	11.4	12.9	11.8	9.2	6.2	50.0	19.5	14.8	9.2	6.7	10.4	18.5	12.7	12.3							
2 Type of oral health problems	n=	18	8	7	24	21	13	10	73	28	101	16	7	14	22	20	11	6	57	39	96	197							
Dental decay		77.3	92.9	85.7	100.0	90.1	72.9	71.9	88.6	88.0	88.4	63.9	53.5	100.0	90.9	95.2	60.3	71.3	85.1	80.6	83.3	85.9							
Gum disease		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	3.2	2.2	12.0	0.0	0.0	0.0	0.0	13.6	0.0	6.9	2.2	5.0	3.6							
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	4.5	0.0	0.2	0.0	0.1	0.1							
Bleeding gums		11.8	14.2	0.0	0.0	4.6	4.7	0.0	10.4	0.0	7.2	13.0	46.5	0.0	0.0	0.0	4.5	0.0	5.9	11.9	8.4	7.8							
Others		5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	1.0	5.5	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.9	1.0	1.0							
3 Consulted (out of those suffered)																													
None		38.6	45.7	14.3	29.2	29.1	36.5	35.4	31.8	32.0	31.8	24.0	38.0	7.1	36.4	15.0	51.2	21.3	25.3	19.6	23.0	27.4							
Trained dentist		32.8	47.3	85.7	37.5	24.4	63.5	64.6	27.8	64.8	39.0	31.5	15.5	92.9	31.8	50.9	22.7	78.7	33.9	64.0	46.3	42.7							
4 Availability of dental facility	n=	178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	621	248	869	1801								
None		7.4	1.4	3.7	18.7	5.4	5.4	11.2	8.5	3.6	7.1	6.9	3.8	0.0	10.6	5.7	8.5	11.8	6.9	4.2	6.1	6.6							
Govt. facility		58.0	23.2	22.2	28.3	23.2	49.5	37.8	35.2	35.3	35.2	59.6	18.6	14.3	30.1	27.7	48.3	42.0	35.3	33.9	34.9	35.1							
Pvt. facility		36.2	69.5	74.1	35.0	67.2	63.7	70.1	52.1	58.7	53.9	32.8	68.7	85.7	41.6	62.7	52.3	75.3	52.4	57.3	53.8	53.9							
Do not know		0.0	8.0	0.0	17.9	6.2	2.2	0.0	5.1	6.7	5.6	1.8	9.9	0.0	17.7	5.3	1.7	0.0	6.2	7.2	6.5	6.1							
5 Time taken to reach the facility	n=	165	145	26	78	134	130	131	563	246	809	160	140	28	81	123	112	111	532	223	755	1564							
Less than 1/2 hr.		50.8	62.4	88.5	65.6	52.7	79.7	50.9	45.2	82.0	55.7	45.5	51.8	100.0	64.2	56.9	75.3	59.2	43.0	78.0	53.0	54.4							
1/2 - 1 hr.		39.7	21.6	7.7	31.8	37.9	13.6	41.5	39.0	16.7	32.6	42.7	28.6	0.0	33.3	30.4	18.2	33.4	39.7	18.1	33.5	33.1							
> 1 hr.		8.3	16.0	0.0	2.6	9.4	6.7	6.2	15.5	0.1	11.1	9.8	18.4	0.0	2.5	11.1	6.4	7.4	16.1	2.6	12.3	11.7							
Cannot say		1.2	0.0	3.8	0.0	0.0	0.0	1.4	0.3	1.3	0.6	1.9	1.1	0.0	0.0	1.6	0.0	0.0	1.1	1.3	1.2	0.9							
6 Ever suffered from	n=	178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	621	248	869	1801								
Hypertension		0.5	0.0	0.0	0.8	0.7	0.7	1.3	0.2	0.7	0.4	0.0	0.4	3.6	0.9	0.7	1.6	1.4	0.6	0.8	0.6	0.5							
Diabetes		0.0	0.5	0.0	0.0	0.0	0.4	1.2	0.2	0.0	0.2	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.1	0.0	0.1							
Epilepsy		1.1	0.5	0.0	0.0	0.6	0.4	0.0	0.7	0.4	0.6	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.3	0.1	0.4							
Jaundice		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0							
Asthma		0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.6	0.2	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.1							

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

Nature of Dental Problems and Treatment related aspects	MALES														FEMALES														STATE TOTAL
	REGIONS							STATE							REGIONS							STATE							
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T									
1 Suffered from oral health problems in last one year	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907							
		23.4	31.8	18.8	28.9	33.5	19.1	24.0	32.5	21.0	29.1	25.7	29.8	61.3	21.5	35.9	19.8	22.8	29.1	33.3	30.2	29.7							
2 Type of oral health problems	n=	41	64	6	36	51	27	33	201	57	258	52	42	19	24	59	39	36	191	80	271	529							
Dental decay		82.8	87.4	83.3	72.8	86.1	70.8	80.5	84.5	82.3	84.0	88.9	94.3	78.9	87.5	75.8	73.3	96.4	89.4	79.6	86.4	85.2							
Gum disease		5.0	1.2	16.7	24.4	3.8	29.2	13.5	8.0	4.0	7.1	7.7	11.8	10.5	4.2	17.4	9.8	19.0	7.1	16.7	10.0	8.6							
Foul breath		2.1	1.2	16.7	0.0	3.8	2.2	0.0	1.8	4.6	2.4	3.7	0.0	5.3	4.2	0.0	1.6	0.0	1.6	3.2	2.1	2.3							
Bleeding gums		7.5	11.4	0.0	2.8	4.1	10.3	0.0	5.5	11.0	6.7	2.0	1.8	5.3	4.2	1.6	11.1	1.8	3.0	2.3	2.8	4.8							
Others		0.0	0.0	0.0	2.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.1	6.2	1.8	1.3	1.2	1.2	0.6							
3 Consulted (out of those suffered)																													
None		31.5	68.1	0.0	21.6	31.2	29.2	9.8	44.5	33.5	42.1	32.9	55.9	5.3	41.7	30.3	22.1	22.3	44.3	18.1	36.4	39.3							
Trained dentist		43.7	23.1	100.0	33.6	25.9	54.1	88.2	26.8	54.2	32.7	44.0	36.7	94.7	41.7	41.4	61.9	77.7	33.7	74.0	45.9	39.3							
4 Availability of dental facility	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907							
None		2.7	0.7	0.0	19.4	11.4	2.5	8.5	7.2	2.9	5.9	4.6	2.2	3.2	9.8	7.4	4.2	15.4	6.3	3.3	5.5	5.7							
Govt. facility		57.1	21.8	15.6	29.7	24.8	40.0	49.2	32.2	35.7	33.2	57.9	22.3	12.9	36.5	23.3	45.7	37.8	36.9	35.5	36.5	34.9							
Pvt. facility		41.1	77.5	84.4	45.8	65.6	75.2	78.6	60.2	63.7	61.3	39.3	76.8	83.9	48.3	70.0	65.7	72.3	55.9	65.8	58.6	60.0							
Do not know		1.2	1.7	0.0	5.7	1.4	0.4	0.0	1.8	1.9	1.8	1.0	2.7	0.0	6.3	1.9	1.3	0.0	2.3	1.7	2.2	2.0							
5 Time taken to reach the facility	n=	172	181	32	93	132	131	121	602	260	862	193	127	30	94	150	145	128	597	270	867	1729							
Less than 1/2 hr.		47.5	59.4	96.9	76.3	48.1	67.6	42.9	45.8	77.7	55.5	43.7	66.5	96.7	58.7	58.1	76.9	53.4	43.3	83.6	54.7	55.1							
1/2 - 1 hr.		42.1	22.6	3.1	20.5	41.6	25.7	47.2	37.1	19.4	31.7	47.1	19.0	3.3	34.9	33.5	19.1	39.9	42.7	15.2	34.9	33.3							
> 1 hr.		9.2	18.0	0.0	1.1	10.3	6.3	10.0	16.1	2.8	12.0	9.2	14.5	0.0	6.4	8.4	4.0	6.7	14.0	1.3	10.4	11.2							
Cannot say		1.2	0.0	0.0	2.2	0.0	0.4	0.0	1.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4							
6 Ever suffered from	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907							
Hypertension		5.0	1.7	9.4	9.7	1.3	3.9	3.3	4.2	4.4	4.2	5.6	6.9	6.5	7.2	1.8	7.4	3.2	3.3	9.0	4.9	4.6							
Diabetes		1.7	4.2	3.1	3.2	1.4	4.3	2.8	1.7	2.1	1.8	1.9	2.3	3.2	2.7	2.5	5.3	3.5	1.5	3.9	2.2	2.0							
Epilepsy		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.0	0.0	0.7	0.6	0.0	0.2	0.7	0.4	0.2							
Jaundice		0.6	0.0	0.0	0.0	1.4	0.0	0.0	0.5	0.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2							
Asthma		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	2.3	0.0	0.9	0.0	1.5	0.4	0.2	1.5	0.6	0.3							

5.4.5 65-74 year olds

About 31 percent in this age group, across both sexes & more in rural reported oral health problem in last one year in the state. The percent reported oral health problems in each region were similar to that in the state.

As regard type of problems, 73 percent across both sexes & places of residence reported dental decay. While other 26 percent more males & more in urban, had gum disease. Another 6 percent reported the problem of foul breath & bleeding gums in the state. Majority of the respondents in each region had problem of dental decay & gum disease.

Only 32 percent of those had problems, across both sexes & more in urban consulted trained dentist.

About 35 percent, more females & little more in rural were aware of Govt dental care facility in their area.

As regard time required to reach facility, 54 percent, more males & more in urban, reported less than half hour. The rest more females & more in rural told half to more than one hour to reach dental care facility.

About 14 percent & 10 percent, more females & more in urban had problem of hypertension & diabetes respectively in the state. **Table : 5.4.5**

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

1. On an average around 19 per cent of the respondents, across both sexes, suffered from dental problems in the last one year. Reporting was more in rural areas. There were no clear differentials among regions.
2. The most common problem reported was dental decay (over 85 per cent). The problem of gum disease was reported by less than 4 per cent of aged 15 and below and 17 per cent in the higher age groups.
3. On an average one-third subjects, across all ages, consulted trained dentist. This was found to be more in NE Coastal and Hills Region. However, only 13 per cent subjects, across all ages and both sexes, but more in urban areas were aware of availability of Governmental dental facility.
4. Most respondents reported less than half-an-hour to reach the private dental health facilities. This was especially so in urban areas.

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

STATE: Tamil Nadu

AGE: 65-74 yrs

Nature of Dental Problems and Treatment related aspects	MALES														FEMALES														STATE TOTAL
	REGIONS							STATE							REGIONS							STATE							
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	
1 Suffered from oral health problems in last one year	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834							
		22.4	35.2	41.9	35.3	29.9	23.1	21.5	33.6	25.4	31.4	29.8	26.2	29.0	36.8	28.9	15.4	26.0	32.6	23.6	30.0	30.7							
2 Type of oral health problems	n=	37	60	13	42	48	37	27	203	61	264	55	45	9	43	41	25	40	196	62	258	522							
Dental decay		75.4	80.1	69.2	61.9	66.8	49.2	70.9	72.9	69.8	72.2	73.0	84.2	77.8	58.1	78.0	75.5	85.5	73.8	77.1	74.5	73.4							
Gum disease		21.8	36.2	23.1	23.8	42.7	45.3	37.6	23.3	48.1	28.8	24.8	32.8	0.0	18.6	30.3	51.7	28.2	18.0	40.0	23.0	25.9							
Foul breath		0.0	0.0	0.0	9.5	0.0	8.9	0.0	2.2	0.4	1.8	1.6	0.0	0.0	16.3	2.4	0.0	1.6	4.4	1.6	3.8	2.8							
Bleeding gums		8.3	1.3	7.7	2.4	0.0	7.4	0.0	3.8	3.1	3.6	3.8	1.7	11.1	0.0	2.4	5.2	9.4	3.2	2.9	3.1	3.4							
Others		0.0	1.3	0.0	2.4	4.1	0.0	13.4	2.3	0.2	1.8	0.0	0.0	11.1	2.3	0.0	0.0	1.6	0.6	2.7	1.1	1.5							
3 Consulted (out of those suffered)																													
None		35.3	80.1	0.0	38.1	29.2	16.7	4.6	49.8	30.8	45.6	43.2	63.5	0.0	55.8	36.5	34.8	32.8	52.9	30.2	47.7	46.7							
Trained dentist		42.8	14.3	100.0	19.0	36.1	60.9	86.6	24.2	62.5	32.8	25.7	34.8	100.0	23.3	24.9	47.1	65.6	21.5	60.7	30.5	31.7							
4 Availability of dental facility	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834							
None		7.9	3.0	0.0	17.6	7.5	2.8	10.6	9.2	3.5	7.6	2.3	0.9	3.2	11.1	9.9	4.3	12.7	6.0	2.1	4.9	6.3							
Govt. facility		56.7	18.1	22.6	34.5	22.7	39.9	42.8	33.9	33.1	33.7	58.0	23.4	16.1	31.6	27.9	48.6	50.6	37.9	34.4	36.9	35.3							
Pvt. facility		35.8	77.8	77.4	42.9	72.4	75.6	74.9	55.9	66.1	58.8	35.2	76.4	80.6	47.0	61.4	59.6	72.9	51.3	66.1	55.6	57.2							
Do not know		1.8	2.1	0.0	5.0	0.7	0.7	0.0	1.7	2.2	1.8	6.0	3.3	0.0	10.3	2.2	3.8	0.0	5.6	2.9	4.8	3.3							
5 Time taken to reach the facility	n=	154	146	31	92	147	146	111	579	248	927	172	151	30	92	125	127	127	567	257	824	1651							
Less than 1/2 hr.		48.4	56.0	96.8	70.7	55.3	80.9	54.4	44.4	83.0	55.6	44.6	56.4	96.7	56.5	52.4	81.0	49.4	42.9	74.5	52.6	54.1							
1/2 - 1 hr.		40.7	22.3	3.2	27.2	34.8	14.3	38.5	38.5	14.0	31.4	43.5	28.1	0.0	34.8	34.9	15.1	42.9	41.2	19.6	34.6	33.0							
> 1 hr.		10.9	21.7	0.0	2.2	8.6	4.0	5.5	16.7	2.9	12.7	9.1	13.5	0.0	6.5	10.9	3.8	7.7	14.9	1.9	10.9	11.8							
Cannot say		0.0	0.0	0.0	0.0	1.3	0.7	1.6	0.5	0.0	0.3	2.8	2.0	3.3	2.2	1.8	0.0	0.0	1.1	4.0	2.0	1.2							
6 Ever suffered from	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834							
Hypertension		10.9	10.9	19.4	12.6	9.6	22.3	25.7	8.1	18.5	11.0	16.6	20.0	35.5	15.4	12.0	18.3	29.0	12.5	27.5	16.8	13.9							
Diabetes		12.4	6.1	9.7	14.3	10.8	19.1	12.0	8.6	13.9	10.1	12.8	8.7	22.6	13.7	6.4	9.6	17.4	7.6	17.6	10.5	10.3							
Epilepsy		0.6	0.5	0.0	0.0	2.0	1.3	0.0	0.7	0.7	0.7	0.0	0.0	3.2	0.0	1.5	0.4	0.0	0.2	0.9	0.4	0.6							
Jaundice		0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	0.2							
Asthma		0.6	0.0	3.2	1.7	3.9	1.4	2.4	1.1	2.0	1.4	0.6	1.0	0.0	3.4	0.0	1.2	0.4	1.1	0.7	1.0	1.2							

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 analysed below:

5.5.2 12 year olds

Less than half the respondents (44 per cent) in this age group, across both sexes, reported knowledge of dental problems (Table 5.5.2). Most of them knew about dental decay (40 per cent), and gum disease (2 per cent). Awareness was higher in urban areas (52 per cent) as compared to rural areas (36 per cent). Males were slightly more aware than females. Subjects in N. Region and Delta were found to be less aware than in other regions.

About 60 per cent of the respondents, across both sexes, reported lack of knowledge about the factors that can cause oral health problems. Awareness was less in N. Region and Delta. Urban people in the state were more aware. The most of them cited factors causing dental problems such as "eating sweets/ice cream/chocolates" (29 per cent) and "not brushing regularly" (12 per cent).

When asked about the preventive measures, again about 64 per cent of the respondents reported no knowledge. The percentages were higher in rural areas (66 per cent) than in urban areas (58 per cent). Around 16 per cent cited cleaning teeth regularly as a preventive measure. Another 16 per cent cited the "use of fluoridated toothpaste/powder". Awareness was higher in the Hills Region.

5.5.3 15 year olds

About 54 per cent of the respondents of this age group, across both sexes and more in urban areas, reported knowledge of oral health problems (Table 5.5.3). Most of them told dental decay (50 per cent) and gum disease (3 per cent). Among regions, awareness was the highest in the Hills Region (95 per cent).

Like the 12-year age group, more than half the respondents of this age did not know about the factors causing oral health problems. These were more in rural areas (almost 52 per cent) than in urban areas (33 per cent) and more in the Delta and N. Region. About 50 percent (who reported knowledge of oral health problems) across both sexes & more in urban, told tooth decay. This followed by reporting of gum disease (3 percent). The most-often reported factor causing oral health problems was "eating sweets/ ice cream/chocolates" (36 per cent) and "not brushing regularly" (15 per cent).

Again, over half the respondents of this age group (60 per cent) reported lack of knowledge of preventive measures. Such subjects were more in rural areas and less in urban. Those aware of preventive measures reported cleaning teeth regularly (19 per cent), "use of fluoridated toothpaste/toothpowder" (16 per cent), and "not consuming tobacco" (about 3 per cent). Awareness about preventive measures was highest in the Hills Region.

Table 5.5.2 Percent 12 year olds by reported awareness of oral health problems, their causes & preventive measures, sex & geographical area.
STATE: Tamil Nadu
AGE: 12 yrs

Awareness of Oral Health Problems, Causes and Preventive Measures	MALES														FEMALES							STATE TOTAL			
	REGIONS							STATE							REGIONS								STATE		
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7		R	U	T
n=	164	169	31	113	161	142	152	655	277	932	190	142	29	117	152	144	134	644	264	908	1840	644	264	908	
No knowledge	73.6	34.9	48.4	82.3	48.0	26.0	9.0	60.3	45.0	55.8	74.7	42.4	34.5	75.2	40.2	23.1	5.1	62.4	43.1	57.1	56.5	62.4	43.1	57.1	
Tooth decay	25.1	62.5	51.6	15.0	46.3	72.1	91.0	37.2	52.4	41.6	22.1	53.2	62.1	21.4	57.1	73.7	94.4	35.3	51.6	39.8	40.7	35.3	51.6	39.8	
Gum disease	1.9	1.8	0.0	0.0	1.8	10.0	4.0	1.7	1.8	1.7	1.0	1.1	0.0	5.1	1.4	8.1	8.2	1.7	2.0	1.8	1.8	1.7	2.0	1.8	
Bad smell	0.6	0.8	0.0	0.0	2.5	3.0	0.4	1.3	0.4	1.1	0.0	3.3	0.0	0.0	0.0	2.1	0.9	0.1	2.3	0.7	0.9	0.1	2.3	0.7	
Stained teeth	1.2	0.0	0.0	0.9	0.0	0.4	0.4	0.5	0.4	0.5	2.1	0.0	3.4	0.0	0.6	1.4	0.0	1.0	1.2	1.1	0.8	1.0	1.2	1.1	
Others	0.0	0.0	0.0	0.9	1.4	0.0	0.0	0.2	0.6	0.3	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.3	0.1	0.2	0.0	0.3	0.1	
2 Factors that cause Oral Health Problems																									
Eating sweets/ice cream	21.1	37.5	41.9	6.2	34.5	42.6	83.4	27.1	33.9	29.1	24.8	30.5	41.4	10.3	43.0	39.8	84.2	28.8	32.0	29.7	29.4	28.8	32.0	29.7	
Not brushing regularly	9.0	17.6	16.1	10.6	6.8	57.5	47.5	8.6	21.6	12.3	10.8	11.5	20.7	14.5	9.2	55.6	49.5	9.9	19.7	12.6	12.5	9.9	19.7	12.6	
Not rinsing	0.0	0.0	3.2	0.0	0.6	9.2	2.8	0.4	1.0	0.6	0.0	0.0	0.0	0.0	0.0	8.3	4.5	0.1	0.6	0.2	0.4	0.1	0.6	0.2	
Consuming tobacco	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	1.4	0.0	0.2	0.1	0.2	0.1	0.2	0.1	0.2	
Do not know	74.1	44.9	45.2	83.2	58.1	25.3	11.5	66.0	48.3	60.9	67.0	57.6	37.9	76.1	47.8	26.3	6.9	62.4	51.4	59.4	60.2	62.4	51.4	59.4	
3 Reported Preventive Measures																									
Not consuming Tobacco	1.7	2.2	0.0	2.7	2.5	4.0	4.3	1.7	2.7	2.0	2.7	3.2	0.0	3.4	4.6	10.2	5.5	3.4	3.2	3.3	2.7	3.4	3.2	3.3	
Cleaning teeth regularly	15.4	19.3	32.3	13.3	10.8	67.5	72.6	11.6	30.1	17.0	15.5	13.0	27.6	14.5	10.4	64.8	79.2	13.2	23.0	15.9	16.5	13.2	23.0	15.9	
Visiting dentist regularly	1.3	0.9	3.2	0.0	2.4	3.8	0.4	1.5	1.3	1.5	0.6	0.5	20.7	0.0	2.0	3.6	4.0	1.0	4.7	2.0	1.8	1.0	4.7	2.0	
Using fluoride paste / powder	5.6	26.0	9.7	5.3	23.8	20.7	33.0	20.2	9.9	17.2	4.2	17.9	10.3	5.1	30.0	21.0	27.5	15.4	10.4	14.1	15.7	15.4	10.4	14.1	
Avoid sweet items	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	
Do not know	77.7	51.6	54.8	78.8	59.9	27.2	21.6	65.6	58.6	63.6	78.1	63.2	41.4	77.8	52.3	26.3	12.9	67.8	59.5	65.6	64.6	67.8	59.5	65.6	

Table 5.3 Percent 15 year olds by reported awareness of oral health problems, their causes & preventive measures, sex & geographical area.
AGE: 15 yrs **STATE: Tamil Nadu**

Awareness of Oral Health Problems, Causes and Preventive Measures	MALES												FEMALES												STATE TOTAL																							
	REGIONS						STATE						REGIONS						STATE																													
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T	1	2	3	4		5	6	7	R	U	T																	
1 Awareness of Oral Health Problems n=	178	157	27	123	151	148	148	660	272	932	175	158	28	113	138	128	621	248	869	1801	56.0	28.0	40.7	75.8	37.1	21.1	5.0	51.4	34.4	46.6	66.4	25.0	32.1	66.4	17.8	5.4	52.1	32.4	46.5	46.6								
No knowledge	41.8	69.6	59.3	20.1	58.1	75.1	95.0	46.3	61.9	50.7	32.5	68.9	67.9	28.3	60.1	81.8	45.0	62.5	49.9	50.3	3.3	1.0	0.0	3.3	3.4	14.4	11.5	2.4	3.5	2.7	1.2	2.4	0.0	6.2	3.7	10.1	8.8	2.9	2.6	2.8	2.8							
Tooth decay	1.2	1.5	0.0	0.0	2.0	7.4	3.3	1.3	1.5	1.3	0.6	3.3	0.0	0.0	0.8	0.4	1.0	0.5	2.5	1.1	1.2	0.6	0.0	0.0	0.8	0.7	0.7	0.0	0.5	0.3	0.5	1.1	0.0	0.0	0.7	2.4	0.0	0.5	0.5	0.5	0.5	0.5						
Gum disease	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.1	0.0	0.0	0.4	0.0	0.9	0.0	0.0	0.4	0.0	0.3	0.2	0.2	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	0.0	0.0	0.0	0.0	0.3	0.2					
Bad smell																																																
Stained teeth																																																
Others																																																
2 Factors that cause Oral Health Problems																																																
Eating sweets/ice cream	34.1	38.4	37.0	13.6	48.7	64.4	88.6	36.1	38.0	36.7	27.3	43.0	42.9	15.9	48.4	55.4	32.6	42.6	35.4	36.1	20.4	18.2	22.2	10.6	8.1	53.6	53.1	12.2	26.8	16.3	12.4	13.9	25.0	14.2	8.7	66.1	52.8	10.6	22.5	13.9	15.1							
Not brushing regularly	1.7	1.0	0.0	1.6	1.9	8.1	4.1	1.6	1.6	1.6	0.6	0.0	3.6	1.8	0.0	9.6	6.8	0.8	1.3	0.9	1.3	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Not rinsing	0.6	0.0	0.0	0.0	0.0	3.9	1.6	0.4	0.2	0.3	0.0	0.4	0.0	0.9	0.8	2.0	1.4	0.4	0.5	0.4	0.4	53.9	42.8	44.4	74.2	43.9	9.8	6.0	54.8	40.4	50.8	64.4	43.6	32.1	69.9	42.0	8.5	59.0	38.0	53.1	52.0							
Consuming tobacco																																																
Do not know																																																
3 Reported Preventive Measures																																																
Not consuming Tobacco	5.8	2.5	0.0	3.3	2.7	7.1	7.0	4.0	3.0	3.7	2.9	1.4	0.0	0.9	3.7	13.7	8.3	2.4	2.5	2.4	3.1	26.6	19.3	25.9	13.9	13.9	72.4	87.1	17.2	31.5	21.2	18.4	17.1	39.3	15.0	9.5	72.9	83.8	13.0	30.5	18.0	19.6						
Cleaning teeth regularly	1.6	2.4	7.4	4.1	1.3	6.7	7.3	2.3	3.4	2.6	1.2	2.8	17.9	2.7	1.4	8.5	0.0	2.1	5.2	3.0	2.8	4.4	25.1	11.1	4.1	28.0	26.9	29.0	18.4	11.2	16.4	5.6	24.8	10.7	5.3	31.3	24.8	31.3	19.1	12.6	17.3	16.9						
Visiting dentist regularly	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.1	0.1	66.6	49.8	55.6	74.7	54.1	21.8	8.0	60.4	54.0	58.7	76.3	53.0	39.3	74.3	54.1	18.5	11.7	65.1	53.5	61.8	60.3						
Using fluoride paste / powder																																																
Avoid sweet items																																																
Do not know																																																

5.5.4 35-44 year olds

About 60 per cent respondents of this age groups reported awareness of oral health problems. This percentage was more in urban areas than in the rural areas. Most of the respondents aware of problems, cited problems such as dental decay (about 55 per cent), and gum disease (only 6 per cent). Awareness was found to be higher in S. Region and Hills Region.

About 45 per cent respondents in this age group reported lack of knowledge on the factors that cause oral health problems. This was more in rural areas than in the urban. Those aware reported factors causing problems much as "eating sweets/ice cream/chocolates" (19 per cent) "not brushing regularly" (17 per cent), "not rinsing" (nearly 3 per cent) and "consuming tobacco products" (1-2 per cent). There were no significant differences among regions.

About preventive measures in regard to oral health problems, 52 per cent reported no knowledge. Their percentage was more in rural areas (59 per cent) as compared to urban areas (44 per cent). Of those with knowledge of preventive measures, about 23 per cent said cleaning teeth regularly was one such measure. Other measures cited were "use of fluoridated toothpaste/powder" (18 per cent) and "visiting dentist regularly" (5 per cent). **Table : 5.5.4**

5.5.5 65-74 year olds

About 46 percent, more females & more in rural reported no knowledge of oral health problems in the state. As regard region, more reported knowledge of oral health problems in S Region & Hills region than in remaining regions.

46 percent of those had knowledge, more males & more in urban told tooth decay an oral health problem. This followed by other 9 percent reported gum disease.

As regard factors that cause oral health problems, about 55 percent, more females & more in rural did not know. About 30 percent more males & more in urban reported eating sweet/ice cream a factor that can cause oral health problem. Other 15 percent cited not brushing regularly another factor. Than can cause oral health problems.

As regard preventive measures, about 60 percent, more females & more in rural was unaware. About 19 percent, of those aware, reported cleaning teeth regularly. Other 16 percent told use of fluoride paste/powder and about 4 percent cited not consuming tobacco a measure to prevent oral health problems. **Table : 5.5.5**

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

1. On an average about 53 per cent of subjects across ages and both sexes, but more in urban areas, were aware of oral health problems in the state.
2. On an average about 55 per cent of respondents were not aware of the factors that can cause oral health problems.

Of those who were aware, most of them reported "eating sweets/ice cream" (40 per cent) followed by "not brushing regularly" (15 per cent) as two important factors.

3. About preventive measures in regard to oral health problems, again 55 per cent 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: Tamil Nadu**

Awareness of Oral Health Problems, Causes and Preventive Measures	MALES														FEMALES							STATE TOTAL			
	REGIONS							STATE							REGIONS								STATE		
	1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7		R	U	T
1 Awareness of Oral Health Problems	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907			
No knowledge		53.9	21.4	37.5	46.1	29.1	9.1	8.5	43.4	24.7	37.9	59.7	25.0	22.6	53.7	26.7	12.4	4.7	47.1	27.6	41.7	39.8			
Tooth decay		42.3	74.7	50.0	45.8	59.0	87.3	90.2	50.4	68.6	55.8	35.9	68.0	67.7	42.7	70.4	83.3	97.2	49.6	64.6	53.8	54.8			
Gum disease		2.7	3.2	18.8	10.3	6.0	27.0	17.3	4.7	8.6	5.8	5.8	5.8	6.5	1.8	3.6	26.2	19.7	3.9	8.9	5.3	5.6			
Bad smell		1.7	2.4	0.0	0.8	5.2	7.2	3.2	2.6	2.2	2.4	1.5	2.3	3.2	0.9	1.2	8.7	0.8	1.2	3.0	1.7	2.1			
Stained teeth		1.2	0.0	0.0	0.0	0.0	5.2	0.5	0.7	0.2	0.5	2.0	0.0	3.2	0.9	0.6	2.2	0.4	1.3	1.2	1.2	0.9			
Others		0.0	0.4	0.0	0.0	1.3	0.4	0.0	0.6	0.0	0.4	0.0	0.0	0.0	0.0	0.0	2.4	1.6	0.0	0.2	0.1	0.3			
2 Factors that cause Oral Health Problems																									
Eating sweets/ice cream		32.3	45.8	34.4	24.8	48.9	62.0	85.3	37.5	43.0	39.1	29.1	38.3	51.6	33.8	41.4	52.7	89.3	34.1	42.7	36.5	37.8			
Not brushing regularly		17.6	16.0	25.0	18.4	18.0	80.9	50.6	14.7	26.9	18.3	17.1	16.5	38.7	8.1	18.9	79.0	66.8	15.1	29.2	19.0	18.7			
Not rinsing		2.8	0.8	6.3	7.9	0.6	19.0	6.5	2.9	3.4	3.0	3.7	3.5	0.0	4.5	2.5	10.6	8.2	2.0	5.9	3.1	3.1			
Consuming tobacco		1.1	0.4	3.1	4.0	0.0	2.8	5.1	1.4	1.2	1.3	0.4	0.0	3.2	1.8	0.6	0.3	6.3	0.6	1.2	0.8	1.1			
Do not know		52.3	38.2	40.6	48.5	33.0	5.3	11.4	47.7	33.1	43.4	57.3	42.9	22.6	54.6	37.3	10.0	4.8	52.4	33.0	47.1	45.3			
3 Reported Preventive Measures																									
Not consuming Tobacco		9.5	0.4	3.1	12.1	5.4	12.0	7.9	5.6	6.3	5.8	5.7	3.5	0.0	3.6	4.3	8.7	14.1	3.3	6.3	4.1	5.0			
Cleaning teeth regularly		21.6	21.3	25.0	24.8	14.0	82.5	74.7	17.8	30.3	21.5	20.6	24.1	51.6	17.9	22.7	73.0	87.8	17.7	40.7	24.1	22.8			
Visiting dentist regularly		4.9	2.9	12.5	6.5	0.6	20.1	4.2	3.1	7.0	4.3	4.2	3.4	25.8	2.7	4.9	16.7	3.2	2.9	11.2	5.2	4.8			
Using flouride paste / powder		5.6	27.4	9.4	11.1	34.5	29.4	35.2	23.3	12.5	20.1	8.2	21.6	3.2	13.4	24.4	25.6	38.7	18.7	10.4	16.4	18.3			
Avoid sweet items		0.6	0.0	0.0	0.0	0.6	1.2	0.0	0.5	0.0	0.4	0.4	0.0	0.0	0.0	0.0	2.8	0.0	0.0	0.6	0.2	0.3			
Do not know		61.7	48.0	50.0	46.9	45.5	11.5	21.5	52.3	47.5	50.9	66.8	47.4	22.6	61.5	43.0	16.6	7.1	59.2	38.5	53.5	52.2			

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

Awareness of Oral Health Problems, Causes and Preventive Measures	MALES														FEMALES							STATE TOTAL			
	REGIONS							STATE							REGIONS								STATE		
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T					
1 Awareness of Oral Health Problems	n=	169	153	31	119	160	153	127	649	263	912	187	158	31	117	142	138	150	649	274	923	1835			
No knowledge		59.4	25.1	41.9	49.6	30.6	14.6	9.1	45.4	31.8	41.6	71.1	26.2	32.3	67.5	33.7	14.2	7.8	56.8	31.2	49.4	45.5			
Tooth decay		32.8	63.7	48.4	41.2	61.1	81.0	90.9	47.5	56.1	49.9	20.8	59.0	64.5	25.6	61.3	76.8	90.6	36.1	57.3	42.3	46.1			
Gum disease		7.1	11.8	6.5	10.1	8.1	26.8	12.6	7.6	12.6	9.0	8.1	13.4	3.2	6.8	5.1	25.3	22.3	7.3	12.0	8.6	8.8			
Bad smell		0.0	2.0	3.2	0.0	2.1	3.8	2.4	0.5	2.5	1.1	0.6	2.0	0.0	0.9	1.4	3.1	1.6	0.9	1.5	1.1	1.1			
Stained teeth		2.4	0.0	3.2	0.0	0.0	2.8	1.0	1.0	1.2	1.0	1.7	1.4	0.0	0.0	4.2	5.7	0.4	2.1	1.3	1.8	1.4			
Others		0.0	0.0	0.0	0.8	1.2	0.0	0.5	0.6	0.0	0.4	0.0	0.4	0.0	0.0	0.7	1.5	0.0	0.4	0.1	0.3	0.4			
2 Factors that cause Oral Health Problems																									
Eating sweets/ice cream		17.9	42.0	35.5	31.1	40.4	50.9	83.6	32.8	34.6	33.3	14.9	34.4	45.2	16.2	40.0	39.8	76.7	24.3	34.9	27.4	30.4			
Not brushing regularly		16.9	13.8	32.3	9.2	17.2	74.6	47.4	12.1	28.2	16.6	6.8	17.7	19.4	10.3	11.5	65.0	60.4	9.0	22.2	12.8	14.7			
Not rinsing		2.3	1.0	3.2	4.2	1.2	14.7	8.2	2.1	3.1	2.4	1.5	2.3	0.0	2.6	1.5	13.0	6.9	1.8	2.5	2.0	2.2			
Consuming tobacco		2.9	0.5	0.0	2.5	0.6	2.4	3.3	1.9	1.0	1.6	2.5	0.0	3.2	1.7	0.7	3.4	3.2	0.9	2.5	1.3	1.5			
Do not know		64.8	41.7	41.9	52.1	43.2	14.9	12.0	54.1	40.6	50.4	76.8	46.1	35.5	70.9	47.1	20.6	12.0	66.5	42.6	59.6	55.0			
3 Reported Preventive Measures																									
Not consuming Tobacco		8.1	1.5	0.0	5.0	3.3	10.7	12.0	4.0	5.2	4.4	6.7	2.4	3.2	6.0	4.3	3.5	6.5	3.8	6.0	4.4	4.4			
Cleaning teeth regularly		16.3	13.3	32.3	30.3	22.4	70.1	80.8	17.2	29.6	20.7	10.5	19.0	48.4	14.5	11.5	67.1	74.9	12.0	29.2	17.0	18.9			
Visiting dentist regularly		1.7	0.9	19.4	8.4	1.2	6.9	3.3	3.0	5.3	3.6	1.4	3.4	12.9	0.9	0.7	8.0	2.0	0.7	6.2	2.3	3.0			
Using flouride paste / powder		4.6	28.3	9.7	5.0	25.7	29.6	25.8	19.4	11.5	17.2	6.2	18.5	12.9	9.4	29.2	22.4	31.2	17.4	11.6	15.7	16.5			
Avoid sweet items		1.2	0.0	0.0	0.0	0.0	0.7	0.0	0.3	0.4	0.4	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.1	0.1	0.3			
Do not know		73.4	52.9	41.9	50.4	46.8	17.7	14.9	58.1	50.3	55.9	79.8	56.7	35.5	70.1	51.4	24.8	22.3	67.9	52.6	63.4	59.7			

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 or pan masala with tobacco and drinking alcohol. This section summarises findings on those 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 10 per cent of respondents about 20 per cent males and 1 per cent females had the habit of smoking tobacco in the state (Table 5.6.4), They were more in rural areas. Among regions, there were more smokers in Delta region than in other regions.

About 80 per cent of males smoked cigarettes. When asked about frequency of smoking, almost everybody reported smoking less than 10 times in a day.

The practice of chewing pan or pan masala with tobacco was lower; only about 7 per cent reported this habit, across sexes. There were significant rural/urban differentials. A majority of those (66 percent) who chewed tobacco or pan masala with tobacco said they have been doing so for 5 to 10 years.

6 per cent of respondents reported taking alcohol. Most of them (74 percent) said they were consuming alcohol occasionally.

5.6.5 65-74 year olds

About 11 per cent in this age group (20 per cent males and 3 per cent females), more in rural areas (Table 5.6.5) had the habit of smoking tobacco. Cigarettes were smoked more than Bidis in both rural and urban areas. The frequency of smoking Bidis and Cigarettes were mostly less than 10 times in a day. Among regions, the habit was reported more in Hills Region and Delta region. But there were more women smokers in the N. Region.

In the state, about 15 per cent (18 per cent males and 12 per cent females) of this age group reported chewing pan or pan masala with tobacco. Their percentage was slightly more in the rural areas (18 per cent) as opposed to urban areas (9 per cent). About 50 per cent of them said they were chewing it less than 10 times in a day. About 58 per cent said they had this habit for 5 to 10 years.

Less than 7 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 Delta & N. Region.

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: Tamil Nadu**

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	7	R	U	T	1	2	3	4	5	6	7	R	U	T							
1 Smoking Habits	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907					
Subjects smoking tobacco		21.4	18.8	3.1	29.9	15.1	15.2	31.5	21.6	15.6	19.8	0.0	0.0	3.2	3.6	1.2	3.2	0.0	1.1	0.8	1.0	10.4					
2 Nature of Smoking	n=	38	33	1	37	23	23	45	154	46	200	0	0	1	4	2	7	0	12	2	14	214					
Chillum		0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	4.1	1.0	0.0	0.0	0.0	0.0	0.0	10.2	0.0	1.5	0.0	1.2	1.1					
Hookah		0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.8	0.0	0.6	0.0	0.0	0.0	0.0	0.0	30.7	0.0	4.5	0.0	3.6	2.1					
Cigars		2.7	4.4	0.0	5.4	8.5	0.0	0.0	4.5	4.1	4.4	0.0	0.0	0.0	0.0	0.0	10.2	0.0	1.5	0.0	1.2	2.8					
Cigarettes		76.1	78.7	100.0	75.7	83.0	91.8	98.5	76.6	82.9	78.1	0.0	0.0	100.0	75.0	100.0	48.8	0.0	77.6	100.0	82.1	80.1					
Bidis		21.2	12.4	0.0	18.9	4.3	8.2	1.5	18.1	8.8	15.9	0.0	0.0	0.0	25.0	0.0	0.0	0.0	14.9	0.0	11.9	13.9					
3 Number of times Smoking in a day																											
< 10 times		86.3	67.8	100.0	94.6	83.0	70.8	71.6	83.1	78.0	81.9	0.0	0.0	100.0	100.0	100.0	100.0	0.0	100.0	100.0	100.0	91.0					
10-20 times		8.2	18.8	0.0	2.7	12.8	21.1	21.0	12.3	9.3	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8					
20+ times		5.5	13.3	0.0	2.7	4.3	8.2	7.4	4.5	12.7	6.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2					
4 Chewing pan/pan masala habits	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907					
Chew pan or pan masala with tobacco		10.5	4.1	0.0	17.8	4.7	2.9	2.3	9.9	3.6	8.0	7.3	1.6	0.0	14.3	1.2	4.4	3.9	6.6	2.3	5.4	6.7					
5 Number of years of chewing pan or pan masala with Tobacco	n=	18	6	0	22	7	7	3	55	8	63	15	3	0	16	2	8	6	41	9	50	113					
Less than 5 years		5.6	18.3	0.0	27.3	29.3	71.4	20.6	19.8	8.0	18.2	39.0	33.3	0.0	50.0	0.0	63.0	10.3	36.7	60.8	39.5	28.9					
5 - 10 years		94.4	70.4	0.0	68.2	41.3	42.9	58.7	78.8	65.9	77.1	48.1	66.7	0.0	50.0	100.0	14.8	89.7	58.3	21.6	54.0	65.6					
> 10 years		0.0	20.4	0.0	4.5	29.3	0.0	20.6	3.6	26.1	6.5	13.0	0.0	0.0	0.0	0.0	22.2	0.0	5.0	17.6	6.5	6.5					
6 Number of times of chewing tobacco in a day																											
Less than 5 times		49.6	38.8	0.0	59.1	29.3	71.4	100.0	51.6	37.5	49.8	48.1	33.3	0.0	62.5	100.0	92.6	70.6	61.4	27.5	57.5	53.7					
5 - 10 times		50.4	50.0	0.0	40.9	41.3	28.6	0.0	48.5	36.4	46.9	51.9	33.3	0.0	37.5	0.0	0.0	29.4	35.4	72.5	39.7	43.3					
> 10 times		0.0	20.4	0.0	0.0	29.3	14.3	0.0	2.0	26.1	5.1	0.0	33.3	0.0	0.0	0.0	7.4	0.0	3.2	0.0	2.8	4.0					
7 Alcohol consumption habits	n=	179	185	32	124	151	138	135	669	275	944	204	134	31	112	165	162	155	676	287	963	1907					
Consuming alcohol		12.2	7.0	6.3	23.4	8.5	6.4	13.5	10.9	10.7	10.9	0.0	0.0	0.0	0.9	0.6	0.3	0.4	0.4	0.0	0.3	5.6					
8 Frequency of alcohol consumption	n=	22	9	2	29	13	10	15	70	30	100	0	0	0	1	1	1	1	4	0	4	104					
Daily		18.6	17.2	0.0	10.3	8.5	43.6	37.7	14.8	14.0	14.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.3					
3 times a week		4.8	23.7	0.0	17.2	15.1	37.1	37.7	14.1	14.0	14.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0					
Occasionally		36.6	47.3	50.0	51.7	61.3	19.3	24.5	48.3	43.2	46.8	0.0	0.0	0.0	100.0	100.0	100.0	100.0	100.0	0.0	100.0	73.4					

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: Tamil Nadu**

Tobacco Smoking or Chewing with Pan masala and Alcohol taking habits	MALES													FEMALES							STATE TOTAL	
	REGIONS													REGIONS								
	1	2	3	4	5	6	7	R	U	T	1	2	3	4	5	6	7	R	U	T		
1 Smoking Habits	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834
Subjects smoking tobacco		24.0	15.5	6.5	32.8	12.4	18.0	36.9	22.6	13.8	20.1	3.3	2.3	0.0	1.7	2.7	1.5	0.8	3.2	1.2	2.6	11.4
2 Nature of Smoking	n=	40	23	2	39	20	31	47	157	45	202	6	4	0	2	4	1	2	16	3	19	221
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	0.0	0.0
Hookah		7.0	0.0	0.0	2.6	0.0	11.4	1.3	2.3	6.7	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
Cigars		14.0	6.1	50.0	2.6	9.8	2.0	3.8	6.9	17.4	8.9	0.0	19.1	0.0	0.0	0.0	0.0	0.0	6.4	0.0	5.6	7.3
Cigarettes		58.9	71.2	50.0	74.4	80.4	61.2	88.4	71.7	58.1	69.1	48.7	61.7	0.0	100.0	75.0	100.0	50.0	53.6	100.0	59.7	64.4
Bidis		20.0	22.7	0.0	20.5	9.8	25.4	6.5	19.2	17.8	18.9	51.3	19.1	0.0	0.0	25.0	0.0	50.0	40.0	0.0	34.8	26.9
3 Number of times Smoking in a day																						
< 10 times		80.0	78.0	100.0	87.2	74.8	44.3	60.9	78.9	81.9	79.5	68.4	100.0	0.0	100.0	75.0	100.0	100.0	85.0	66.7	82.6	81.1
10-20 times		15.2	9.1	0.0	10.3	15.3	42.3	29.8	15.0	9.1	13.9	14.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.3	4.3	9.1
20 + times		4.8	12.9	0.0	2.6	9.8	13.4	9.4	6.0	9.1	6.6	17.1	0.0	0.0	0.0	25.0	0.0	0.0	15.0	0.0	13.0	9.8
4 Chewing pan/pan masala habits	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834
Chew pan or pan masala with tobacco		26.7	10.5	3.2	31.9	8.3	16.8	6.8	20.9	10.9	18.2	19.0	2.7	3.2	24.8	4.3	20.1	7.0	14.6	6.4	12.2	15.2
5 Number of years of chewing pan or pan masala with Tobacco	n=	44	15	1	38	13	25	10	116	30	146	35	5	1	29	6	23	13	87	25	112	258
Less than 5 years		11.3	10.0	0.0	39.5	23.9	16.5	21.9	19.6	17.4	19.2	19.9	0.0	0.0	37.9	36.1	28.2	35.0	23.9	26.4	24.2	21.7
5 - 10 years		70.0	65.7	100.0	55.3	37.6	44.2	21.9	62.9	60.6	62.5	56.3	32.1	100.0	51.7	63.9	30.2	24.0	52.8	56.8	53.4	58.0
> 10 years		18.7	24.4	0.0	5.3	45.9	41.5	56.2	18.5	22.0	19.1	23.8	67.9	0.0	10.3	0.0	41.6	41.0	23.4	16.9	22.4	20.8
6 Number of times of chewing tobacco in a day																						
Less than 5 times		43.7	48.8	100.0	71.1	31.2	59.0	57.3	51.2	51.7	51.3	43.7	67.9	100.0	44.8	84.0	45.5	59.0	49.7	48.6	49.6	50.5
5 - 10 times		42.3	46.8	0.0	23.7	60.5	30.8	42.7	37.6	44.5	38.8	47.4	32.1	0.0	44.8	16.0	22.8	35.0	40.5	45.9	41.3	40.1
> 10 times		14.0	4.5	0.0	5.3	15.6	12.2	0.0	12.1	3.8	10.7	8.9	0.0	0.0	10.3	0.0	31.7	6.0	9.8	5.4	9.1	9.9
7 Alcohol consumption habits	n=	169	152	31	119	160	153	127	649	262	911	187	158	31	117	142	138	150	649	274	923	1834
Consuming alcohol		15.1	4.1	3.2	34.5	4.4	8.3	12.0	14.8	6.1	12.4	1.1	0.0	0.0	1.7	0.0	0.0	1.6	0.9	0.0	0.7	6.6
8 Frequency of alcohol consumption	n=	25	5	1	41	7	15	17	93	18	111	2	0	0	2	0	0	2	5	1	6	117
Daily		19.4	0.0	0.0	12.2	0.0	20.4	27.4	12.1	16.7	12.7	50.0	0.0	0.0	50.0	0.0	0.0	0.0	49.5	0.0	48.6	30.7
3 times a week		11.8	0.0	0.0	17.1	0.0	25.8	28.7	13.5	6.8	12.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
Occasionally		52.4	62.8	0.0	29.3	84.5	53.8	43.8	44.7	47.7	45.1	50.0	0.0	0.0	50.0	0.0	0.0	100.0	50.5	100.0	51.4	48.3

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

1. About 10 per cent in the 35-44 and 65-74 age groups had the habit of smoking tobacco in the state. The habit was more prevalent among males and in rural areas. Higher percentages were reported from Delta. More than half of them, more males and more from rural areas, smoked cigarettes. Around 80 per cent of smokers, across both sexes and place of residence, said they smoked less than 10 times in a day.
2. About 12 per cent, across all ages and place of residence, but more males said they chewed pan or pan masala with tobacco. A majority of those who chewed tobacco or pan masala with tobacco said they been doing so for 5-10 years.
3. About 7 per cent, across all ages, but more males and more in rural areas, said they were consuming 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 conditions
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.

Tables (tabulated data) and Figures (charts and graphs) accompany the narrative report. The tables present a detailed picture of the findings (male and female subjects) while figures present the high points of the prevalence patterns based on totals (percentages combined for male and female subjects). The tables are numbered based on the chapter and section they represent while the figures are similarly numbered and represent the tables from which the data is drawn. The figures are only selectively prepared and do not always follow a table. The consistency of numbering is maintained and therefore, certain numbers of figures may be absent. A complete list of tables and figures is separately included in the report.

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 present the prevalence proportion of subjects by age and sex who were caries-free and those with caries experience using a range of dmft (deflt)/ 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 presents the mean number of teeth decayed, missing and filled (mean dmft and mean DMFT) in the surveyed population and includes the Significant Caries (SIC) Index. The table also gives the mean number of teeth present in the mouth and the percent subjects who were edentulous.

Table 6.03 presents the breakup of the percent 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 (Table 6.01) was generally high in the state in both primary and permanent teeth. In children aged 5 year olds, nearly 50 per cent (49.8 per cent) had experienced caries in the primary teeth with a mean dmft value of 2.3 (Table 6.02). The percentage of subjects decreased as the mean number of teeth decayed, missing or filled (dmft) increased. The dmft value of 1-3 was most prevalent (24.1per cent) followed by dmft value 6-10 (11.9 per cent). The decayed teeth (dt) component contributed almost completely to the mean dmft value. Caries in children aged 5 years appeared more prevalent amongst males than in females in the state. There was a higher prevalence of caries experience amongst the rural rather than urban population in this age group. The pattern of distribution of caries and mean dmft values were similar in both rural and urban areas.

The caries experience in permanent teeth, increased as age advanced from 12 years to 65-74 years. The percentage of subjects with caries experience at 12 years was 52.2; at 15 years it was 60.9; and at 35-44 years it was 80.4. This percentage peaked 65-74 years (84.6). The DMFT value of 1-3 teeth was most prevalent in children aged 12 and 15 years; in adults (35-44 years) the most prevalent DMFT value was 4-8 (35.0 per cent) while in older adults (65-74 years) the DMFT value of 25-32 was most prevalent (27.1 per cent).

Overall, caries experience was higher among children (12 and 15 years old) in rural areas but in adults (35-44 years and 65-74 years) the opposite was true. Except in the 35-44 year age group, caries experience was higher in males than in females. There were no major differentials in the state in between urban and rural areas and in between regions.

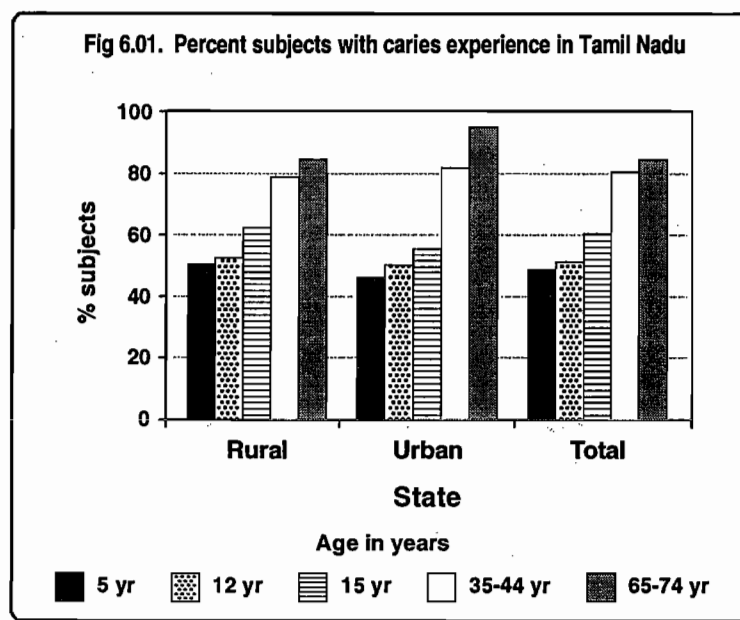


Table 6.01. Percent subjects with caries experience and with dmft/ DMFT values by age, sex and geographical area. State : Tamil Nadu

Decayed, Missing, Filled Teeth	n=	5 years			Decayed, Missing, Filled Teeth	n=	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=	169	169	338	Region 3	n=	164	190	354	178	175	353	179	204	383	169	187	356
With caries		44.2	40.9	42.6	With caries		58.5	53.2	55.9	63.5	60.6	62.1	77.7	77.0	77.4	78.1	80.2	79.2
dmft value 1-3		20.3	18.1	19.2	DMFT level 1-3		30.5	30.0	30.3	28.7	30.9	29.8	26.8	22.5	24.7	19.5	17.1	18.3
dmft value 4-5		12.2	9.4	10.8	DMFT level 4-8		22.0	17.9	20.0	27.5	23.4	25.5	37.4	40.2	38.8	21.9	20.3	21.1
dmft value 6-10		9.3	9.4	9.4	DMFT level 9-16		4.3	4.2	4.3	6.7	5.7	6.2	9.5	10.3	9.9	17.2	15.0	16.1
dmft value 11-15		1.2	2.3	1.8	DMFT level 17-24		0.0	0.0	0.0	0.0	0.0	0.0	2.8	1.0	1.9	4.7	6.4	5.6
dmft value 16 or more		1.2	1.8	1.5	DMFT level 25-28		1.8	1.1	1.5	0.6	0.6	0.6	0.0	1.0	0.5	1.2	2.1	1.7
					DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	1.1	2.0	1.6	13.6	19.3	16.5
Region 2	n=	163	152	315	Region 3	n=	169	142	311	157	158	315	185	134	319	153	158	311
With caries		47.9	46.8	47.4	With caries		52.7	58.5	55.6	58.6	57.0	57.8	81.6	81.3	81.5	85.6	87.3	86.5
dmft value 1-3		24.5	25.3	24.9	DMFT level 1-3		33.7	40.1	36.9	28.7	30.4	29.6	20.0	17.9	19.0	5.9	13.3	9.6
dmft value 4-5		9.2	5.8	7.5	DMFT level 4-8		13.6	14.8	14.2	23.6	17.7	20.7	38.4	37.3	37.9	15.0	16.5	15.8
dmft value 6-10		12.3	11.7	12.0	DMFT level 9-16		3.6	3.5	3.6	4.5	5.1	4.8	16.8	25.4	21.1	22.2	13.3	17.8
dmft value 11-15		0.0	3.2	1.6	DMFT level 17-24		1.2	0.0	0.6	0.0	0.0	0.0	4.3	0.7	2.5	10.5	12.7	11.6
dmft value 16 or more		1.8	0.6	1.2	DMFT level 25-28		0.6	0.0	0.3	1.9	3.8	2.9	2.2	0.0	1.1	3.9	4.4	4.2
					DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.1	27.2	27.7
Region 3	n=	31	30	61	Region 3	n=	31	29	60	27	28	55	32	31	63	31	31	62
With caries		54.8	60.0	57.4	With caries		96.8	89.7	93.3	92.6	89.3	91.0	81.3	96.8	89.1	96.8	96.8	96.8
dmft value 1-3		9.7	23.3	16.5	DMFT level 1-3		12.9	3.4	8.2	7.4	7.1	7.3	6.3	3.2	4.8	0.0	3.2	1.6
dmft value 4-5		22.6	3.3	13.0	DMFT level 4-8		35.5	55.2	45.4	25.9	35.7	30.8	15.6	29.0	22.3	22.6	22.6	22.6
dmft value 6-10		22.6	33.3	28.0	DMFT level 9-16		48.4	31.0	39.7	59.3	46.4	52.9	53.1	58.1	55.6	51.6	45.2	48.4
dmft value 11-15		0.0	0.0	0.0	DMFT level 17-24		0.0	0.0	0.0	0.0	0.0	0.0	6.3	3.2	4.8	12.9	6.5	9.7
dmft value 16 or more		0.0	0.0	0.0	DMFT level 25-28		0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	1.6	3.2	6.5	4.9
					DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	12.9	9.7
Region 4	n=	121	107	228	Region 4	n=	113	117	230	123	113	236	124	112	236	119	117	236
With caries		48.8	38.9	43.9	With caries		57.5	45.3	51.4	73.2	68.1	70.7	75.0	77.7	76.4	73.1	70.1	71.6
dmft value 1-3		27.3	20.4	23.9	DMFT level 1-3		30.1	29.9	30.0	21.1	21.2	21.2	20.2	30.4	25.3	10.1	12.0	11.1
dmft value 4-5		10.7	8.3	9.5	DMFT level 4-8		24.8	13.7	19.3	39.8	36.3	38.1	41.9	34.8	38.4	22.7	21.4	22.1
dmft value 6-10		9.1	7.4	8.3	DMFT level 9-16		2.7	1.7	2.2	12.2	10.6	11.4	12.1	11.6	11.9	5.9	14.5	10.2
dmft value 11-15		1.7	1.9	1.8	DMFT level 17-24		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	1.7	4.3	3.0
dmft value 16 or more		0.0	0.9	0.5	DMFT level 25-28		0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	2.5	3.4	3.0
					DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.3	14.5	22.4
Region 5	n=	157	146	303	Region 5	n=	161	152	313	151	138	289	151	165	316	160	142	302
With caries		61.6	54.1	57.9	With caries		55.9	61.2	58.6	70.2	70.3	70.3	76.2	89.1	82.7	86.9	86.6	86.8
dmft value 1-3		26.4	24.0	25.2	DMFT level 1-3		21.1	33.6	27.4	23.8	29.0	26.4	11.9	10.9	11.4	5.0	7.7	6.4
dmft value 4-5		15.1	8.9	12.0	DMFT level 4-8		25.5	20.4	23.0	27.8	22.5	25.2	36.4	32.1	34.3	14.4	12.7	13.6
dmft value 6-10		16.4	14.4	15.4	DMFT level 9-16		6.2	5.9	6.1	13.9	15.2	14.6	22.5	30.3	26.4	16.3	19.0	17.7
dmft value 11-15		1.3	4.8	3.1	DMFT level 17-24		1.9	0.7	1.3	0.0	1.4	0.7	3.3	9.1	6.2	11.9	12.7	12.3
dmft value 16 or more		2.5	2.1	2.3	DMFT level 25-28		1.2	0.7	1.0	4.6	2.2	3.4	1.3	1.8	1.6	6.3	4.9	5.6
					DMFT level ≥9 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.7	4.8	2.8	33.1	29.6	31.4

Decayed, Missing, Filled Teeth	n=	5 years			Decayed, Missing, Filled Teeth	n=	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=	137	141	278	Region 6	n=	142	144	286	148	128	276	138	162	300	153	138	291
With caries		52.9	55.6	54.3	With caries		40.1	35.4	37.8	53.4	42.2	47.8	78.3	86.4	82.4	90.8	92.0	91.4
dmft value 1-3		34.1	34.5	34.3	DMFT level 1-3		28.9	27.1	28.0	38.5	24.2	31.4	27.5	31.5	29.5	13.1	9.4	11.3
dmft value 4-5		8.0	8.5	8.3	DMFT level 4-8		11.3	7.6	9.5	10.8	17.2	14.0	34.8	22.8	28.8	18.3	11.6	15.0
dmft value 6-10		9.4	9.2	9.3	DMFT level 9-16		0.0	0.7	0.4	4.1	0.8	2.5	14.5	24.1	19.3	17.6	18.1	17.9
dmft value 11-15		1.4	3.5	2.5	DMFT level 17-24		0.0	0.0	0.0	0.0	0.0	0.0	1.4	6.2	3.8	11.8	18.1	15.0
dmft value 16 or more		0.0	0.0	0.0	DMFT level 25-28		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	5.9	8.7	7.3
				DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6	24.2	26.1	25.2	
Region 7	n=	134	138	272	Region 7	n=	152	134	286	148	129	277	135	155	290	127	150	277
With caries		53.7	48.2	51.0	With caries		41.4	47.0	44.2	50.0	53.5	51.8	77.8	81.3	79.6	89.8	86.7	88.3
dmft value 1-3		17.2	20.9	19.1	DMFT level 1-3		34.2	41.0	37.6	33.8	34.9	34.4	31.1	29.0	30.1	8.7	16.0	12.4
dmft value 4-5		18.7	10.1	14.4	DMFT level 4-8		6.6	6.0	6.3	14.9	15.5	15.2	28.1	39.4	33.8	24.4	26.0	25.2
dmft value 6-10		14.2	11.5	12.9	DMFT level 9-16		0.7	0.0	0.4	1.4	2.3	1.9	13.3	6.5	9.9	20.5	15.3	17.9
dmft value 11-15		3.7	5.0	4.4	DMFT level 17-24		0.0	0.0	0.0	0.0	0.8	0.4	4.4	5.2	4.8	9.4	14.0	11.7
dmft value 16 or more		0.0	0.7	0.4	DMFT level 25-28		0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.6	0.7	9.4	4.0	6.7
				DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	17.3	11.3	14.3	
State Rural	n=	660	623	1283	State Rural	n=	655	644	1299	660	621	1281	669	676	1345	649	649	1298
With caries		52.6	49.6	51.1	With caries		53.0	52.3	52.7	63.2	61.8	62.5	77.7	81.7	79.7	84.9	82.7	83.8
dmft value 1-3		25.0	23.8	24.4	DMFT level 1-3		29.8	34.6	32.2	29.4	27.9	28.7	22.0	22.9	22.5	10.0	13.1	11.6
dmft value 4-5		13.1	9.5	11.3	DMFT level 4-8		19.4	14.4	16.9	25.6	24.2	24.9	36.6	34.9	35.8	20.6	18.0	19.3
dmft value 6-10		11.7	11.8	11.8	DMFT level 9-16		3.1	2.8	3.0	6.8	7.7	7.3	14.6	17.9	16.3	18.6	15.7	17.2
dmft value 11-15		1.5	3.3	2.4	DMFT level 17-24		0.2	0.2	0.2	0.0	0.5	0.3	3.4	4.3	3.9	7.9	10.9	9.4
dmft value 16 or more		1.2	1.1	1.2	DMFT level 25-28		0.6	0.3	0.5	1.4	1.6	1.5	0.9	0.4	0.7	4.5	3.7	4.1
				DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.2	0.7	23.3	21.3	22.3	
State Urban	n=	252	260	512	State Urban	n=	277	264	541	272	248	520	275	287	562	263	274	537
With caries		48.8	44.1	46.5	With caries		51.6	50.4	51.0	59.6	54.0	56.8	78.9	85.0	82.0	84.0	88.7	86.4
dmft value 1-3		22.4	23.8	23.1	DMFT level 1-3		27.8	27.3	27.6	26.8	28.6	27.7	22.9	22.3	22.6	10.6	11.3	11.0
dmft value 4-5		11.4	5.4	8.4	DMFT level 4-8		13.7	16.7	15.2	19.5	17.3	18.4	33.1	33.1	33.1	16.0	19.0	17.5
dmft value 6-10		13.4	10.7	12.1	DMFT level 9-16		7.9	6.1	7.0	12.5	8.1	10.3	19.6	22.3	21.0	16.7	19.3	18.0
dmft value 11-15		1.2	3.4	2.3	DMFT level 17-24		1.4	0.0	0.7	0.0	0.0	0.0	1.8	3.1	2.5	10.6	11.7	11.2
dmft value 16 or more		0.4	0.8	0.6	DMFT level 25-28		0.7	0.4	0.6	0.7	0.0	0.4	0.7	1.7	1.2	5.3	6.6	6.0
				DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.7	2.4	1.6	24.7	20.8	22.8	
State Total	n=	912	883	1795	State Total	n=	932	908	1840	932	869	1801	944	963	1907	912	923	1835
With caries		51.5	48.0	49.8	With caries		52.6	51.8	52.2	62.1	59.6	60.9	78.1	82.7	80.4	84.6	84.5	84.6
dmft value 1-3		24.3	23.8	24.1	DMFT level 1-3		29.2	32.5	30.9	28.6	28.1	28.4	22.2	22.7	22.5	10.2	12.6	11.4
dmft value 4-5		12.6	8.3	10.5	DMFT level 4-8		17.7	15.1	16.4	23.8	22.2	23.0	35.6	34.4	35.0	19.3	18.3	18.8
dmft value 6-10		12.2	11.5	11.9	DMFT level 9-16		4.5	3.7	4.1	8.5	7.8	8.2	16.1	19.2	17.7	18.1	16.8	17.5
dmft value 11-15		1.4	3.4	2.4	DMFT level 17-24		0.5	0.1	0.3	0.0	0.3	0.2	3.0	3.9	3.5	8.7	11.2	10.0
dmft value 16 or more		1.0	1.0	1.0	DMFT level 25-28		0.6	0.3	0.5	1.2	1.2	1.2	0.8	0.8	0.8	4.7	4.6	4.7
				DMFT level 29 or more		0.0	0.0	0.0	0.0	0.0	0.0	0.3	1.6	1.0	23.7	21.1	22.4	

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.

The mean DMFT at 12 years was 2.5 and increased as age advanced. It was 3.4 in children aged 15 years; 5.8 in adults aged 35-44 years and highest (13.3) in older adults (65-74 years). While the decayed teeth (DT) component contributed to the DMFT value in the younger age groups, it was the missing teeth component (MT) which contributed notably to DMFT in adults aged 35-44 years (1.3) and maximally to the DMFT value in subjects aged 65-74 years (10.5). the majority of missing teeth in adults aged 35-44 and 65-74 years were recorded as missing due to reasons other than caries. The SIC Index was about two to two and a half times more than the mean dmft/DMFT values in the state across age groups. The pattern was similar for rural and urban areas and in between regions.

Overall, the number of teeth present in the mouth of individuals surveyed decreased as age advanced (Table 6.02). About 17.7 percent of the subjects surveyed, more males than females, in the age group of 65-74 years, were edentulous (without natural teeth). There were no marked differentials between rural and urban areas.

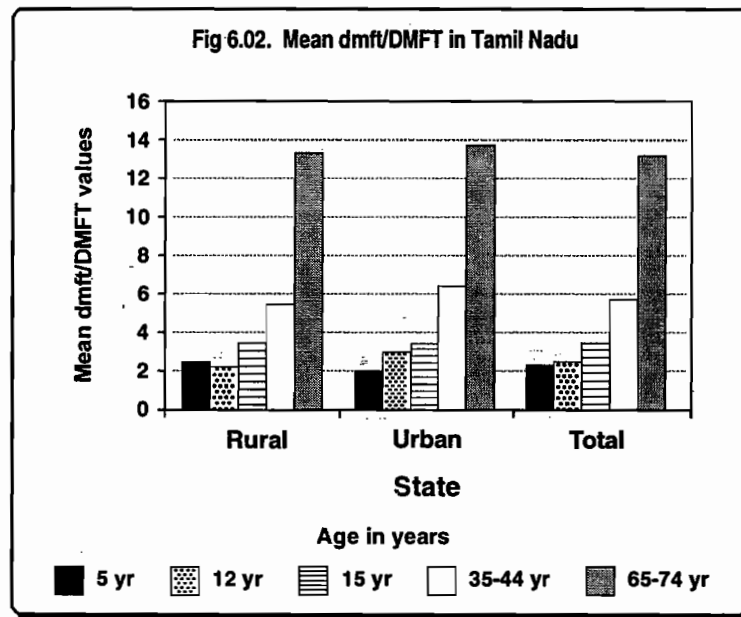


Table 6.02 Mean number of teeth decayed, missing, filled by age, sex and geographical area.

State : Tamil Nadu

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=	169	169	338	162	187	349	175	170	345	178	195	373	157	174	331
Mean no. of teeth present (mnt/MNT)		19.9	19.8	19.9	24.5	25.0	24.8	27.9	27.9	27.9	31.1	30.9	31.0	24.3	22.6	23.5
Mean dmft and Mean DMFT		2.1	2.2	2.2	2.5	2.1	2.3	2.8	2.7	2.8	4.4	5.2	4.8	9.6	11.4	10.5
Mean no. of Decayed teeth (dt/DT)		2.1	2.1	2.1	2.4	2.1	2.3	2.8	2.6	2.7	3.5	4.1	3.8	2.0	2.0	2.0
Mean no. of Missing teeth (mt/MT)		0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.9	1.1	1.0	7.7	9.4	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	0.0	0.0	0.0	0.0	0.0	0.0
SIC Index		5.4	6.0	5.7	6.4	5.3	5.9	6.4	6.0	6.2	9.6	11.0	10.3	22.7	26.5	24.6
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	0	0	18	29	47
Region 2	n=	163	152	315	168	138	306	155	155	310	183	134	317	149	153	302
Mean no. of teeth present (mnt/MNT)		19.7	19.6	19.7	27.3	27.5	27.4	27.9	28.0	28.0	31.1	31.0	31.1	19.4	20.1	19.8
Mean dmft and Mean DMFT		2.1	2.1	2.1	2.0	1.8	1.9	2.7	2.8	2.8	5.7	5.5	5.6	15.8	15.2	15.5
Mean no. of Decayed teeth (dt/DT)		2.1	2.1	2.1	2.0	1.8	1.9	2.6	2.8	2.7	4.7	4.5	4.6	3.3	3.3	3.3
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	1.0	1.0	12.6	11.9	12.3
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	0.0	0.1	0.0	0.0	0.0
SIC Index		6.0	6.1	6.1	5.2	4.3	4.8	6.6	7.3	7.0	12.3	10.6	11.5	30.9	30.7	30.8
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	0	0	35	35	70
Region 3	n=	31	30	61	31	29	60	27	28	55	31	31	62	31	31	62
Mean no. of teeth present (mnt/MNT)		19.7	20.0	19.9	27.1	27.3	27.2	28.0	28.0	28.0	30.5	30.5	30.5	26.9	24.5	25.7
Mean dmft and Mean DMFT		2.9	2.9	2.9	7.0	6.3	6.7	7.3	6.5	6.9	8.7	9.7	9.2	12.6	13.6	13.1
Mean no. of Decayed teeth (dt/DT)		2.9	2.9	2.9	7.0	6.3	6.7	7.3	6.5	6.9	7.1	8.2	7.7	7.5	6.1	6.8
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	1.5	1.5	1.5	5.1	7.5	6.3
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	0.0	0.1	0.0	0.0	0.0
SIC Index		6.8	7.2	7.0	10.6	8.6	9.6	10.1	9.9	10.0	14.5	14.5	14.5	21.1	24.9	23.0
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	0	0	2	4	6
Region 4	n=	121	107	228	112	117	229	123	113	236	123	112	235	118	115	233
Mean no. of teeth present (mnt/MNT)		19.8	20.0	19.9	23.3	23.2	23.3	27.9	27.9	27.9	31.4	31.3	31.4	20.2	24.0	22.1
Mean dmft and Mean DMFT		2.0	1.7	1.9	2.0	1.4	1.7	3.6	3.1	3.4	4.2	4.3	4.3	12.9	9.6	11.3
Mean no. of Decayed teeth (dt/DT)		1.9	1.7	1.8	2.0	1.4	1.7	3.6	3.0	3.3	3.6	3.6	3.6	1.1	1.6	1.4
Mean no. of Missing teeth (mt/MT)		0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.6	0.7	0.7	11.8	8.0	9.9
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		5.2	5.1	5.2	4.7	3.8	4.3	7.1	6.5	6.8	8.5	8.9	8.7	31.3	23.5	27.4
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	0	0	35	16	51
Region 5	n=	157	146	303	154	150	304	150	137	287	147	164	311	152	133	285
Mean no. of teeth present (mnt/MNT)		19.9	19.8	19.9	26.7	27.4	27.1	28.0	27.9	28.0	30.8	29.0	29.9	18.3	19.2	18.8
Mean dmft and Mean DMFT		3.1	2.9	3.0	2.9	2.5	2.7	4.4	4.1	4.3	6.2	9.6	7.9	17.6	16.5	17.1
Mean no. of Decayed teeth (dt/DT)		3.1	2.8	3.0	2.8	2.5	2.7	4.3	4.0	4.2	4.9	6.6	5.8	3.9	3.7	3.8
Mean no. of Missing teeth (mt/MT)		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1	1.2	3.0	2.1	13.7	12.8	13.3
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	0.0	0.1	0.0	0.0	0.0
SIC Index		7.4	7.6	7.5	7.1	6.0	6.6	10.3	9.4	9.9	12.8	18.9	15.9	31.7	31.2	31.5
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	3	3	41	30	71

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=	137	141	278	141	143	284	148	128	276	137	161	298	148	133	281
Mean no. of teeth present (mnt/MNT)		19.7	19.9	19.8	24.6	25.5	25.1	27.9	27.8	27.9	29.6	27.7	28.7	17.9	15.8	16.9
Mean dmft and Mean DMFT		1.9	2.1	2.0	1.0	0.9	1.0	1.6	1.3	1.5	4.5	6.8	5.7	15.1	17.5	16.3
Mean no. of Decayed teeth (dt/DT)		1.9	2.0	2.0	1.0	0.8	0.9	1.5	1.2	1.4	1.8	2.3	2.1	1.0	1.3	1.2
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	2.4	4.3	3.4	14.1	16.2	15.2
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	0.3	0.2	0.3	0.0	0.0	0.0
SIC Index		4.8	5.7	5.3	3.0	2.7	2.9	4.0	3.9	4.0	9.2	14.4	11.8	29.8	30.6	30.2
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	2	2	23	20	43
Region 7	n=	134	138	272	152	134	286	148	129	277	135	155	290	127	150	277
Mean no. of teeth present (mnt/MNT)		19.9	20.0	20.0	23.1	24.5	23.8	28.0	27.9	28.0	29.3	29.4	29.4	17.8	21.0	19.4
Mean dmft and Mean DMFT		2.6	2.4	2.5	1.0	1.0	1.0	1.4	1.6	1.5	4.6	4.8	4.7	15.3	12.4	13.9
Mean no. of Decayed teeth (dt/DT)		2.5	2.4	2.5	0.9	0.9	0.9	1.3	1.4	1.4	1.8	2.1	2.0	1.1	1.4	1.3
Mean no. of Missing teeth (mt/MT)		0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.1	2.7	2.6	2.7	14.2	11.0	12.6
Mean no. of Filled teeth (ft/FT)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.0	0.0	0.0
SIC Index		6.6	6.8	6.7	2.6	2.4	2.5	3.8	4.3	4.1	10.4	10.3	10.4	28.3	24.4	26.4
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	1	1	13	12	25
State Rural	n=	660	623	1283	647	637	1284	657	615	1272	664	668	1332	630	625	1255
Mean no. of teeth present (mnt/MNT)		19.8	19.8	19.8	25.2	25.7	25.5	28.0	27.9	28.0	31.1	30.6	30.9	21.0	21.4	21.2
Mean dmft and Mean DMFT		2.5	2.4	2.5	2.4	2.0	2.2	3.3	3.4	3.4	5.2	6.0	5.6	13.7	13.0	13.4
Mean no. of Decayed teeth (dt/DT)		2.4	2.4	2.4	2.3	2.0	2.2	3.2	3.3	3.3	4.2	4.6	4.4	2.7	2.4	2.6
Mean no. of Missing teeth (mt/MT)		0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.9	1.4	1.2	11.0	10.6	10.8
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	0.0	0.1	0.0	0.0	0.0
SIC Index		6.2	6.5	6.4	5.0	4.3	4.7	6.8	7.1	7.0	10.7	12.6	11.7	29.3	28.5	28.9
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	4	4	120	105	225
State Urban	n=	252	260	512	273	261	534	269	245	514	270	284	554	252	264	516
Mean no. of teeth present (mnt/MNT)		19.8	19.8	19.8	26.7	26.5	26.6	27.9	28.0	28.0	30.8	30.2	30.5	21.7	21.8	21.8
Mean dmft and Mean DMFT		2.0	2.0	2.0	3.1	2.8	3.0	3.7	2.8	3.3	5.6	7.1	6.4	13.6	13.9	13.8
Mean no. of Decayed teeth (dt/DT)		2.0	1.9	2.0	3.0	2.7	2.9	3.6	2.7	3.2	4.3	5.2	4.8	3.2	3.6	3.4
Mean no. of Missing teeth (mt/MT)		0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	1.2	1.8	1.5	10.3	10.2	10.3
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	0.0	0.1	0.0	0.0	0.0
SIC Index		5.7	5.7	5.7	6.4	5.4	5.9	7.2	5.7	6.5	11.4	14.2	12.8	30.0	29.1	29.6
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	2	2	47	41	88
State Total	n=	912	883	1795	920	898	1818	926	860	1786	934	952	1886	882	889	1771
Mean no. of teeth present (mnt/MNT)		19.8	19.8	19.8	25.7	25.9	25.8	27.9	27.9	27.9	31.0	30.5	30.8	21.4	21.7	21.6
Mean dmft and Mean DMFT		2.3	2.2	2.3	2.7	2.3	2.5	3.5	3.2	3.4	5.2	6.4	5.8	13.5	13.1	13.3
Mean no. of Decayed teeth (dt/DT)		2.2	2.2	2.2	2.6	2.3	2.5	3.5	3.2	3.4	4.2	4.8	4.5	2.8	2.8	2.8
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	1.0	1.5	1.3	10.6	10.3	10.5
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	0.0	0.1	0.0	0.0	0.0
SIC Index		6.1	6.3	6.2	5.4	4.6	5.0	6.9	6.7	6.8	10.9	13.1	12.0	29.6	28.8	29.2
No. of subjects edentulous		0	0	0	0	0	0	0	0	0	0	6	6	167	146	313

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. Associated Tables 6.01 and 6.03

Table 6.03 Mean number of teeth missing due to caries or other reasons by age, sex and geographical area.

State : Tamil Nadu

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=	162	187	349	175	170	345	178	195	373	157	174	331
Mean nos. of teeth missing due to caries		0.1	0.0	0.1	0.1	0.0	0.1	0.6	0.7	0.7	1.6	3.5	2.6
Mean nos. of teeth missing due to other reasons		0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.3	0.3	6.1	5.9	6.0
Region 2	n=	168	138	306	155	155	310	183	134	317	149	153	302
Mean nos. of teeth missing due to caries		0.0	0.0	0.0	0.1	0.0	0.1	0.9	0.8	0.9	8.3	6.0	7.2
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	4.3	5.9	5.1
Region 3	n=	31	29	60	27	28	55	31	31	62	31	31	62
Mean nos. of teeth missing due to caries		0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.2	1.1	1.7	5.1	3.4
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.3	0.5	3.4	2.4	2.9
Region 4	n=	112	117	229	123	113	236	123	112	235	118	115	233
Mean nos. of teeth missing due to caries		0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.3	0.3	0.6	1.0	0.8
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.4	11.2	7.0	9.1
Region 5	n=	154	150	304	150	137	287	147	164	311	152	133	285
Mean nos. of teeth missing due to caries		0.0	0.0	0.0	0.0	0.1	0.1	1.0	2.3	1.7	7.5	8.1	7.8
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.7	0.5	6.2	4.7	5.5
Region 6	n=	141	143	284	148	128	276	137	161	298	148	133	281
Mean nos. of teeth missing due to caries		0.0	0.0	0.0	0.1	0.1	0.1	1.8	3.6	2.7	3.8	4.7	4.3
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.1	0.1	0.6	0.6	0.6	10.2	11.5	10.9
Region 7	n=	152	134	286	148	129	277	135	155	290	127	150	277
Mean nos. of teeth missing due to caries		0.0	0.0	0.0	0.0	0.1	0.1	2.1	2.5	2.3	6.2	4.5	5.4
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	7.9	6.5	7.2
State Rural	n=	647	637	1284	657	615	1272	664	668	1332	630	625	1255
Mean nos. of teeth missing due to caries		0.1	0.0	0.1	0.0	0.0	0.0	0.7	1.0	0.9	5.0	5.3	5.2
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	6.0	5.3	5.7
State Urban	n=	273	261	534	269	245	514	270	284	554	252	264	516
Mean nos. of teeth missing due to caries		0.0	0.0	0.0	0.1	0.0	0.1	1.0	1.5	1.3	2.9	3.2	3.1
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	7.4	7.0	7.2
State Total	n=	920	898	1818	926	860	1786	934	952	1886	882	889	1771
Mean nos. of teeth missing due to caries		0.0	0.0	0.0	0.0	0.0	0.0	0.8	1.1	1.0	3.9	4.2	4.1
Mean nos. of teeth missing due to other reasons		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	6.7	6.1	6.4

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

6.1.2. Root caries

Table 6.04 presents the percent subjects with root caries and fillings, if any, and the mean number of teeth with root caries and fillings, if any.

The Root Caries. does not appear in children and young adults. Therefore the data on root caries is presented only for the two age groups of 35-44 years and 65-74 year.

The percentage of subjects with root caries was approximately 13.3 and 16.4 per cent respectively amongst adults aged 35-44 yaers and 65-74 years. The mean number of teeth with root caries in these age groups was 0.6 and 1.1 respectively for 35-44 and 65-74 year olds.

Unlike coronal caries in the state, root caries was more prevalent in urban residents compared to rural residents but there were no clearly marked differentials between male and female subjects.

A negligibly small percentage of subjects (0.2 per cent) each in the 35-44 and 65-74 year old subjects in the state had root fillings. This is rather surprising considering the high density of dental colleges and private dental facilities in the state. Apparently, there is little priority amongst the population for seeking or utilizing the services.

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

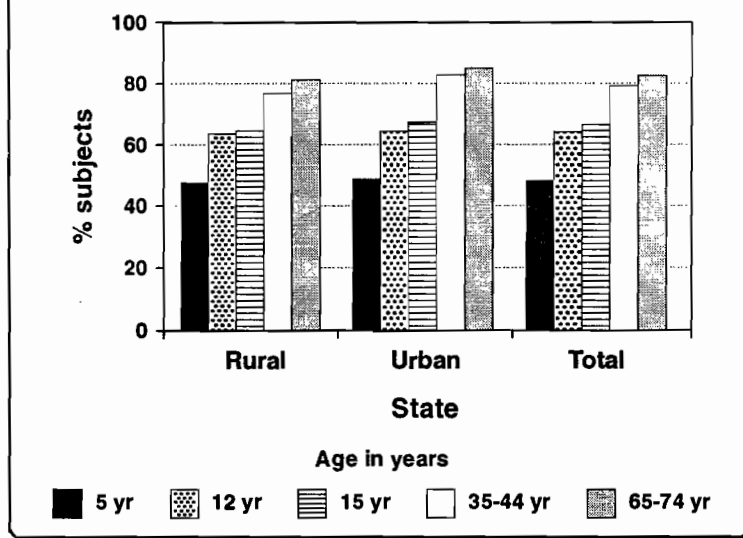
Root Caries		35-44 years			65-74 years		
		M	F	T	M	F	T
Region 1	n=	179	204	383	169	187	356
% Subjects with Root caries		7.8	10.8	9.3	12.0	8.0	10.0
Mean nos of teeth with Root Caries		0.3	0.7	0.5	0.5	0.4	0.5
% Subjects with Root fillings		0.5	0.5	0.5	0.0	0.0	0.0
Mean nos of teeth with Root fillings		0.0	0.0	0.0	0.0	0.0	0.0
Region 2	n=	185	134	319	153	158	311
% Subjects with Root caries		10.2	14.0	12.1	21.6	13.9	17.8
Mean nos of teeth with Root Caries		0.2	0.4	0.3	1.2	1.2	1.2
% 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
Region 3	n=	32	31	63	31	31	62
% Subjects with Root caries		3.1	0.0	1.6	6.5	0.0	3.3
Mean nos of teeth with Root Caries		0.1	0.0	0.1	0.3	0.0	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
Region 4	n=	124	112	236	119	117	236
% Subjects with Root caries		4.8	16.1	10.5	1.7	4.3	3.0
Mean nos of teeth with Root Caries		0.1	0.5	0.3	0.1	0.2	0.2
% Subjects with Root fillings		0.0	0.0	0.0	0.0	1.7	0.9
Mean nos of teeth with Root fillings		0.0	0.0	0.0	0.0	0.3	0.2
Region 5	n=	151	165	316	160	142	302
% Subjects with Root caries		9.2	18.2	13.7	17.7	20.0	18.9
Mean nos of teeth with Root Caries		0.3	1.4	0.9	2.1	1.4	1.8
% 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=	138	162	300	153	138	291
% Subjects with Root caries		13.9	30.5	22.2	21.0	29.2	25.1
Mean nos of teeth with Root Caries		0.2	1.0	0.6	1.0	1.4	1.2
% Subjects with Root fillings		1.5	0.0	0.8	0.0	0.4	0.2
Mean nos of teeth with Root fillings		0.0	0.0	0.0	0.0	0.0	0.0
Region 7	n=	135	155	290	127	150	277
% Subjects with Root caries		18.9	20.7	19.8	36.9	34.1	35.5
Mean nos of teeth with Root Caries		0.4	0.6	0.5	1.7	1.5	1.6
% 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
State Rural	n=	669	676	1345	649	649	1298
% Subjects with Root caries		9.0	16.1	12.6	15.2	14.2	14.7
Mean nos of teeth with Root Caries		0.3	0.7	0.5	1.1	0.9	1.0
% Subjects with Root fillings		0.0	0.2	0.1	0.0	0.5	0.3
Mean nos of teeth with Root fillings		0.0	0.0	0.0	0.0	0.1	0.1
State Urban	n=	275	287	562	263	274	537
% Subjects with Root caries		10.9	17.8	14.4	19.2	18.6	18.9
Mean nos of teeth with Root Caries		0.3	0.9	0.6	1.2	1.1	1.2
% Subjects with Root fillings		0.7	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 Total	n=	944	963	1907	912	923	1835
% Subjects with Root caries		9.8	16.8	13.3	16.8	16.0	16.4
Mean nos of teeth with Root Caries		0.3	0.8	0.6	1.1	1.0	1.1
% Subjects with Root fillings		0.3	0.1	0.2	0.0	0.3	0.2
Mean nos of teeth with Root fillings		0.0	0.0	0.0	0.0	0.0	0.0

6.1.3 Treatment need

Table 6.05 presents the percent subjects requiring preventive and treatment care by type of treatment needed, and Table 6.06 presents the mean number of teeth requiring treatment, by type of treatment.

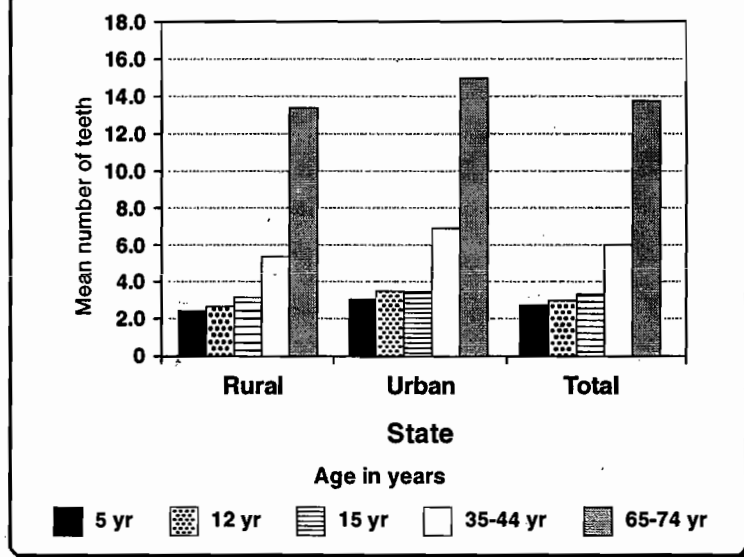
The subjects were clinically assessed for their need for both preventive and treatment care, based on their caries experience and dentition status. Preventive care need included caries arresting care and fissure sealing. Treatment need included the need for one, two or more surface fillings, extractions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

Fig 6.05. Percent subjects with treatment need in Tamil Nadu



A high percentage of subjects in all age groups required some form of treatment in the state. About 48.2 per cent children aged 5 years needed treatment. The treatment need peaked at 81.7 per cent in the age group of 65-74 years. The predominant treatment need was for one or more surface fillings, followed by preventive care and pulp care and extractions. There was a significantly high need for other but unspecified care, especially in the highest age group of 65-74 years. Since these needs largely related to the subjects' gingival, periodontal and prosthetic conditions and did not strictly fall in the purview of the analyses of the columns recorded, these are not reported in detail. There were no marked differentials between male and female subjects requiring treatment but there appeared to be a slightly greater need for treatment across age groups in the urban areas of residence. The pattern of need was similar in between regions.

Fig. 6.06. Mean number of teeth with treatment need in Tamil Nadu



The mean number of teeth requiring treatment increased as age advanced. On average, 2.7 teeth needed treatment in children aged 5 years with primary teeth while in 12 years, 3 teeth required some treatment. The corresponding figures for 15 years, 35-44 years and 65-74 year old subjects respectively were 3.4 teeth, 6.0 teeth and 13.8 teeth. The mean number of teeth requiring fillings (one or more surface) was highest across age groups and in both sexes. This was followed by the need for pulp care and extractions and for preventive care and fissure sealants. The pattern of treatment need was similar in male and female subjects and in rural and urban areas. There were no marked regional variations.

Table 6.05 Percent subjects with treatment need by age, sex and geographical area.

State : Tamil Nadu

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=	172	171	343	164	190	354	178	175	353	179	204	383	169	187	356
Treatment needed		43.8	36.5	40.2	64.7	61.1	62.9	62.6	58.2	60.4	77.1	67.7	72.4	75.8	73.8	74.8
Preventive care & fissure sealant		10.5	12.3	11.4	8.0	5.3	6.7	1.7	2.2	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		31.0	24.2	27.6	62.1	56.0	59.1	58.2	54.8	56.5	67.5	55.4	61.5	32.7	32.6	32.7
Crown & Veneer		0.0	0.6	0.3	1.2	0.0	0.6	0.6	1.7	1.2	2.2	1.0	1.6	0.6	1.1	0.9
Pulp care		3.5	1.2	2.4	0.6	2.0	1.3	1.8	1.6	1.7	1.8	3.0	2.4	1.9	1.7	1.8
Extraction		0.6	1.1	0.9	1.7	2.7	2.2	1.7	2.8	2.3	10.8	12.3	11.6	10.9	9.1	10.0
Need for other care		0.0	0.0	0.0	3.2	3.7	3.5	7.2	2.3	4.8	22.3	23.7	23.0	51.5	49.8	50.7
Region 2	n=	163	154	317	169	142	311	157	158	315	185	134	319	153	158	311
Treatment needed		47.7	45.3	46.5	61.9	60.3	61.1	61.3	60.7	61.0	81.2	84.9	83.1	89.7	89.4	89.6
Preventive care & fissure sealant		0.0	0.0	0.0	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		47.3	43.8	45.6	58.0	59.8	58.9	59.9	59.3	59.6	71.5	71.4	71.5	32.3	39.0	35.7
Crown & Veneer		0.0	0.0	0.0	0.8	1.6	1.2	2.0	1.9	2.0	1.7	4.0	2.9	0.5	1.9	1.2
Pulp care		1.0	3.5	2.3	3.1	1.1	2.1	3.5	1.0	2.3	2.0	5.1	3.6	1.5	2.4	2.0
Extraction		0.9	3.4	2.2	1.8	2.0	1.9	1.5	0.0	0.8	12.2	23.7	18.0	31.1	24.4	27.8
Need for other care		1.0	0.0	0.5	0.9	0.5	0.7	3.0	1.7	2.4	27.8	37.6	32.7	75.4	74.0	74.7
Region 3	n=	31	30	61	31	29	60	27	28	55	32	31	63	31	31	62
Treatment needed		80.6	83.3	82.0	96.8	89.7	93.3	92.6	89.3	91.0	81.3	####	90.7	93.5	93.5	93.5
Preventive care & fissure sealant		67.7	66.7	67.2	48.4	34.5	41.5	40.7	32.1	36.4	34.4	22.6	28.5	32.3	32.3	32.3
Filling one or more surfaces		19.4	33.3	26.4	58.1	62.1	60.1	51.9	57.1	54.5	46.9	74.2	60.6	51.6	58.1	54.9
Crown & Veneer		0.0	0.0	0.0	3.2	0.0	1.6	0.0	0.0	0.0	21.9	12.9	17.4	35.5	29.0	32.3
Pulp care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	1.6	0.0	0.0	0.0
Extraction		0.0	0.0	0.0	3.2	0.0	1.6	0.0	0.0	0.0	0.0	3.2	1.6	6.5	0.0	3.3
Need for other care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.1	3.6	9.4	19.4	14.4	19.4	25.8	22.6
Region 4	n=	121	108	229	113	117	230	123	113	236	124	112	236	119	117	236
Treatment needed		45.5	37.8	41.7	62.8	58.1	60.5	72.5	67.3	69.9	76.8	75.8	76.3	74.8	70.9	72.9
Preventive care & fissure sealant		1.7	0.0	0.9	0.0	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		43.8	35.0	39.4	60.2	54.7	57.5	72.5	63.7	68.1	64.7	62.4	63.6	26.1	30.8	28.5
Crown & Veneer		0.8	0.9	0.9	0.0	1.7	0.9	0.0	0.0	0.0	4.0	1.8	2.9	1.7	0.9	1.3
Pulp care		0.0	3.5	1.8	3.5	0.9	2.2	1.6	0.0	0.8	1.6	0.0	0.8	0.0	0.0	0.0
Extraction		0.8	1.9	1.4	0.0	1.7	0.9	3.3	2.7	3.0	5.7	13.4	9.6	8.4	10.3	9.4
Need for other care		0.0	0.0	0.0	0.0	0.9	0.5	0.8	6.2	3.5	10.5	15.2	12.9	54.6	48.7	51.7
Region 5	n=	159	146	305	161	152	313	151	138	289	151	165	316	160	142	302
Treatment needed		54.8	54.7	54.8	57.1	60.4	58.8	70.7	67.8	69.3	74.7	89.0	81.9	82.4	83.1	82.8
Preventive care & fissure sealant		0.0	0.0	0.0	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		52.8	52.6	52.7	53.9	58.9	56.4	65.5	64.0	64.8	62.8	70.7	66.8	33.4	39.5	36.5
Crown & Veneer		0.6	0.0	0.3	0.6	0.6	0.6	2.7	0.0	1.4	0.7	3.7	2.2	0.6	0.0	0.3
Pulp care		1.4	1.5	1.5	1.2	1.4	1.3	3.3	0.7	2.0	0.7	2.4	1.6	0.0	3.5	1.8
Extraction		4.4	4.2	4.3	3.1	4.2	3.7	5.3	5.1	5.2	17.7	31.6	24.7	28.9	36.1	32.5
Need for other care		0.6	1.5	1.1	3.9	8.1	6.0	4.7	8.0	6.4	31.1	35.0	33.1	61.8	60.6	61.2

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=	138	142	280	142	144	286	148	128	276	138	162	300	153	138	291
Treatment needed		48.3	43.7	46.0	68.7	58.3	63.5	58.4	43.8	51.1	81.3	88.1	84.7	88.4	89.6	89.0
Preventive care & fissure sealant		0.0	0.8	0.4	9.1	15.7	12.4	11.2	11.2	11.2	4.7	0.6	2.7	1.7	0.4	1.1
Filling one or more surfaces		45.5	42.1	43.8	55.8	40.8	48.3	45.1	29.7	37.4	61.8	75.7	68.8	38.6	40.5	39.6
Crown & Veneer		0.0	0.4	0.2	0.4	2.1	1.3	0.7	0.0	0.4	1.2	0.6	0.9	2.8	1.5	2.2
Pulp care		4.8	4.2	4.5	7.4	6.3	6.9	6.7	2.8	4.8	9.1	8.8	9.0	1.1	4.2	2.7
Extraction		6.0	1.9	4.0	17.3	9.4	13.4	7.7	8.1	7.9	29.4	46.0	37.7	44.6	41.6	43.1
Need for other care		1.6	0.4	1.0	6.0	2.2	4.1	5.2	5.4	5.3	53.3	51.7	52.5	74.4	74.5	74.5
Region 7	n=	134	139	273	152	134	286	148	129	277	135	155	290	127	150	277
Treatment needed		59.8	49.7	54.8	66.1	71.6	68.9	51.5	59.1	55.3	81.7	82.7	82.2	90.9	87.4	89.2
Preventive care & fissure sealant		1.4	0.9	1.2	8.3	15.5	11.9	11.2	15.2	13.2	3.7	3.5	3.6	0.0	0.0	0.0
Filling one or more surfaces		58.8	48.8	53.8	61.0	62.8	61.9	44.5	49.3	46.9	51.7	63.2	57.5	31.0	38.4	34.7
Crown & Veneer		0.0	1.3	0.7	0.0	0.9	0.5	0.4	1.4	0.9	1.9	1.2	1.6	0.5	1.6	1.1
Pulp care		5.6	4.5	5.1	9.7	8.8	9.3	5.0	7.2	6.1	8.6	9.1	8.9	5.8	6.1	6.0
Extraction		3.8	2.7	3.3	11.5	12.4	12.0	3.7	4.4	4.1	34.2	25.9	30.1	52.8	48.0	50.4
Need for other care		0.5	0.0	0.3	3.5	6.8	5.2	4.1	8.8	6.5	51.6	45.9	48.8	83.1	77.0	80.1
State Rural	n=	664	629	1293	655	644	1299	660	621	1281	669	676	1345	649	649	1298
Treatment needed		50.0	45.5	47.8	65.4	61.7	63.6	65.0	63.3	64.2	78.6	76.1	77.4	82.4	78.1	80.3
Preventive care & fissure sealant		4.0	4.3	4.2	3.1	2.4	2.8	0.9	0.9	0.9	0.1	0.1	0.1	0.0	0.0	0.0
Filling one or more surfaces		44.7	40.2	42.5	61.9	59.0	60.5	62.1	60.5	61.3	68.4	62.5	65.5	35.6	34.9	35.3
Crown & Veneer		0.4	0.5	0.5	0.9	0.8	0.9	0.9	0.6	0.8	1.5	1.8	1.7	1.1	1.2	1.2
Pulp care		1.3	1.6	1.5	2.2	1.1	1.7	2.3	0.6	1.5	1.6	2.9	2.3	1.2	1.9	1.6
Extraction		1.9	2.0	2.0	1.4	2.9	2.2	2.7	2.6	2.7	11.3	18.2	14.8	19.8	17.6	18.7
Need for other care		0.2	0.0	0.1	2.0	3.2	2.6	3.2	4.7	4.0	21.8	25.4	23.6	60.4	55.5	58.0
State Urban	n=	254	261	515	277	264	541	272	248	520	275	287	562	263	274	537
Treatment needed		50.9	47.9	49.4	64.2	64.2	64.2	69.9	64.2	67.1	78.3	86.3	82.3	83.0	86.5	84.8
Preventive care & fissure sealant		16.3	16.6	16.5	11.5	9.4	10.5	8.6	7.7	8.2	6.9	4.8	5.9	7.0	6.5	6.8
Filling one or more surfaces		34.8	33.3	34.1	53.9	54.9	54.4	59.0	54.8	56.9	61.8	68.9	65.4	30.1	41.6	35.9
Crown & Veneer		0.0	0.0	0.0	1.0	0.8	0.9	1.8	1.9	1.9	6.6	5.5	6.1	7.7	6.6	7.2
Pulp care		2.5	3.0	2.8	1.9	2.3	2.1	2.9	1.8	2.4	1.9	4.0	3.0	0.8	2.0	1.4
Extraction		0.9	2.9	1.9	4.0	2.4	3.2	2.2	1.8	2.0	12.1	20.8	16.5	21.5	19.9	20.7
Need for other care		0.8	0.6	0.7	2.2	2.7	2.5	5.6	3.0	4.3	27.3	34.5	30.9	55.8	60.0	57.9
State Total		918	890	1808	932	908	1840	932	869	1801	944	963	1907	912	923	1835
Treatment needed		50.2	46.2	48.2	65.5	62.7	64.1	68.2	64.9	66.6	78.3	80.0	79.2	82.6	80.8	81.7
Preventive care & fissure sealant		9.4	9.7	9.6	6.9	5.4	6.2	4.1	3.6	3.9	3.1	2.0	2.6	2.9	2.8	2.9
Filling one or more surfaces		40.3	36.8	38.6	59.0	57.5	58.3	62.1	59.4	60.8	65.1	64.8	65.0	33.3	37.2	35.3
Crown & Veneer		0.3	0.4	0.4	0.9	0.8	0.9	1.2	1.1	1.2	3.8	3.3	3.6	3.9	3.6	3.8
Pulp care		1.6	2.1	1.9	2.1	1.5	1.8	2.6	1.0	1.8	1.8	3.2	2.5	1.1	2.0	1.6
Extraction		1.4	2.1	1.8	2.3	2.6	2.5	2.6	2.3	2.5	11.7	18.7	15.2	19.4	17.6	18.5
Need for other care		0.4	0.2	0.3	2.1	2.9	2.5	4.0	4.1	4.1	23.3	28.7	26.0	58.3	56.3	57.3

Table 6.06 Mean number of teeth with treatment need by age, sex and geographical area.

State : Tamil Nadu

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=	160	158	318	155	181	336	171	165	336	173	183	356	153	171	324
Treatment needed		1.8	1.6	1.7	2.1	2.0	2.1	1.9	2.0	2.0	4.6	4.8	4.7	9.8	10.4	10.1
Preventive care/ fissure sealant		0.2	0.4	0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		1.5	1.1	1.3	1.9	1.8	1.9	1.7	1.9	1.8	3.5	3.5	3.5	1.7	1.6	1.7
Crown/ Veneer		0.0	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	0.1
Pulp care		0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
Extraction		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.6	0.6	0.6
Need for other care		0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.8	0.9	0.9	7.3	7.9	7.6
Region 2	n=	163	151	314	168	140	308	155	155	310	183	134	317	153	157	310
Treatment needed		2.2	2.1	2.2	1.9	1.7	1.8	2.1	2.0	2.1	5.7	7.0	6.4	18.9	17.6	18.3
Preventive care/ fissure sealant		0.0	0.0	0.0	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		2.1	1.8	2.0	1.8	1.6	1.7	1.9	1.8	1.9	4.1	4.0	4.1	1.8	1.8	1.8
Crown/ Veneer		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0
Pulp care		0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Extraction		0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.4	1.9	1.9	1.9
Need for other care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	1.4	2.3	1.9	15.2	13.8	14.5
Region 3	n=	31	30	61	31	29	60	27	28	55	31	31	62	31	31	62
Treatment needed		7.6	8.4	8.0	5.7	4.8	5.3	5.0	4.6	4.8	8.6	10.4	9.5	12.4	13.7	13.1
Preventive care/ fissure sealant		7.0	7.3	7.2	3.0	1.7	2.4	2.8	2.0	2.4	3.7	2.2	3.0	3.0	2.8	2.9
Filling one or more surfaces		0.6	1.1	0.9	2.6	3.0	2.8	2.3	2.4	2.4	3.4	6.4	4.9	4.2	4.3	4.3
Crown/ Veneer		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.8	2.7	1.7	2.2
Pulp care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Extraction		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1
Need for other care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.5	1.2	0.9	2.4	4.9	3.7
Region 4	n=	121	107	228	112	116	228	123	113	236	124	112	236	119	116	235
Treatment needed		1.8	1.8	1.8	1.4	1.4	1.4	2.6	2.1	2.4	4.1	4.2	4.2	14.0	10.2	12.1
Preventive care/ fissure sealant		0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		1.8	1.6	1.7	1.4	1.2	1.3	2.5	1.9	2.2	3.6	3.1	3.4	1.2	1.6	1.4
Crown/ Veneer		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Pulp care		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Extraction		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.5	0.4	1.1	0.7	0.9
Need for other care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.3	0.6	0.5	11.6	7.9	9.8
Region 5	n=	155	145	300	155	147	302	147	135	282	145	162	307	155	132	287
Treatment needed		2.9	3.5	3.2	2.1	1.9	2.0	2.6	2.4	2.5	6.8	9.4	8.1	16.7	15.5	16.1
Preventive care/ fissure sealant		0.0	0.0	0.0	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		2.6	3.2	2.9	2.0	1.8	1.9	2.4	2.3	2.4	4.6	4.6	4.6	2.2	2.1	2.2
Crown/ Veneer		0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Pulp care		0.0	0.0	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
Extraction		0.1	0.2	0.2	0.0	0.0	0.0	0.1	0.0	0.1	0.7	2.2	1.5	2.3	2.8	2.6
Need for other care		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	1.5	2.5	2.0	12.2	10.6	11.4

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=	136	141	277	140	143	283	148	128	276	138	162	300	148	132	280
Treatment needed		1.7	1.6	1.7	0.9	0.6	0.8	0.8	0.6	0.7	5.2	6.8	6.0	14.7	16.6	15.7
Preventive care/ fissure sealant		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0
Filling one or more surfaces		1.6	1.5	1.6	0.6	0.5	0.6	0.5	0.4	0.5	2.4	2.4	2.4	1.8	1.9	1.9
Crown/ Veneer		0.0	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	0.1
Pulp care		0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.2	0.1	0.2	0.0	0.1	0.1
Extraction		0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.6	1.8	1.2	2.1	2.5	2.3
Need for other care		0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0	1.9	2.5	2.2	10.7	12.1	11.4
Region 7	n=	134	139	273	152	134	286	148	129	277	135	155	290	127	150	277
Treatment needed		2.8	2.4	2.6	0.9	1.3	1.1	0.7	0.6	0.7	4.8	4.3	4.6	14.1	12.0	13.1
Preventive care/ fissure sealant		0.1	0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0
Filling one or more surfaces		2.5	2.2	2.4	0.7	0.8	0.8	0.6	0.4	0.5	1.7	1.9	1.8	1.2	1.4	1.3
Crown/ Veneer		0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pulp care		0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1
Extraction		0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	1.0	0.8	0.9	2.7	2.6	2.7
Need for other care		0.0	0.0	0.0	0.1	0.2	0.2	0.0	0.0	0.0	1.8	1.4	1.6	10.1	7.9	9.0
State Rural	n=	654	614	1268	642	630	1272	651	610	1261	660	659	1319	633	626	1259
Treatment needed		2.3	2.4	2.4	2.8	2.6	2.7	3.1	3.3	3.2	5.3	5.7	5.5	14.2	12.8	13.5
Preventive care/ fissure sealant		0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		2.1	2.1	2.1	2.6	2.3	2.5	2.9	3.1	3.0	4.1	3.6	3.9	2.0	1.7	1.9
Crown/ Veneer		0.0	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	0.1
Pulp care		0.0	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	0.1
Extraction		0.0	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.3	0.8	0.6	1.4	1.3	1.4
Need for other care		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.9	1.1	1.0	10.6	9.5	10.1
State Urban	n=	246	257	503	271	260	531	268	243	511	269	280	549	253	263	516
Treatment needed		3.1	3.1	3.1	3.6	3.2	3.4	3.7	3.1	3.4	5.9	8.1	7.0	15.0	15.0	15.0
Preventive care/ fissure sealant		1.5	1.6	1.6	0.9	0.6	0.8	0.8	0.6	0.7	0.7	0.5	0.6	0.6	0.6	0.6
Filling one or more surfaces		1.5	1.2	1.4	2.6	2.5	2.6	2.7	2.1	2.4	3.4	4.4	3.9	1.9	2.3	2.1
Crown/ Veneer		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.1	0.2	0.6	0.4	0.5
Pulp care		0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.1
Extraction		0.0	0.2	0.1	0.1	0.0	0.1	0.1	0.0	0.1	0.2	0.9	0.6	1.3	1.4	1.4
Need for other care		0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.2	1.3	2.2	1.8	10.6	10.3	10.5
State Total	n=	900	871	1771	913	890	1803	919	853	1772	929	939	1868	886	889	1775
Treatment needed		2.6	2.7	2.7	3.1	2.8	3.0	3.4	3.3	3.4	5.4	6.5	6.0	14.3	13.3	13.8
Preventive care/ fissure sealant		0.7	0.8	0.8	0.4	0.3	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3
Filling one or more surfaces		1.8	1.7	1.8	2.5	2.4	2.5	2.9	2.8	2.9	3.7	3.9	3.8	1.9	1.9	1.9
Crown/ Veneer		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3
Pulp care		0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
Extraction		0.0	0.1	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.3	0.8	0.6	1.3	1.3	1.3
Need for other care		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	1.0	1.5	1.3	10.4	9.6	10.0

6.2. PERIODONTAL STATUS

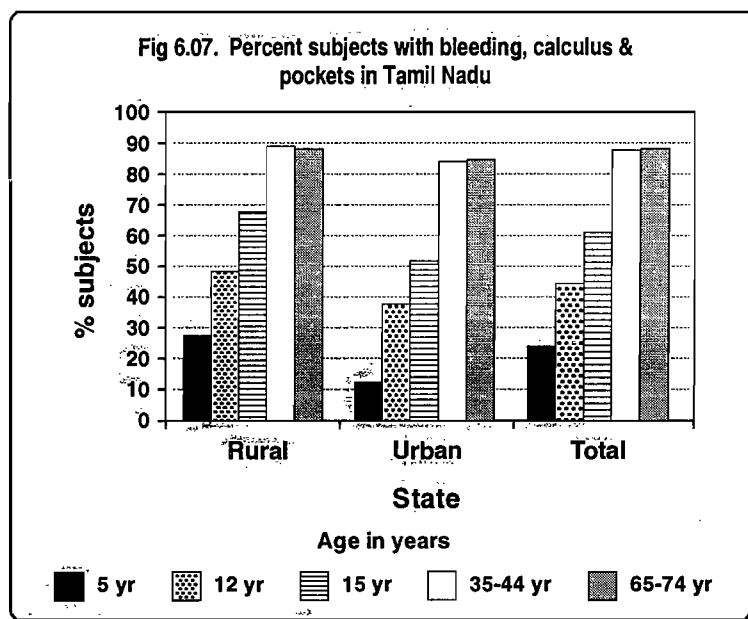
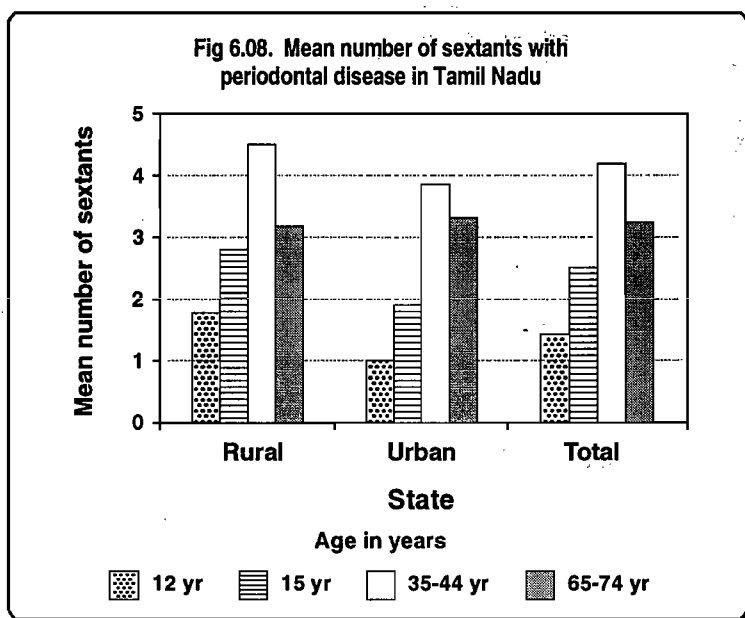
6.2.1 Bleeding, calculus and pockets

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 presents percentage of subjects with periodontal status (bleeding, calculus and pockets) by level of severity, listed by a) individual variables (bleeding, calculus and pocket depth), and b) each variable taken in combination with the higher variables (bleeding or higher, calculus or higher, pockets 4-5 mm or higher, and pockets 6 mm only). The percentage of subjects with bleeding,

calculus and/or pockets, indicating the presence of periodontal disease in a subject, equals the total of the figures under b) above. Table 6.08 presents the mean number of teeth with bleeding, calculus and pockets. WHO recommends recording only bleeding and calculus in 5 and 12 year old subjects and this has been considered during field examinations and in course of this report.

In the 5 year olds, bleeding was recorded in about 21.6 per cent subjects while the presence of calculus was prevalent in 3.6 per cent (Table 6.07). In subjects aged 12 years and above, the prevalence of periodontal disease increased as age advanced. Bleeding was the most prevalent condition present, with or without calculus and pockets, except in the case of 65-74 year old subjects, where calculus or higher was the most prevalent. Pockets (4-5 mm) were present in about 8.8 per cent in the age group of 65-74 years. The prevalence of deep pockets (6 mm) was negligible.



Overall, prevalence of periodontal disease was higher in rural residents. There were no marked male and female differentials. The pattern of distribution of disease conditions was similar in between the regions

The dentition is divided into six sextants, three upper and three lower, for assessment of the periodontal status. The mean number of sextants with periodontal disease, i.e., sextants with bleeding, calculus and/or pockets was highest in 35-44 year old subjects (4.2) followed by the 65-74 year old subjects (3.2). The mean number of sextants with

bleeding was higher than calculus in children but the situation was reversed in adults. The mean number of sextants with pockets of depth 4-5 mm and 6 mm was 0.1 and 0.4 respectively in 65-74 year age group.

The pattern was similar for rural and urban areas and between regions. There were no marked male and female differentials.

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

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	64	64	128	147	167	314	171	171	342	177	193	370	134	142	276
With bleeding,calculus, or pockets	14.0	12.3	13.2	45.9	44.8	45.4	65.5	64.0	64.8	87.0	88.4	87.7	94.9	90.1	92.5
with bleeding	7.5	7.4	7.5	18.3	21.1	19.7	29.1	30.9	30.0	11.9	12.7	12.3	7.1	3.6	5.4
with calculus	3.3	0.0	1.7	14.9	14.5	14.7	21.3	18.9	20.1	26.2	34.1	30.2	29.3	36.8	33.1
with pockets 4-5 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.2	3.1	14.3	9.4	11.9
with pockets 6 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.8
with bleeding or higher	10.7	12.3	11.5	31.0	30.3	30.7	44.2	45.1	44.7	48.1	47.5	47.8	32.1	27.2	29.7
with calculus or higher	3.3	0.0	1.7	14.9	14.5	14.7	21.3	18.9	20.1	34.9	38.7	36.8	45.3	51.2	48.3
with pockets 4-5 mm or higher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	2.2	3.1	16.7	10.9	13.8
with pockets 6mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.8
Region 2	118	101	219	145	121	266	157	155	312	183	131	314	109	121	230
With bleeding,calculus, or pockets	19.3	16.1	17.7	43.7	39.2	41.5	59.0	60.5	59.8	82.6	78.9	80.8	82.9	78.6	80.8
with bleeding	19.3	14.3	16.8	34.8	30.5	32.7	41.7	46.0	43.9	38.0	30.6	34.3	22.4	16.9	19.7
with calculus	0.0	1.8	0.9	2.6	8.1	5.4	5.6	4.8	5.2	12.6	18.7	15.7	22.7	23.7	23.2
with pockets 4-5 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6	2.0	4.3	3.2
with pockets 6 mm	0.0	0.0	0.0	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 bleeding or higher	19.3	14.3	16.8	41.0	31.1	36.1	53.4	55.6	54.5	67.9	57.9	62.9	57.6	47.0	52.3
with calculus or higher	0.0	1.8	0.9	2.6	8.1	5.4	5.6	4.8	5.2	14.7	19.9	17.3	23.3	27.2	25.3
with pockets 4-5 mm or higher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6	2.0	4.3	3.2
with pockets 6mm	0.0	0.0	0.0	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	3	1	4	11	11	22	24	26	50	32	31	63	29	29	58
With bleeding,calculus, or pockets	33.3	0.0	16.7	0.0	18.2	9.1	20.8	34.6	27.7	87.5	90.3	88.9	96.6	93.1	94.9
with bleeding	33.3	0.0	16.7	0.0	9.1	4.6	4.2	19.2	11.7	21.9	12.9	17.4	10.3	13.8	12.1
with calculus	0.0	0.0	0.0	0.0	0.0	0.0	12.5	11.5	12.0	31.3	41.9	36.6	55.2	34.5	44.9
with pockets 4-5 mm	0.0	0.0	0.0	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 pockets 6 mm	0.0	0.0	0.0	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 bleeding or higher	33.3	0.0	16.7	0.0	18.2	9.1	8.3	23.1	15.7	56.3	48.4	52.4	41.4	58.6	50.0
with calculus or higher	0.0	0.0	0.0	0.0	0.0	0.0	12.5	11.5	12.0	31.3	41.9	36.6	55.2	34.5	44.9
with pockets 4-5 mm or higher	0.0	0.0	0.0	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 pockets 6mm	0.0	0.0	0.0	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	33	30	63	98	101	199	123	113	236	123	111	234	79	97	176
With bleeding,calculus, or pockets	51.5	43.3	47.4	59.2	44.6	51.9	80.4	60.2	70.3	97.0	99.1	98.1	98.7	94.8	96.8
with bleeding	51.5	43.3	47.4	49.0	34.7	41.9	50.3	46.0	48.2	41.6	49.7	45.7	34.2	22.7	28.5
with calculus	0.0	0.0	0.0	5.1	6.9	6.0	11.4	8.8	10.1	26.1	20.8	23.5	19.0	15.5	17.3
with pockets 4-5 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.6	1.8	6.3	14.4	10.4
with pockets 6 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.0	1.8
with bleeding or higher	51.5	43.3	47.4	54.1	37.6	45.9	69.0	51.3	60.2	64.4	68.4	66.4	59.5	53.6	56.6
with calculus or higher	0.0	0.0	0.0	5.1	6.9	6.0	11.4	8.8	10.1	31.8	26.2	29.0	29.1	22.7	25.9
with pockets 4-5 mm or higher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	4.5	2.7	7.6	17.5	12.6
with pockets 6mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5	1.0	1.8
Region 5	96	97	193	116	120	236	145	132	277	142	153	295	100	104	204
With bleeding,calculus, or pockets	34.1	35.1	34.6	54.3	42.6	48.5	64.9	61.3	63.1	83.8	91.4	87.6	76.9	78.8	77.9
with bleeding	29.0	30.0	29.5	31.9	26.9	29.4	35.9	34.4	35.2	24.7	21.6	23.2	11.1	11.5	11.3
with calculus	3.1	3.1	3.1	10.2	8.2	9.2	9.7	10.4	10.1	19.0	31.2	25.1	27.9	29.9	28.9
with pockets 4-5 mm	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	0.9	1.0
with pockets 6 mm	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	2.0	2.5
with bleeding or higher	31.1	32.0	31.6	44.1	34.4	39.3	55.2	50.8	53.0	59.2	55.7	57.5	35.0	37.4	36.2
with calculus or higher	3.1	3.1	3.1	10.2	8.2	9.2	9.7	10.4	10.1	23.8	35.7	29.8	37.7	34.8	36.3
with pockets 4-5 mm or higher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	1.1	4.7	2.9
with pockets 6mm	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	2.0	2.5

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	56	53	109	125	132	257	145	126	271	137	158	295	111	95	206
With bleeding,calculus, or pockets	8.1	6.8	7.5	45.1	51.4	48.3	56.7	68.9	62.8	88.4	85.0	86.7	83.9	82.0	83.0
with bleeding	3.6	0.0	1.8	6.9	7.8	7.4	12.8	13.8	13.3	10.0	5.4	7.7	1.8	0.0	0.9
with calculus	0.9	3.4	2.2	33.5	33.2	33.4	31.8	39.8	35.8	40.8	37.8	39.3	28.8	22.5	25.7
with pockets 4-5 mm	0.0	3.4	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.5	1.0	3.8	14.9	24.3	19.6
with pockets 6 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.7	3.0
with bleeding or higher	7.1	0.0	3.6	11.6	18.2	14.9	24.2	29.0	26.6	27.3	28.2	27.8	6.8	8.0	7.4
with calculus or higher	0.9	3.4	2.2	33.5	33.2	33.4	32.5	39.8	36.2	54.5	54.6	54.6	58.5	40.6	49.6
with pockets 4-5 mm or higher	0.0	3.4	1.7	0.0	0.0	0.0	0.0	0.0	0.0	6.5	2.2	4.4	16.3	29.6	23.0
with pockets 6mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	3.7	3.0
Region 7	2	1	3	149	133	282	148	128	276	133	154	287	101	134	235
With bleeding,calculus, or pockets	0.0	0.0	0.0	55.9	59.8	57.9	60.8	68.1	64.5	83.5	87.7	85.6	91.5	87.9	89.7
with bleeding	0.0	0.0	0.0	15.2	17.2	16.2	11.1	15.6	13.4	4.7	3.1	3.9	5.3	5.1	5.2
with calculus	0.0	0.0	0.0	33.0	31.4	32.2	32.4	34.2	33.3	48.7	51.5	50.1	30.6	27.4	29.0
with pockets 4-5 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	4.7	3.8	15.9	16.4	16.2
with pockets 6 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.8	3.9	4.6	4.3
with bleeding or higher	0.0	0.0	0.0	22.9	28.4	25.7	28.4	33.8	31.1	20.2	21.3	20.8	18.5	13.2	15.9
with calculus or higher	0.0	0.0	0.0	33.0	31.4	32.2	32.4	34.2	33.3	57.0	61.7	59.4	47.2	49.1	48.2
with pockets 4-5 mm or higher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.8	4.7	4.8	21.9	21.1	21.5
with pockets 6mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.8	3.9	4.6	4.3
State Rural	286	268	554	565	572	1137	649	608	1257	659	650	1309	466	503	969
With bleeding,calculus, or pockets	29.8	24.8	27.3	52.8	43.5	48.2	68.3	66.2	67.3	88.3	89.9	89.1	91.4	86.1	88.8
with bleeding	27.6	24.0	25.8	43.3	33.2	38.3	55.0	53.2	54.1	59.6	56.6	58.1	43.2	37.1	40.2
with calculus	4.0	3.2	3.6	19.5	17.1	18.3	29.8	25.0	27.4	53.5	58.1	55.8	60.4	55.2	57.8
with pockets 4-5 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.8	11.6	11.7	24.2	25.1	24.7
with pockets 6 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.4	1.2	7.0	5.2	6.1
with bleeding or higher	27.6	24.0	25.8	43.3	33.2	38.3	55.0	53.2	54.1	59.6	56.6	58.1	43.2	37.1	40.2
with calculus or higher	2.2	0.7	1.5	9.6	10.3	10.0	13.2	13.0	13.1	26.9	31.2	29.1	37.3	37.2	37.3
with pockets 4-5 mm or higher	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	2.2	2.0	9.4	10.9	10.2
with pockets 6mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.9	1.2
State Urban	86	79	165	226	213	439	264	243	507	268	281	549	197	219	416
With bleeding,calculus, or pockets	11.1	14.2	12.7	36.2	40.2	38.2	52.7	50.2	51.5	83.8	85.1	84.5	85.8	85.6	85.7
with bleeding	11.1	10.2	10.7	27.3	27.6	27.5	39.0	39.1	39.1	55.7	47.3	51.5	41.9	44.5	43.2
with calculus	0.2	3.7	2.0	15.7	16.7	16.2	25.1	21.5	23.3	61.6	68.5	65.1	70.7	71.8	71.3
with pockets 4-5 mm	0.0	0.3	0.2	0.0	0.1	0.1	0.0	0.0	0.0	5.5	4.8	5.2	10.7	12.1	11.4
with pockets 6 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.1	0.7	0.8	1.7	1.3
with bleeding or higher	11.1	10.2	10.7	27.3	27.6	27.5	39.0	39.1	39.1	55.7	47.3	51.5	41.9	44.5	43.2
with calculus or higher	0.0	3.7	1.9	9.0	12.6	10.8	13.8	11.1	12.5	26.8	36.8	31.8	38.4	35.3	36.9
with pockets 4-5 mm or higher	0.0	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.0	1.1	4.8	5.1	5.0
with pockets 6mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.6
State Total	372	347	719	791	785	1576	913	851	1764	927	931	1858	663	722	1385
With bleeding,calculus, or pockets	24.5	22.2	23.4	47.2	42.3	44.8	62.7	60.6	61.7	87.0	88.6	87.8	89.7	86.7	88.2
with bleeding	22.7	20.5	21.6	37.7	31.0	34.4	49.7	47.8	48.8	57.7	53.6	55.7	42.6	40.6	41.6
with calculus	3.4	3.8	3.6	18.8	17.8	18.3	28.6	24.4	26.5	57.9	61.6	59.8	64.4	61.5	63.0
with pockets 4-5 mm	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	9.9	9.7	9.8	19.8	21.4	20.6
with pockets 6 mm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.0	1.1	4.9	4.0	4.5
with bleeding or higher	22.7	20.5	21.6	37.7	31.0	34.4	49.7	47.8	48.8	57.7	53.6	55.7	42.6	40.6	41.6
with calculus or higher	1.8	1.6	1.7	9.5	11.3	10.4	13.1	12.8	13.0	27.7	33.0	30.4	37.9	35.7	36.8
with pockets 4-5 mm or higher	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	1.6	2.0	1.8	8.0	9.5	8.8
with pockets 6mm	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	0.8	1.0

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

State : Tamil Nadu

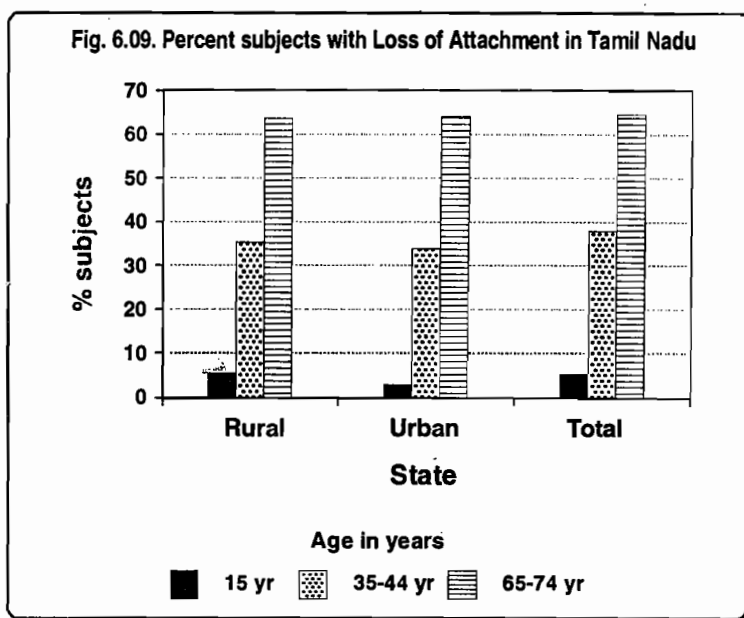
Periodontal Disease	n=	12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	164	190	354	178	175	353	179	204	383	169	187	356
Mean no. of healthy sextants		3.7	3.6	3.7	3.0	3.2	3.1	1.3	1.2	1.3	0.3	0.5	0.4
With bleeding, calculus, pockets		1.7	1.6	1.7	2.7	2.6	2.7	4.5	4.3	4.4	3.8	3.4	3.6
with bleeding		0.9	0.9	0.9	1.4	1.5	1.5	1.2	1.1	1.2	0.6	0.4	0.5
with calculus		0.8	0.8	0.8	1.3	1.1	1.2	2.8	2.8	2.8	2.2	2.2	2.2
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.5	0.9	0.7	0.8
with pockets (6mm or more)		0.0	0.0	0.0	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	0.2	0.2	0.2
Not recorded		0.6	0.8	0.7	0.3	0.1	0.2	0.2	0.4	0.3	1.6	1.8	1.7
Region 2	n=	169	142	311	157	158	315	185	134	319	153	158	311
Mean no. of healthy sextants		3.6	3.6	3.6	3.3	3.5	3.4	1.9	2.1	2.0	0.6	1.0	0.8
With bleeding, calculus, pockets		1.5	1.3	1.4	2.7	2.3	2.5	4.0	3.6	3.8	2.8	2.8	2.8
with bleeding		1.3	1.1	1.2	2.0	2.0	2.0	2.5	2.0	2.3	1.3	1.1	1.2
with calculus		0.2	0.2	0.2	0.6	0.3	0.5	1.4	1.6	1.5	1.5	1.5	1.5
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
with pockets (6mm or more)		0.0	0.0	0.0	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	0.1	0.1	0.9	0.6	0.8
Not recorded		0.9	1.1	1.0	0.0	0.1	0.1	0.1	0.2	0.2	1.7	1.6	1.7
Region 3	n=	31	29	60	27	28	55	32	31	63	31	31	62
Mean no. of healthy sextants		2.0	1.9	2.0	4.6	4.2	4.4	2.0	1.5	1.8	1.0	1.3	1.2
With bleeding, calculus, pockets		0.0	0.4	0.2	0.8	1.4	1.1	3.9	4.4	4.2	4.5	4.2	4.4
with bleeding		0.0	0.3	0.2	0.1	0.8	0.5	1.7	1.3	1.5	0.9	1.2	1.1
with calculus		0.0	0.1	0.1	0.6	0.6	0.6	2.2	3.1	2.7	3.6	3.0	3.3
with pockets(4-5 mm)		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 pockets (6mm or more)		0.0	0.0	0.0	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
Not recorded		4.0	3.7	3.9	0.7	0.4	0.6	0.1	0.1	0.1	0.5	0.5	0.5
Region 4	n=	113	117	230	123	113	236	124	112	236	119	117	236
Mean no. of healthy sextants		3.4	4.0	3.7	3.1	4.0	3.6	1.5	1.1	1.3	1.0	1.1	1.1
With bleeding, calculus, pockets		1.7	1.2	1.5	2.9	2.0	2.5	4.5	4.6	4.6	2.9	3.5	3.2
with bleeding		1.4	0.9	1.2	2.0	1.5	1.8	2.1	2.5	2.3	0.9	1.0	1.0
with calculus		0.3	0.3	0.3	0.9	0.5	0.7	2.1	1.8	2.0	1.4	1.5	1.5
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.3	0.4	0.9	0.7
with pockets (6mm or more)		0.0	0.0	0.0	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	0.1	0.1	0.1
Not recorded		0.8	0.8	0.8	0.0	0.0	0.0	0.0	0.2	0.1	2.1	1.3	1.7
Region 5	n=	161	152	313	151	138	289	151	165	316	160	142	302
Mean no. of healthy sextants		2.5	3.1	2.8	3.0	3.2	3.1	1.6	1.3	1.5	1.0	1.0	1.0
With bleeding, calculus, pockets		1.8	1.6	1.7	2.7	2.6	2.7	3.9	4.0	4.0	2.3	2.7	2.5
with bleeding		1.2	1.1	1.2	1.8	1.6	1.7	1.8	1.6	1.7	0.7	0.7	0.7
with calculus		0.6	0.5	0.6	0.9	0.9	0.9	1.8	2.1	2.0	1.3	1.6	1.5
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.3	0.2	0.3	0.3
with pockets (6mm or more)		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1
excluded sextants		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.2	0.2
Not recorded		1.7	1.3	1.5	0.3	0.3	0.3	0.5	0.6	0.6	2.5	2.2	2.4

Periodontal Disease		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=	142	144	286	148	128	276	138	162	300	153	138	291
Mean no. of healthy sextants		3.8	3.8	3.8	3.6	3.2	3.4	1.5	1.6	1.6	0.3	0.5	0.4
With bleeding, calculus, pockets		1.7	1.8	1.8	2.3	2.7	2.5	4.3	3.9	4.1	2.7	2.5	2.6
with bleeding		0.3	0.5	0.4	0.8	0.8	0.8	0.8	0.7	0.8	0.2	0.1	0.2
with calculus		1.4	1.4	1.4	1.5	1.9	1.7	2.9	2.6	2.8	1.4	1.1	1.3
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.6	1.1	1.2	1.2
with pockets (6mm or more)		0.0	0.0	0.0	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	0.2	0.1	0.8	0.6	0.7
Not recorded		0.5	0.4	0.5	0.1	0.1	0.1	0.2	0.3	0.3	2.1	2.5	2.3
Region 7	n=	152	134	286	148	129	277	135	155	290	127	150	277
Mean no. of healthy sextants		4.2	3.9	4.1	3.8	3.7	3.8	2.1	2.0	2.1	0.7	1.1	0.9
With bleeding, calculus, pockets		1.7	2.0	1.9	2.2	2.3	2.3	3.7	3.9	3.8	3.1	3.5	3.3
with bleeding		0.7	0.8	0.8	0.7	0.8	0.8	0.4	0.5	0.5	0.3	0.2	0.3
with calculus		1.0	1.2	1.1	1.4	1.5	1.5	2.6	2.8	2.7	1.6	1.7	1.7
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5	0.5	1.0	1.3	1.2
with pockets (6mm or more)		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2
excluded sextants		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.2	0.3
Not recorded		0.1	0.1	0.1	0.0	0.0	0.0	0.2	0.1	0.2	1.9	1.2	1.6
State Rural	n=	655	644	1299	660	621	1281	669	676	1345	649	649	1298
Mean no. of healthy sextants		3.2	3.6	3.4	3.0	3.1	3.1	1.4	1.4	1.4	0.7	0.9	0.8
With bleeding, calculus, pockets		1.9	1.6	1.8	2.9	2.7	2.8	4.5	4.2	4.4	3.1	3.1	3.1
with bleeding		1.3	1.0	1.2	1.9	1.9	1.9	2.1	1.8	2.0	0.9	0.8	0.9
with calculus		0.6	0.6	0.6	1.0	0.9	1.0	2.0	2.1	2.1	1.6	1.7	1.7
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.6	0.6	0.6
with pockets (6mm or more)		0.0	0.0	0.0	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	0.2	0.2	0.2
Not recorded		0.9	0.8	0.9	0.1	0.1	0.1	0.1	0.4	0.3	2.0	1.9	2.0
State Urban	n=	277	264	541	272	248	520	275	287	562	263	274	537
Mean no. of healthy sextants		3.4	3.2	3.3	3.7	4.1	3.9	2.0	1.7	1.9	0.6	0.9	0.8
With bleeding, calculus, pockets		1.0	1.0	1.0	2.0	1.7	1.9	3.8	4.0	3.9	3.2	3.3	3.3
with bleeding		0.6	0.7	0.7	1.1	1.1	1.1	1.5	1.3	1.4	0.8	0.8	0.8
with calculus		0.4	0.4	0.4	0.9	0.6	0.8	2.1	2.6	2.4	2.3	2.2	2.3
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.2	0.2	0.3	0.3
with pockets (6mm or more)		0.0	0.0	0.0	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	0.1	0.1	0.7	0.5	0.6
Not recorded		1.6	1.7	1.7	0.3	0.2	0.3	0.2	0.3	0.3	1.4	1.4	1.4
State Total	n=	932	908	1840	932	869	1801	944	963	1907	912	923	1835
Mean no. of healthy sextants		3.3	3.4	3.4	3.3	3.5	3.4	1.6	1.5	1.6	0.7	0.9	0.8
With bleeding, calculus, pockets		1.5	1.4	1.5	2.6	2.3	2.5	4.2	4.1	4.2	3.2	3.2	3.2
with bleeding		1.0	0.9	1.0	1.6	1.5	1.6	1.8	1.6	1.7	0.8	0.8	0.8
with calculus		0.5	0.5	0.5	1.0	0.8	0.9	2.1	2.3	2.2	1.8	1.8	1.8
with pockets(4-5 mm)		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.5	0.5	0.5
with pockets (6mm or more)		0.0	0.0	0.0	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	0.4	0.3	0.4
Not recorded		1.2	1.2	1.2	0.2	0.2	0.2	0.2	0.4	0.3	1.8	1.7	1.8

6.2.2. Loss of attachment

Tables 6.09 presents the percent subjects with loss of epithelial attachment by severity, and Table 6.10 presents 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.



Overall, the prevalence of loss of attachment (Table 6.09) in one or more sextants was highest in 65-74 years (64.8 per cent) in the state followed by the 35-44 year age group (37.6 per cent). More females than males had loss of attachment. The prevalence was inversely proportional to depth or degree of loss of attachment so that the least severe form of loss of attachment (4-5 mm) was the most prevalent in subjects aged 35-44 and 65-74 years. The prevalence decreased across age groups and sex as the severity of loss of attachment measured in 'mm' increased.

The mean number of sextants with loss of attachment was low across age groups. It was 1.5 and 2.2 respectively in subjects aged 35-44 and 65-74 years. The mean number of teeth with loss of attachment of 4-5 mm was the highest and this number decreased as the depth of loss of attachment was increased to 12 mm or more. The pattern was similar in between rural and urban areas, male and female subjects and between regions.

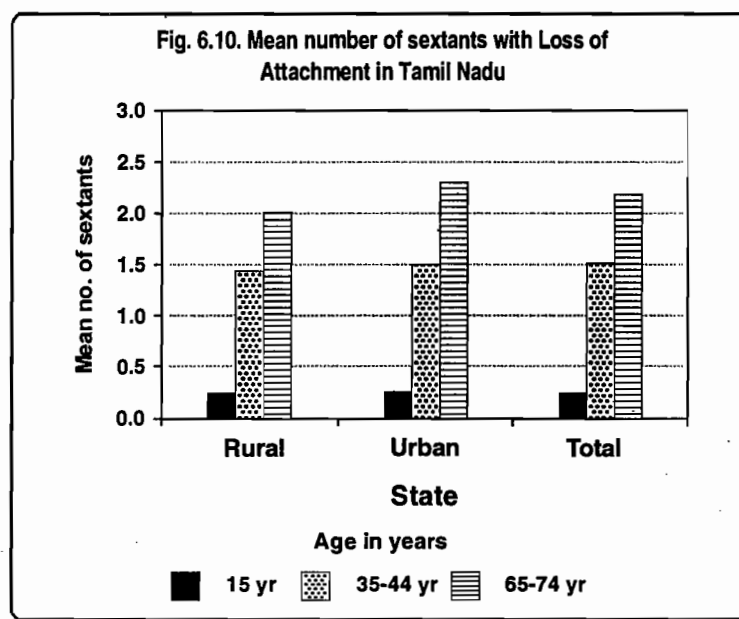


Table 6.09 Percent distribution of subjects with highest scores of loss of attachment by age, sex, and geographical area. State : Tamil Nadu

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	134	139	273	151	160	311	123	130	253
With no loss of attachment (0-3 mm)		90.3	87.3	88.8	48.3	54.1	51.2	20.2	20.7	20.5
With loss of attachment		9.7	12.7	11.2	51.7	44.7	48.2	78.2	74.8	76.5
with LOA 4-5 mm		9.7	12.7	11.2	45.8	39.8	42.8	53.2	59.4	56.3
with LOA 6-8 mm		0.0	0.0	0.0	4.7	3.8	4.3	21.6	13.7	17.7
with LOA 9-11 mm		0.0	0.0	0.0	1.3	1.1	1.2	2.6	1.6	2.1
with LOA 12 mm or more		0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5
Region 2	n=	155	151	306	182	129	311	109	120	229
With no loss of attachment (0-3 mm)		99.5	98.1	98.8	85.4	86.2	85.8	34.7	40.5	37.6
With loss of attachment		0.5	1.9	1.2	13.4	12.7	13.1	46.5	47.7	47.1
with LOA 4-5 mm only		0.5	1.9	1.2	11.7	10.5	11.1	33.8	34.5	34.2
with LOA 4-5 mm & 6-8 mm		0.0	0.0	0.0	1.7	2.2	2.0	12.7	12.1	12.4
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3
Region 3	n=	15	19	34	27	28	55	27	24	51
With no loss of attachment (0-3 mm)		86.7	89.5	88.1	25.9	28.6	27.3	14.8	12.5	13.7
With loss of attachment		13.3	10.5	11.9	74.1	71.4	72.8	85.2	87.5	86.4
with LOA 4-5 mm only		0.0	10.5	5.3	74.1	57.1	65.6	81.5	70.8	76.2
with LOA 4-5 mm & 6-8 mm		13.3	0.0	6.7	0.0	14.3	7.2	3.7	16.7	10.2
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Region 4	n=	121	113	234	122	111	233	79	98	177
With no loss of attachment (0-3 mm)		94.2	96.5	95.4	57.3	46.1	51.7	48.1	31.6	39.9
With loss of attachment		5.8	3.5	4.7	42.7	53.9	48.3	51.9	67.3	59.6
with LOA 4-5 mm only		5.0	3.5	4.3	37.8	52.1	45.0	39.2	57.1	48.2
with LOA 4-5 mm & 6-8 mm		0.8	0.0	0.4	4.1	0.9	2.5	8.9	10.2	9.6
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	0.8	0.9	0.9	3.8	0.0	1.9
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Region 5	n=	126	123	249	133	145	278	97	98	195
With no loss of attachment (0-3 mm)		98.4	100.0	99.2	75.0	67.2	71.1	37.5	36.9	37.2
With loss of attachment		1.6	0.0	0.8	25.0	31.4	28.2	59.5	58.9	59.2
with LOA 4-5 mm only		1.6	0.0	0.8	15.3	25.2	20.3	41.2	31.3	36.3
with LOA 4-5 mm & 6-8 mm		0.0	0.0	0.0	5.9	4.8	5.4	13.3	20.5	16.9
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	1.5	1.3	1.4	2.0	2.0	2.0
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	2.3	0.0	1.2	3.0	5.2	4.1

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 6	n=	128	121	249	137	158	295	112	94	206
With no loss of attachment (0-3 mm)		100.0	99.1	99.6	64.3	75.6	70.0	16.3	29.3	22.8
With loss of attachment		0.0	0.9	0.5	34.1	21.2	27.7	64.3	58.4	61.4
with LOA 4-5 mm only		0.0	0.4	0.2	19.4	14.2	16.8	35.7	22.2	29.0
with LOA 4-5 mm & 6-8 mm		0.0	0.4	0.2	10.8	6.7	8.8	18.8	24.0	21.4
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	3.6	0.3	2.0	6.7	9.1	7.9
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	0.4	0.0	0.2	3.2	3.2	3.2
Region 7	n=	146	127	273	133	154	287	101	135	236
With no loss of attachment (0-3 mm)		97.9	100.0	99.0	78.0	76.0	77.0	36.0	34.5	35.3
With loss of attachment		2.1	0.0	1.1	22.0	22.8	22.4	58.3	61.4	59.9
with LOA 4-5 mm only		1.2	0.0	0.6	15.2	19.3	17.3	35.2	37.8	36.5
with LOA 4-5 mm & 6-8 mm		0.9	0.0	0.5	3.9	3.5	3.7	17.7	19.5	18.6
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	2.9	0.0	1.5	3.4	1.8	2.6
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.3	2.2
State Rural	n=	590	572	1162	632	617	1249	457	486	943
With no loss of attachment (0-3 mm)		95.5	93.3	94.4	66.2	60.5	63.4	35.3	32.7	34.0
With loss of attachment		4.5	6.7	5.6	33.5	38.5	36.0	62.5	64.3	63.4
with LOA 4-5 mm only		4.3	6.6	5.5	28.2	34.3	31.3	41.4	48.2	44.8
with LOA 4-5 mm & 6-8 mm		0.2	0.0	0.1	4.0	3.6	3.8	17.0	13.2	15.1
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	0.9	0.6	0.8	2.7	1.7	2.2
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	0.4	0.0	0.2	1.4	1.1	1.3
State Urban	n=	235	221	456	253	268	521	191	213	404
With no loss of attachment (0-3 mm)		95.4	97.0	96.2	63.9	66.0	65.0	22.1	26.6	24.4
With loss of attachment		4.6	3.0	3.8	35.4	33.0	34.2	64.3	63.4	63.9
with LOA 4-5 mm only		2.9	3.0	3.0	31.5	27.2	29.4	53.5	46.1	49.8
with LOA 4-5 mm & 6-8 mm		1.7	0.0	0.9	3.0	4.9	4.0	10.4	15.9	13.2
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	0.6	0.9	0.8	0.4	0.4	0.4
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	0.3	0.0	0.2	0.1	0.9	0.5
State Total	n=	825	793	1618	885	885	1770	648	699	1347
With no loss of attachment (0-3 mm)		95.1	94.0	94.6	63.4	60.3	61.9	29.2	29.2	29.2
With loss of attachment		4.9	6.0	5.5	36.2	38.9	37.6	64.3	65.3	64.8
with LOA 4-5 mm only		4.0	6.0	5.0	31.2	34.2	32.7	46.7	49.0	47.9
with LOA 4-5 mm & 6-8 mm		0.8	0.0	0.4	3.8	4.0	3.9	14.6	14.1	14.4
with LOA 4-5 mm & 6-8 mm & 9-11 mm		0.0	0.0	0.0	0.8	0.6	0.7	2.1	1.2	1.7
with LOA 4-5 mm & 6-8 mm & 9-11 mm & 12 mm or higher		0.0	0.0	0.0	0.3	0.0	0.2	0.9	0.9	0.9

Table 6.10 Mean no. of sextants with loss of attachment by age, sex, and geographical area.

State : Tamil Nadu

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	178	175	353	179	204	383	169	187	356
With no loss of attachment (0-3 mm)		4.2	4.4	4.3	3.0	3.0	3.0	1.1	1.2	1.2
With loss of attachment		0.3	0.4	0.4	1.9	1.6	1.8	2.7	2.4	2.6
with loss of attachment 4-5 mm		0.3	0.4	0.4	1.7	1.4	1.6	2.0	2.0	2.0
with loss of attachment 6-8 mm		0.0	0.0	0.0	0.2	0.1	0.2	0.6	0.3	0.5
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	0.2	0.2	0.2
not recorded		1.5	1.3	1.4	1.1	1.4	1.3	2.0	2.2	2.1
Region 2	n=	157	158	315	185	134	319	153	158	311
With no loss of attachment (0-3 mm)		5.8	5.6	5.7	5.3	5.2	5.3	2.3	2.5	2.4
With loss of attachment		0.0	0.1	0.1	0.5	0.5	0.5	1.2	1.3	1.3
with loss of attachment 4-5 mm		0.0	0.1	0.1	0.5	0.4	0.5	0.9	1.0	1.0
with loss of attachment 6-8 mm		0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.2	0.3
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	0.1	0.0	0.1	0.9	0.6	0.8
not recorded		0.1	0.3	0.2	0.1	0.2	0.2	1.6	1.6	1.6
Region 3	n=	27	28	55	32	31	63	31	31	62
With no loss of attachment (0-3 mm)		2.9	3.7	3.3	1.7	1.9	1.8	1.0	0.8	0.9
With loss of attachment		0.4	0.4	0.4	3.3	3.3	3.3	4.2	3.8	4.0
with loss of attachment 4-5 mm		0.0	0.4	0.2	3.3	2.5	2.9	4.0	3.4	3.7
with loss of attachment 6-8 mm		0.4	0.0	0.2	0.0	0.8	0.4	0.2	0.4	0.3
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	0.0	0.0	0.0
not recorded		2.7	1.9	2.3	1.0	0.8	0.9	0.9	1.4	1.2
Region 4	n=	123	113	236	124	112	236	119	117	236
With no loss of attachment (0-3 mm)		5.7	5.9	5.8	3.8	3.2	3.5	2.1	1.8	2.0
With loss of attachment		0.2	0.1	0.2	2.1	2.6	2.4	1.8	2.8	2.3
with loss of attachment 4-5 mm		0.2	0.1	0.2	2.0	2.5	2.3	1.4	2.6	2.0
with loss of attachment 6-8 mm		0.0	0.0	0.0	0.1	0.1	0.1	0.3	0.3	0.3
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	0.1	0.1	0.1
not recorded		0.1	0.0	0.1	0.1	0.2	0.2	2.1	1.3	1.7
Region 5	n=	151	138	289	151	165	316	160	142	302
With no loss of attachment (0-3 mm)		4.9	5.3	5.1	4.4	4.2	4.3	1.8	1.7	1.8
With loss of attachment		0.1	0.0	0.1	0.8	0.9	0.9	1.5	1.8	1.7
with loss of attachment 4-5 mm		0.1	0.0	0.1	0.5	0.8	0.7	1.1	1.1	1.1
with loss of attachment 6-8 mm		0.0	0.0	0.0	0.2	0.1	0.2	0.3	0.5	0.4
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	0.0	0.1	0.1	0.2	0.2	0.2
not recorded		1.0	0.7	0.9	0.8	0.9	0.9	2.5	2.4	2.5

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 6	n=	148	128	276	138	162	300	153	138	291
With no loss of attachment (0-3 mm)		5.4	5.8	5.6	4.7	4.9	4.8	1.3	1.5	1.4
With loss of attachment		0.0	0.0	0.0	1.1	0.6	0.9	1.7	1.5	1.6
with loss of attachment 4-5 mm		0.0	0.0	0.0	0.7	0.5	0.6	1.3	0.7	1.0
with loss of attachment 6-8 mm		0.0	0.0	0.0	0.3	0.2	0.3	0.4	0.6	0.5
with loss of attachment 9-11 mm		0.0	0.0	0.0	0.1	0.0	0.1	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	0.2	0.2	0.8	0.6	0.7
not recorded		0.6	0.2	0.4	0.2	0.3	0.3	2.1	2.4	2.3
Region 7	n=	148	129	277	135	155	290	127	150	277
With no loss of attachment (0-3 mm)		5.9	5.9	5.9	5.1	5.1	5.1	2.2	2.6	2.4
With loss of attachment		0.1	0.0	0.1	0.7	0.8	0.8	1.7	2.0	1.9
with loss of attachment 4-5 mm		0.0	0.0	0.0	0.5	0.6	0.6	1.1	1.4	1.3
with loss of attachment 6-8 mm		0.0	0.0	0.0	0.2	0.1	0.2	0.5	0.6	0.6
with loss of attachment 9-11 mm		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	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	0.1	0.1	0.3	0.2	0.3
not recorded		0.1	0.1	0.1	0.1	0.1	0.1	1.8	1.2	1.5
State Rural	n=	660	621	1281	669	676	1345	649	649	1298
With no loss of attachment (0-3 mm)		5.1	5.1	5.1	4.1	3.6	3.9	1.9	1.7	1.8
With loss of attachment		0.2	0.2	0.2	1.4	1.4	1.4	1.8	2.1	2.0
with loss of attachment 4-5 mm		0.1	0.2	0.2	1.2	1.3	1.3	1.4	1.7	1.6
with loss of attachment 6-8 mm		0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.3	0.4
with loss of attachment 9-11 mm		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	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	0.2	0.2	0.2
not recorded		0.8	0.6	0.7	0.6	0.9	0.8	2.1	2.1	2.1
State Urban	n=	272	248	520	275	287	562	263	274	537
With no loss of attachment (0-3 mm)		4.7	5.0	4.9	3.9	3.9	3.9	1.4	1.8	1.6
With loss of attachment		0.2	0.1	0.2	1.5	1.4	1.5	2.3	2.2	2.3
with loss of attachment 4-5 mm		0.1	0.1	0.1	1.4	1.1	1.3	2.0	1.8	1.9
with loss of attachment 6-8 mm		0.1	0.0	0.1	0.1	0.2	0.2	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	0.0	0.0	0.7	0.5	0.6
not recorded		1.1	0.9	1.0	0.6	0.6	0.6	1.6	1.5	1.6
State Total	n=	932	869	1801	944	963	1907	912	923	1835
With no loss of attachment (0-3 mm)		4.9	5.0	5.0	3.9	3.6	3.8	1.7	1.7	1.7
With loss of attachment		0.2	0.2	0.2	1.5	1.5	1.5	2.1	2.2	2.2
with loss of attachment 4-5 mm		0.1	0.2	0.2	1.3	1.4	1.4	1.7	1.8	1.8
with loss of attachment 6-8 mm		0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.3	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	0.0	0.0	0.4	0.3	0.4
not recorded		0.9	0.8	0.9	0.6	0.8	0.7	1.9	1.9	1.9

6.3. MALOCCLUSION STATUS

Table 6.11 presents the malocclusion status of subjects measured by DAI scores. The highest age group of 65-74 years is excluded.

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

In calculating percent subjects with malocclusion, only those subjects with a DAI score of 26 or higher were included.

No significant malocclusion was reported in the age group of 5 years where only primary teeth are present.

There was a low prevalence of definite or severe form of malocclusion. The prevalence of definite malocclusion, as indicated by the DA Index, was about 11.9 per cent in 12 years old subjects and about 11.1 per cent in 15 years old subjects. Very severe malocclusion was prevalent in 15.6 and 14.7 per cent children aged 12 and 15 years respectively.

There were no marked differentials between rural and urban residents or between male and female subjects in the state. There was no major regional variation.

The incidence of malocclusion is spread evenly between 12, 15 & 35-44 year age groups, both males and females equally affected. But if the malocclusion could be duly intercepted in the first two groups, the third group would be less affected. The high scores in the older age group may be because of the heavy tooth loss in the age group.

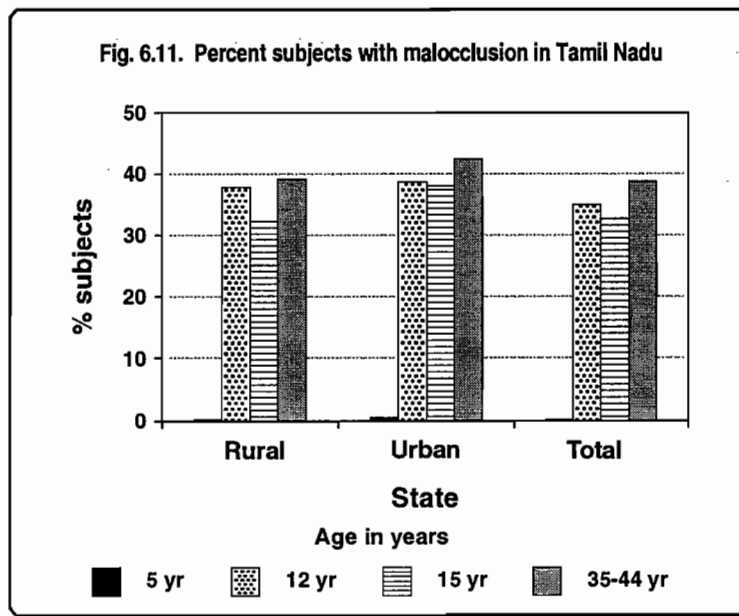


Table 6.11 Percent subjects with malocclusion by age, sex and geographical areas.

State : Tamil Nadu

Malocclusion (DAI Score)	n=	5 years			12 years			15 years			35-44 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 1		172	171	343	164	190	354	178	175	353	179	204	383
None or minor malocclusion (<25)		100	99.5	99.8	73.8	71.1	72.5	81.5	75.1	78.3	69.3	71.7	70.5
Malocclusion present		0.0	0.5	0.3	26.2	28.9	27.6	18.5	24.9	21.7	30.7	28.3	29.5
Definite (26 -30)		0.0	0.0	0.0	13	17.6	15.3	14.5	17.5	16.0	19.3	14.1	16.7
Severe (31 - 15)		0.0	0.0	0.0	5.7	9.2	7.5	2.9	3.9	3.4	5.2	8.8	7.0
V Severe (36 or more)		0.0	0.5	0.3	7.5	2.1	4.8	1.2	3.4	2.3	6.2	5.4	5.8
Region 2		163	154	317	169	142	311	157	158	315	185	134	319
None or minor malocclusion (<25)		100	100	100.0	35.4	42.5	39.0	41.2	42.4	41.8	41.3	32.5	36.9
Malocclusion present		0.0	0.0	0.0	64.6	57.5	61.1	58.8	57.6	58.2	58.7	67.5	63.1
Definite (26 -30)		0.0	0.0	0.0	17.8	13.6	15.7	13.5	10.5	12.0	10.2	10.1	10.2
Severe (31 - 15)		0.0	0.0	0.0	16	14.1	15.1	16	11.4	13.7	13.9	19.1	16.5
V Severe (36 or more)		0.0	0.0	0.0	30.8	29.9	30.4	29.3	35.6	32.5	34.7	38.3	36.5
Region 3		31	30	61	31	29	60	27	28	55	32	31	63
None or minor malocclusion (<25)		100	100	100.0	96.8	100	98.4	96.3	96.4	96.4	90.6	87.1	88.9
Malocclusion present		0.0	0.0	0.0	3.2	0.0	1.6	3.7	3.6	3.7	9.4	12.9	11.2
Definite (26 -30)		0.0	0.0	0.0	3.2	0.0	1.6	3.7	3.6	3.7	0.0	3.2	1.6
Severe (31 - 15)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	3.2	3.2
V Severe (36 or more)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.2	6.5	6.4
Region 4		121	108	229	113	117	230	123	113	236	124	112	236
None or minor malocclusion (<25)		99.2	100	99.6	88.5	94.9	91.7	91.9	96.5	94.2	85.5	88.4	87.0
Malocclusion present		0.8	0.0	0.4	11.5	5.1	8.3	8.1	3.5	5.8	14.5	11.6	13.1
Definite (26 -30)		0.0	0.0	0.0	9.7	1.7	5.7	5.7	2.7	4.2	9.7	5.4	7.6
Severe (31 - 15)		0.0	0.0	0.0	1.8	1.7	1.8	2.4	0.0	1.2	3.2	3.6	3.4
V Severe (36 or more)		0.8	0.0	0.4	0.0	1.7	0.9	0.0	0.9	0.5	1.6	2.7	2.2
Region 5		159	146	305	161	152	313	151	138	289	151	165	316
None or minor malocclusion (<25)		100	99.2	99.6	42.3	47.3	44.8	46.2	50.4	48.3	43.3	41.8	42.6
Malocclusion present		0.0	0.8	0.4	57.7	52.7	55.2	53.8	49.6	51.7	56.7	58.2	57.5
Definite (26 -30)		0.0	0.0	0.0	13	6.5	9.8	9.5	10.2	9.9	10.0	9.2	9.6
Severe (31 - 15)		0.0	0.0	0.0	11.1	10.5	10.8	9.4	13	11.2	6.7	7.9	7.3
V Severe (36 or more)		0.0	0.8	0.4	33.6	35.7	34.7	34.9	26.4	30.7	40.1	41.2	40.7
Region 6		138	142	280	142	144	286	148	128	276	138	162	300
None or minor malocclusion (<25)		100	99.6	99.8	61.8	71.8	66.8	76.4	73.9	75.2	62.1	44.4	53.3
Malocclusion present		0.0	0.4	0.2	38.2	28.2	33.2	23.6	26.1	24.9	37.9	55.6	46.8
Definite (26 -30)		0.0	0.0	0.0	25.3	17.8	21.6	14.4	14.8	14.6	15.8	14.1	15.0
Severe (31 - 15)		0.0	0.0	0.0	4.5	5.2	4.9	4.6	4.8	4.7	9.1	8.8	9.0
V Severe (36 or more)		0.0	0.4	0.2	8.5	5.2	6.9	4.5	6.4	5.5	13.1	32.8	23.0
Region 7		134	139	273	152	134	286	148	129	277	135	155	290
None or minor malocclusion (<25)		99.5	99.5	99.5	67.6	66.3	67.0	76.7	64.1	70.4	50.2	57.4	53.8
Malocclusion present		0.5	0.5	0.5	32.4	33.7	33.1	23.3	35.9	29.6	49.8	42.6	46.2
Definite (26 -30)		0.0	0.0	0.0	16.3	20.9	18.6	12.9	26.6	19.8	20.6	19.1	19.9
Severe (31 - 15)		0.5	0.0	0.3	7.1	10	8.6	8.3	7.4	7.9	15.9	11.6	13.8
V Severe (36 or more)		0.0	0.5	0.3	9	2.8	5.9	2.1	1.9	2.0	13.3	11.9	12.6
State Rural		664	629	1293	655	644	1299	660	621	1281	669	676	1345
None or minor malocclusion (<25)		99.8	100	99.9	60.6	65.1	62.9	68.3	67.7	68.0	60.5	60.9	60.7
Malocclusion present		0.2	0.0	0.1	39.4	34.9	37.2	31.7	32.3	32.0	39.5	39.1	39.3
Definite malocclusion (26 -30)		0.0	0.0	0.0	16.4	14.4	15.4	13.4	14.8	14.1	16.5	13.3	14.9
Severe malocclusion (31 - 15)		0.0	0.0	0.0	9.6	9.9	9.8	6.1	6.9	6.5	7.7	10.6	9.2
V Severe malocclusion (36 or more)		0.2	0.0	0.1	13.4	10.7	12.1	12.1	10.6	11.4	15.2	15.2	15.2
State Urban		254	261	515	277	264	541	272	248	520	275	287	562
None or minor malocclusion (<25)		100	99.3	99.7	58.5	64.6	61.6	63.3	62.1	62.7	58.2	56.5	57.4
Malocclusion present		0.0	0.7	0.4	41.5	35.4	38.5	36.7	37.9	37.3	41.8	43.5	42.7
Definite (26 -30)		0.0	0.0	0.0	9.3	6.2	7.8	8.0	6.0	7.0	5.6	5.7	5.7
Severe (31 - 15)		0.0	0.0	0.0	7.7	7.2	7.5	9.6	6.9	8.3	8.2	9.1	8.7
V Severe (36 or more)		0.0	0.7	0.4	24.6	22	23.3	19	24.9	22.0	27.9	28.7	28.3
State Total		918	890	1808	932	908	1840	932	869	1801	944	963	1907
None or minor malocclusion (<25)		99.9	99.8	99.9	61.6	66.7	64.2	68	67.2	67.6	60.8	61.1	61.0
Malocclusion present		0.1	0.2	0.1	38.4	33.3	35.9	32.0	32.8	32.4	39.2	38.9	39.1
Definite (26 -30)		0.0	0.0	0.0	13.0	10.7	11.9	11.1	11.1	11.1	12	10.4	11.2
Severe (31 - 15)		0.0	0.0	0.0	8.4	8.6	8.5	7.0	6.2	6.6	7.6	9.2	8.4
V Severe (36 or more)		0.1	0.2	0.2	17	14.1	15.6	13.9	15.4	14.7	19.6	19.3	19.5

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

6.4. ORAL CANCER & ORAL MUCOSAL LESIONS

Table 6.12 presents 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.

Oral mucosal lesions were present in less than 1% below 15 years & around 6% above 35 years. Pre-cancerous conditions form the bulk of such cases. Appropriate ban of the use of tobacco products will go a long way in reducing the incidence.

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

State : Tamil Nadu

Oral Mucosal Lesions	n=	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=	115	130	245	116	137	253	178	174	352	136	144	280	115	131	246
Oral mucosal lesions present		2	1	3	1	3	4	2	2	4	15	7	12	16	6	22
Oral Cancer		1	1	2	1	2	3	0	0	0	0	1	1	2	0	2
Leukoplakia		0	0	0	0	0	0	1	1	2	13	0	13	6	1	7
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	0	1	2	4	6	3	4	7
ANUG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candidiasis		0	0	0	0	1	1	0	0	0	0	1	1	1	0	1
Abscess		0	0	0	0	0	0	0	0	0	1	1	2	2	0	2
Any other condition		1	0	1	0	0	0	0	1	1	3	0	3	4	1	5
Region 2	n=	159	151	310	169	140	309	157	158	315	184	133	317	153	157	310
Oral mucosal lesions present.		1	2	3	1	0	1	1	0	1	7	2	9	12	3	15
Oral Cancer		0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Leukoplakia		0	0	0	0	0	0	0	0	0	3	0	3	4	0	4
Lichen planus		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ulceration		1	0	1	0	0	0	1	0	1	1	0	1	2	2	4
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	1	1	0	0	0	0	0	0	1	0	1	0	0	0
Any other condition		0	0	0	1	0	1	0	0	0	4	2	6	8	1	9
Region 3	n=	31	30	61	31	28	59	27	28	55	31	31	62	31	31	62
Oral mucosal lesions present		0	0	0	0	0	0	1	0	1	0	0	0	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	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	1	0	1	0	0	0	0	1	1
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 4	n=	78	89	167	72	99	171	123	113	236	107	107	214	80	103	183
Oral mucosal lesions present		0	1	1	0	1	1	1	0	1	12	1	13	12	5	17
Oral Cancer		0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Leukoplakia		0	0	0	0	0	0	0	0	0	5	1	6	6	0	6
Lichen planus		0	0	0	0	0	0	0	0	0	3	0	3	0	0	0
Ulceration		0	0	0	0	0	0	0	0	0	6	0	6	2	1	3
ANUG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candidiasis		0	0	0	0	1	1	1	0	1	0	0	0	3	3	6
Abscess		0	0	0	0	0	0	0	0	0	2	0	2	0	0	0
Any other condition		0	0	0	0	0	0	0	0	0	2	0	2	2	2	4
Region 5	n=	153	143	296	155	148	303	150	138	288	143	161	304	153	136	289
Oral mucosal lesions present		1	2	3	0	0	0	1	3	4	6	6	12	14	12	26
Oral Cancer		0	0	0	0	0	0	0	0	0	1	0	1	1	1	2
Leukoplakia		0	0	0	0	0	0	0	0	0	0	1	1	5	2	7
Lichen planus		0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Ulceration		1	1	2	0	0	0	0	2	2	3	1	4	4	3	7
ANUG		0	0	0	0	0	0	0	0	0	1	1	2	0	0	0
Candidiasis		0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Abscess		0	0	0	0	0	0	0	0	0	1	1	2	1	2	3
Any other condition		0	1	1	0	0	0	1	1	2	1	4	5	6	5	11

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=	136	139	275	139	142	281	148	128	276	137	161	298	151	138	289
Oral mucosal lesions present		25	23	48	17	32	49	26	23	49	32	32	64	37	44	81
Oral Cancer		15	11	26	11	16	27	13	11	24	19	13	32	13	17	30
Leukoplakia		8	8	16	5	11	16	9	6	15	9	12	21	15	16	31
Lichen planus		0	2	2	0	1	1	0	1	1	0	1	1	3	2	5
Ulceration		1	2	3	1	2	3	2	2	4	3	4	7	4	7	11
ANUG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candidiasis		1	0	1	0	1	1	1	1	2	0	0	0	0	1	1
Abscess		0	0	0	0	0	0	1	1	2	0	0	0	1	2	3
Any other condition		0	0	0	0	1	1	0	3	3	1	4	5	4	2	6
Region 7	n=	134	139	273	152	134	286	148	129	277	135	155	290	127	149	276
Oral mucosal lesions present		25	28	53	29	25	54	28	25	53	32	37	69	30	36	66
Oral Cancer		22	21	43	25	23	48	22	23	45	16	28	44	16	28	44
Leukoplakia		3	4	7	2	1	3	5	2	7	9	5	14	10	5	15
Lichen planus		0	1	1	1	0	1	0	0	0	2	1	3	0	1	1
Ulceration		0	1	1	1	0	1	1	1	2	4	0	4	3	4	7
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	1	2	1	0	1
Abscess		0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
Any other condition		0	0	0	0	1	1	0	0	0	2	2	4	2	0	2
State Rural	n=	571	577	1148	574	584	1158	659	620	1279	615	626	1241	569	589	1158
Oral mucosal lesions present		53	56	109	47	58	105	58	51	109	94	75	169	102	95	197
Oral Cancer		38	35	73	37	41	78	35	34	69	36	42	78	32	45	77
Leukoplakia		11	12	23	7	12	19	15	9	24	35	17	52	37	19	56
Lichen planus		0	3	3	1	1	2	0	0	0	5	2	7	3	3	6
Ulceration		3	4	7	2	2	4	5	5	10	15	8	23	16	20	36
ANUG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Candidiasis		1	2	2	0	2	2	2	1	3	0	1	1	4	4	8
Abscess		0	0	0	0	0	0	0	1	1	6	2	8	3	3	6
Any other condition		0	1	1	0	0	0	1	4	5	11	6	17	19	8	27
State Urban	n=	235	244	479	260	244	504	272	248	520	258	266	524	241	256	497
Oral mucosal lesions present		1	1	2	1	3	4	2	2	4	10	10	20	19	12	31
Oral Cancer		0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Leukoplakia		0	0	0	0	0	0	0	0	0	4	2	6	9	5	14
Lichen planus		0	0	0	0	0	0	0	1	1	0	0	0	2	0	2
Ulceration		0	0	0	0	0	0	1	0	1	4	1	5	2	2	4
ANUG		0	0	0	0	0	0	0	0	0	1	1	2	0	0	0
Candidiasis		0	0	0	0	1	1	0	0	0	1	1	2	1	0	1
Abscess		0	1	1	0	0	0	1	0	1	0	0	0	1	1	2
Any other condition		1	0	1	1	2	3	0	1	1	2	6	8	7	3	10
State Total	n=	806	821	1627	834	828	1662	931	868	1799	873	892	1765	810	845	1655
Oral mucosal lesions present		54	57	111	48	61	109	60	53	113	104	85	189	121	107	228
Oral Cancer		38	35	73	37	41	78	35	34	69	36	42	78	32	46	78
Leukoplakia		11	12	23	7	12	22	15	9	24	39	19	58	46	24	70
Lichen planus		0	3	3	1	1	2	0	1	1	5	2	7	5	3	8
Ulceration		3	4	7	2	2	4	6	5	11	19	9	28	18	22	40
ANUG		0	0	0	0	0	0	0	0	0	1	1	2	0	0	0
Candidiasis		1	2	3	0	3	3	2	1	3	1	2	3	5	4	9
Abscess		0	1	1	0	0	0	1	1	2	6	2	8	4	4	8
Any other condition		1	1	2	1	2	3	1	5	6	13	12	25	26	11	37

Table 6.13 Distribution of subjects with oral mucosal conditions by location of conditions in the mouth. State : Tamil Nadu

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	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
Lips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sulci	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buccal mucosa	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Floor of mouth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Tongue	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2
Hard/Soft palate	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	0
Alv ridges/ Gingiva	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Rural Total	0	0	0	0	0	0	0	0	0	0	0	1	0	0	3	1	3	2
State Urban																		
Vermilion Border	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
Lips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sulci	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buccal mucosa	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Floor of mouth	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Tongue	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
Hard/Soft palate	0	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0	4	0
Alv ridges/ Gingiva	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Urban Total	0	0	1	0	0	0	3	1	0	0	0	0	0	1	2	0	6	2
State Total																		
Vermilion Border	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
Lips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Sulci	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buccal mucosa	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0
Floor of mouth	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Tongue	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	1	2
Hard/Soft palate	0	0	1	0	0	0	2	0	0	0	0	0	0	0	4	0	7	0
Alv ridges/ Gingiva	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
State Total	0	0	1	0	0	0	3	1	0	0	0	1	0	1	5	1	9	4

6.5. DENTAL FLUOROSIS STATUS

Table 6.14 presents the percent subjects with dental fluorosis by level of severity

16% of the children are affected and mostly of the mild variety. This is cause of alarm. Rural areas are very highly affected compared to urban areas. Action needs to be taken to provide preventive measures and safe drinking water.

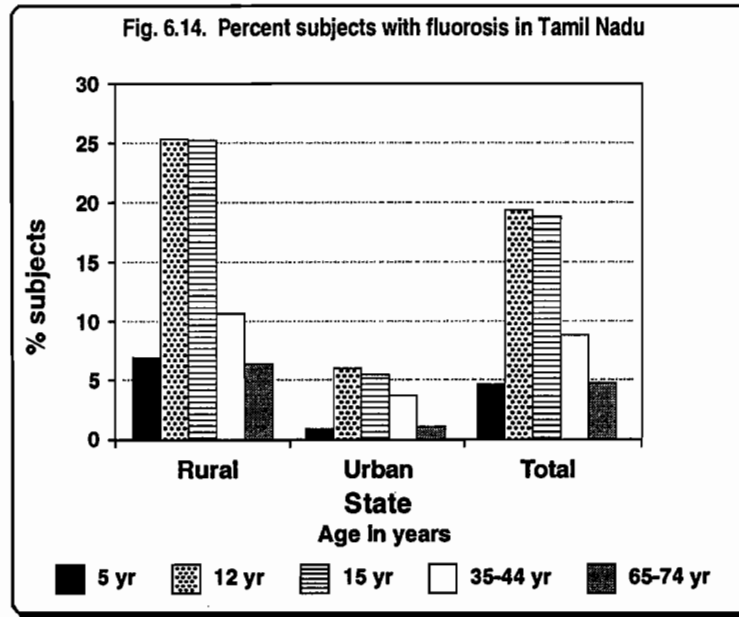


Table 6.14 Percent distribution of subjects with severity of dental fluorosis by age, sex and geographical area.

State : Tamil Nadu

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=	101	98	199	152	174	326	157	157	314	166	174	340	119	133	252
With Fluorosis		7.2	6.4	6.8	34.6	37.1	35.9	36.9	31.0	34.0	15.0	15.2	15.1	9.6	9.5	9.6
Questionable		2.1	3.2	2.7	8.8	6.4	7.6	8.6	7.7	8.2	0.6	2.3	1.5	1.8	2.4	2.1
V Mild & Mild		5.2	3.2	4.2	24.4	25.4	24.9	26.2	19.2	22.7	13.7	10.7	12.2	7.8	6.4	7.1
Moderate		0.0	0.0	0.0	1.4	4.1	2.8	1.3	3.4	2.4	0.6	2.2	1.4	0.0	0.8	0.4
Severe		0.0	0.0	0.0	0.0	1.2	0.6	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Region 2	n=	114	122	236	169	140	309	157	155	312	182	130	312	110	115	225
With Fluorosis		6.2	6.9	6.6	18.3	17.3	17.8	18.8	19.5	19.2	9.7	6.6	8.2	5.8	2.4	4.1
Questionable		1.2	1.7	1.5	6.7	4.0	5.4	5.9	3.7	4.8	7.1	3.2	5.2	3.9	1.8	2.9
V Mild & Mild		4.4	4.6	4.5	8.8	6.1	7.5	11.1	12.2	11.7	1.5	2.3	1.9	0.6	0.6	0.6
Moderate		0.6	0.6	0.6	1.6	6.1	3.9	1.8	2.7	2.3	0.8	1.1	1.0	0.6	0.0	0.3
Severe		0.0	0.0	0.0	1.2	1.0	1.1	0.0	1.0	0.5	0.4	0.0	0.2	0.6	0.0	0.3
Region 3	n=	16	17	33	21	27	48	26	28	54	28	27	55	26	25	51
With Fluorosis		6.3	0.0	3.2	0.0	7.4	3.7	0.0	0.0	0.0	0.0	3.7	1.9	0.0	0.0	0.0
Questionable		0.0	0.0	0.0	0.0	3.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
V Mild & Mild		6.3	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.7	1.9	0.0	0.0	0.0
Moderate		0.0	0.0	0.0	0.0	3.7	1.9	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	0.0	0.0	0.0	0.0	0.0	0.0
Region 4	n=	75	63	138	111	114	225	121	113	234	117	107	224	79	95	174
With Fluorosis		1.3	0.0	0.7	1.8	0.9	1.4	1.7	3.5	2.6	1.7	3.7	2.7	0.0	2.1	1.1
Questionable		0.0	0.0	0.0	0.9	0.9	0.9	0.8	2.7	1.8	0.9	2.8	1.9	0.0	0.0	0.0
V Mild & Mild		1.3	0.0	0.7	0.9	0.0	0.5	0.8	0.9	0.9	0.9	0.9	0.9	0.0	2.1	1.1
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	0.0	0.0	0.0	0.0	0.0	0.0
Region 5	n=	131	115	246	148	145	293	140	136	276	140	151	291	111	105	216
With Fluorosis		2.3	2.5	2.4	13.3	7.4	10.4	12.6	9.3	11.0	4.2	1.3	2.8	1.0	2.1	1.6
Questionable		0.8	0.8	0.8	3.3	1.3	2.3	3.6	2.1	2.9	0.0	0.0	0.0	1.0	1.0	1.0
V Mild & Mild		0.0	0.8	0.4	8.0	4.0	6.0	7.6	3.6	5.6	4.2	1.3	2.8	0.0	1.0	0.5
Moderate		0.7	0.8	0.8	2.0	0.7	1.4	1.4	2.9	2.2	0.0	0.0	0.0	0.0	0.0	0.0
Severe		0.7	0.0	0.4	0.0	1.3	0.7	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Region 6	n=	108	104	212	136	142	278	148	128	276	134	160	294	113	99	212
With Fluorosis		2.9	1.5	2.2	7.6	5.1	6.4	8.7	2.8	5.8	2.1	1.9	2.0	1.8	0.0	0.9
Questionable		0.5	0.0	0.3	1.5	0.7	1.1	0.7	0.8	0.8	0.9	1.2	1.1	0.0	0.0	0.0
V Mild & Mild		2.4	1.5	2.0	6.1	4.4	5.3	7.6	0.0	3.8	1.3	0.7	1.0	1.8	0.0	0.9
Moderate		0.0	0.0	0.0	0.0	0.0	0.0	0.4	1.6	1.0	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	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0
Region 7	n=	53	60	113	152	132	284	148	128	276	128	153	281	88	123	211
With Fluorosis		1.1	0.0	0.6	7.5	7.6	7.6	4.6	6.8	5.7	0.0	1.6	0.8	0.8	0.5	0.7
Questionable		0.0	0.0	0.0	1.6	2.4	2.0	3.8	4.0	3.9	0.0	0.4	0.2	0.8	0.0	0.4
V Mild & Mild		1.1	0.0	0.6	5.8	5.2	5.5	0.9	2.9	1.9	0.0	1.2	0.6	0.0	0.5	0.3
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	0.0	0.0	0.0	0.0	0.0	0.0
State Rural	n=	434	415	849	634	620	1254	641	601	1242	639	634	1273	462	492	954
With Fluorosis		6.6	7.3	7.0	26.2	25.0	25.6	26.6	24.4	25.5	12.1	9.8	11.0	6.8	6.4	6.6
Questionable		1.4	2.5	2.0	7.8	4.8	6.3	7.5	5.4	6.5	3.4	2.8	3.1	2.6	2.0	2.3
V Mild & Mild		4.4	4.1	4.3	15.8	14.7	15.3	17.0	14.7	15.9	7.8	6.0	6.9	3.6	3.9	3.8
Moderate		0.6	0.6	0.6	2.0	4.1	3.1	1.9	3.7	2.8	0.7	1.0	0.9	0.3	0.4	0.4
Severe		0.3	0.0	0.2	0.6	1.4	1.0	0.3	0.5	0.4	0.2	0.0	0.1	0.3	0.0	0.2
State Urban	n=	164	164	328	255	254	509	256	244	500	256	268	524	184	203	387
With Fluorosis		1.7	0.0	0.9	5.3	7.5	6.4	5.5	5.4	5.5	2.6	3.9	3.3	1.1	0.8	1.0
Questionable		0.5	0.0	0.3	1.3	2.0	1.7	0.8	2.1	1.5	1.4	0.5	1.0	0.4	0.4	0.4
V Mild & Mild		1.2	0.0	0.6	4.0	3.6	3.8	4.7	2.4	3.6	1.2	2.4	1.8	0.7	0.4	0.6
Moderate		0.0	0.0	0.0	0.0	1.9	1.0	0.0	0.1	0.1	0.0	0.9	0.5	0.0	0.0	0.0
Severe		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
State Total	n=	598	579	1177	889	874	1763	897	845	1742	895	902	1797	646	695	1341
With Fluorosis		4.7	4.2	4.5	18.4	18.6	18.5	18.7	16.9	17.8	8.2	7.7	8.0	4.5	4.5	4.5
Questionable		1.0	1.6	1.3	5.2	3.6	4.4	4.8	4.1	4.5	2.1	1.8	2.0	1.5	1.3	1.4
V Mild & Mild		3.2	2.3	2.8	11.7	11.1	11.4	12.6	9.9	11.3	5.6	5.1	5.4	2.7	2.9	2.8
Moderate		0.3	0.3	0.3	1.2	3.1	2.2	1.1	2.3	1.7	0.4	0.9	0.7	0.1	0.3	0.2
Severe		0.2	0.0	0.1	0.3	0.9	0.6	0.2	0.6	0.4	0.1	0.0	0.1	0.1	0.0	0.1

6.6. OTHER LESIONS

6.6.1 Extra oral lesions

Table 6.15 presents the percent subjects with extra oral lesions by type of lesions.

Seen in less than 2% of the population, mostly as ulcerations. Not of public health importance.

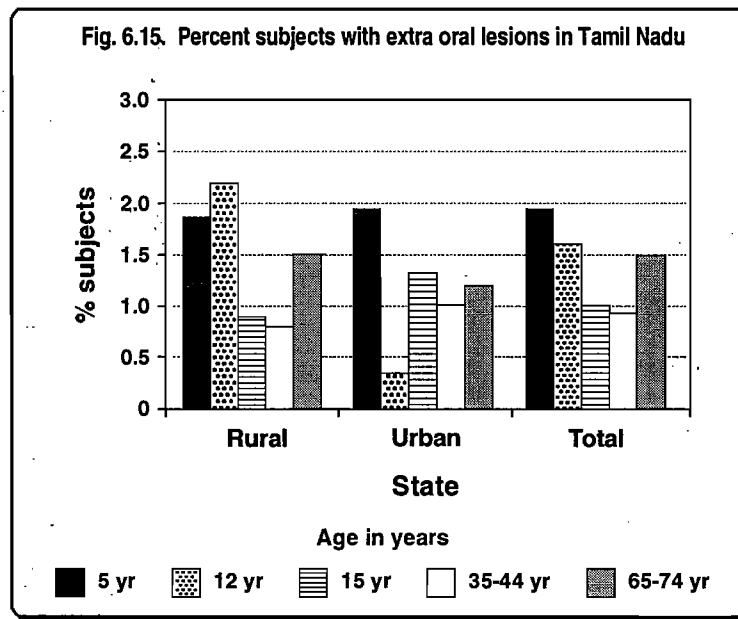


Table 6.15 Percent distribution of subjects with extra oral lesions by age, sex and geographical area.

State : Tamil Nadu

Extra Oral Lesions	n=	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=	96	114	210	101	123	224	171	172	343	177	193	370	96	112	208
With extra oral lesions		2.2	0.9	1.6	4.2	3.4	3.8	1.2	1.2	1.2	0.0	1.6	0.8	1.1	1.9	1.5
Ulceration,sores,erosions,fissures		1.1	0.9	1.0	2.1	0.9	1.5	1.2	0.6	0.9	0.0	1.0	0.5	0.0	0.9	0.5
head, neck, limbs		0.0	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	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		1.1	0.0	0.6	2.1	0.9	1.5	1.2	0.6	0.9	0.0	0.5	0.3	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	0.9	0.5
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)		1.1	0.0	0.6	2.1	2.6	2.4	0.0	0.6	0.3	0.0	0.5	0.3	0.0	0.9	0.5
Region 2	n=	161	153	314	169	140	309	157	156	313	184	133	317	152	157	309
With extra oral lesions		1.0	1.5	1.3	0.0	0.5	0.3	0.0	1.0	0.5	1.7	0.0	0.9	2.6	0.0	1.3
Ulceration,sores,erosions,fissures		1.0	1.5	1.3	0.0	0.5	0.3	0.0	1.0	0.5	1.7	0.0	0.9	2.6	0.0	1.3
head, neck, limbs		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
nose, cheeks, chin		0.0	1.5	0.8	0.0	0.5	0.3	0.0	0.0	0.0	0.8	0.0	0.4	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	0.8	0.0	0.4	1.5	0.0	0.8
vermilion border		1.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.5
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=	31	30	61	31	28	59	27	28	55	32	31	63	31	31	62
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 4	n=	71	76	147	64	87	151	117	111	228	115	110	225	81	89	170
With extra oral lesions		2.8	4.0	3.4	3.1	0.0	1.6	0.9	1.8	1.4	1.7	0.9	1.3	2.5	1.1	1.8
Ulceration,sores,erosions,fissures		2.8	4.0	3.4	3.1	0.0	1.6	0.9	0.9	0.9	1.7	0.9	1.3	2.5	1.1	1.8
head, neck, limbs		0.0	1.3	0.7	1.6	0.0	0.8	0.0	0.0	0.0	1.7	0.0	0.9	1.2	0.0	0.6
nose, cheeks, chin		0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
commissures		2.8	2.6	2.7	1.6	0.0	0.8	0.0	0.0	0.0	0.9	0.5	1.2	1.1	1.2	
vermilion border		0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.5	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	0.9	0.5	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 5	n=	157	145	302	157	152	309	144	137	281	145	162	307	156	137	293
With extra oral lesions		3.2	2.2	2.7	1.2	0.0	0.6	0.0	0.0	0.0	0.7	0.6	0.7	1.9	0.7	1.3
Ulceration,sores,erosions,fissures		2.6	1.5	2.1	1.2	0.0	0.6	0.0	0.0	0.0	0.7	0.6	0.7	1.3	0.7	1.0
head, neck, limbs		1.9	0.0	1.0	0.6	0.0	0.3	0.0	0.0	0.0	0.7	0.0	0.4	0.6	0.0	0.3
nose, cheeks, chin		0.7	1.5	1.1	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	0.6	0.0	0.3	0.0	0.9	0.0	0.0	0.0	0.0	0.7	0.7	0.7
vermilion border		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3	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)		0.6	0.0	0.3	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=	136	139	275	140	142	282	148	128	276	137	161	298	150	138	288
With extra oral lesions		4.0	9.1	6.6	6.3	4.6	5.5	5.5	7.1	6.3	1.3	5.0	3.2	2.1	4.9	3.5
Ulceration,sores,erosions,fissures		0.8	0.8	0.8	1.8	1.4	1.6	0.0	2.0	1.0	1.3	0.3	0.8	0.4	3.0	1.7
head, neck, limbs		0.8	0.8	0.8	1.8	1.4	1.6	0.0	0.4	0.2	1.3	0.3	0.8	0.4	3.0	1.7
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
vermillion border		0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.8	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)		3.2	6.8	5.0	4.1	3.2	3.7	5.5	5.2	5.4	0.0	4.3	2.2	0.0	1.5	0.8
Region 7	n=	134	139	273	152	134	286	148	128	276	135	155	290	127	150	277
With extra oral lesions		0.0	0.0	0.0	0.4	0.0	0.2	0.0	0.5	0.3	0.0	1.2	0.6	0.5	0.4	0.5
Ulceration,sores,erosions,fissures		0.0	0.0	0.0	0.4	0.0	0.2	0.0	0.5	0.3	0.0	0.0	0.0	0.5	0.0	0.3
head, neck, limbs		0.0	0.0	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	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	0.0	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
vermillion border		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	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	1.2	0.6	0.0	0.0	0.0
State Rural	n=	552	556	1108	552	569	1121	646	615	1261	655	663	1318	549	566	1115
With extra oral lesions		2.0	1.6	1.8	2.6	1.7	2.2	0.8	1.0	0.9	0.6	1.0	0.8	1.7	1.2	1.5
Ulceration,sores,erosions,fissures		1.4	1.3	1.4	1.7	0.6	1.2	0.8	0.5	0.7	0.6	0.7	0.7	1.0	0.8	0.9
head, neck, limbs		0.5	0.6	0.6	0.5	0.0	0.3	0.0	0.0	0.0	0.6	0.3	0.5	0.5	0.0	0.3
nose, cheeks, chin		0.0	0.3	0.2	0.0	0.2	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
commissures		0.8	0.4	0.6	1.2	0.4	0.8	0.6	0.3	0.5	0.0	0.2	0.1	0.5	0.5	0.5
vermillion border		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.2	0.1	0.0	0.4	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	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Enlarged lymph nodes(head & neck)		0.6	0.0	0.3	0.8	1.1	1.0	0.0	0.3	0.2	0.0	0.3	0.2	0.0	0.4	0.2
State Urban	n=	234	240	474	262	237	499	266	245	511	270	282	552	244	248	492
With extra oral lesions		1.7	2.0	1.9	0.3	0.3	0.3	0.4	1.1	0.8	1.3	0.7	1.0	2.0	0.3	1.2
Ulceration,sores,erosions,fissures		1.5	1.5	1.5	0.1	0.1	0.1	0.0	0.8	0.4	1.3	0.4	0.9	1.9	0.2	1.1
head, neck, limbs		0.3	0.0	0.2	0.1	0.1	0.1	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.2	0.1
nose, cheeks, chin		0.3	1.5	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.4	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	0.7	0.4	0.6	1.1	0.0	0.6
vermillion border		0.8	0.0	0.4	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.8	0.0	0.4
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)		0.2	0.4	0.3	0.2	0.2	0.2	0.4	0.3	0.4	0.0	0.3	0.2	0.0	0.1	0.1
State Total	n=	786	796	1582	814	806	1620	912	860	1772	925	945	1870	793	814	1607
With extra oral lesions		2.0	1.8	1.9	1.9	1.3	1.6	0.7	1.2	1.0	0.9	0.9	0.9	1.9	1.0	1.5
Ulceration,sores,erosions,fissures		1.5	1.4	1.5	1.2	0.4	0.8	0.6	0.7	0.7	0.9	0.6	0.8	1.4	0.7	1.1
head, neck, limbs		0.4	0.4	0.4	0.4	0.0	0.2	0.0	0.3	0.2	0.4	0.2	0.3	0.3	0.1	0.2
nose, cheeks, chin		0.1	0.7	0.4	0.0	0.1	0.1	0.1	0.0	0.1	0.3	0.0	0.2	0.0	0.0	0.0
commissures		0.6	0.3	0.5	0.8	0.3	0.6	0.4	0.2	0.3	0.3	0.2	0.3	0.7	0.3	0.5
vermillion border		0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.1	0.1	0.3	0.3	0.3
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)		0.5	0.2	0.4	0.6	0.9	0.8	0.2	0.3	0.3	0.0	0.4	0.2	0.0	0.3	0.2

6.6.2 T M joint symptoms and signs

Table 6.16 presents the percent subjects with temporomandibular joint (TM Joint) symptoms and signs.

The temporomandibular symptoms and signs were recorded in less than 0.6% of the population and clicking is the most common finding amongst all the groups. Tenderness is seen in less than 0.5%. Urbanites had greater incidence and the 65-74 age group the most commonly affected. Specialists are of the opinion that clicking is a very common finding not warranting any treatment. Thus this disease is not of public health importance.

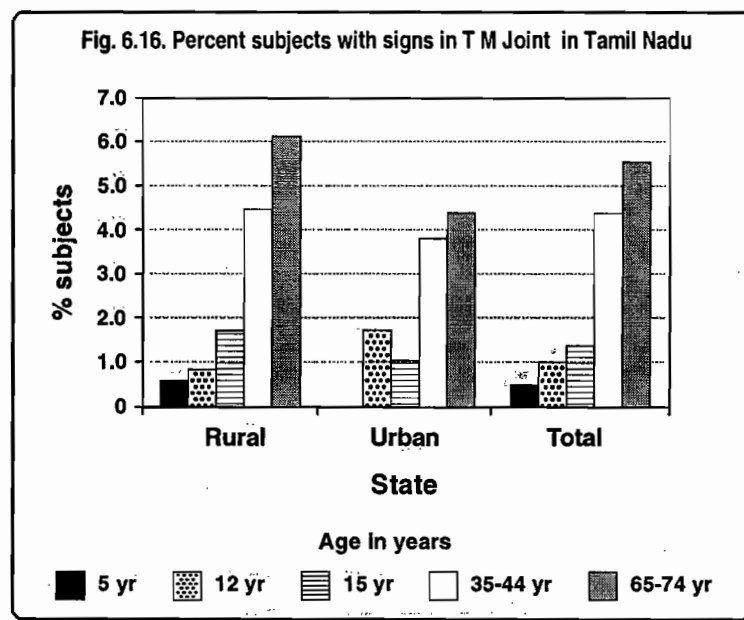


Table 6.16 Percent subjects with symptoms and signs in the tempromandibular joints by age, sex and geographical area State : Tamil Nadu

T M Joints Assessment	n=	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	164	328	160	184	344	168	170	338	177	191	368	159	177	336
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	0.0	1.2	0.6
Signs present		0.0	0.6	0.3	1.2	1.9	1.6	2.3	0.6	1.5	7.4	5.2	6.3	10.1	4.7	7.4
Clicking		0.0	0.6	0.3	1.2	1.9	1.6	2.3	0.6	1.5	7.4	4.6	6.0	10.1	3.5	6.8
Tenderness		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.6	0.0	1.8	0.9
Reduced jaw mobility		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.7	0.0	0.4
Region 2	n=	161	153	314	169	140	309	157	156	313	184	131	315	153	157	310
Symptoms present		0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	0.7	0.0	0.0	0.0	1.5	0.0	0.8
Signs present		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.5	0.8	1.7	1.3	2.5	2.4	2.5
Clicking		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.4	0.5	0.8	1.7	1.3	2.5	2.4	2.5
Tenderness		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0	1.0	0.0	0.5
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=	20	21	41	26	25	51	25	25	50	30	30	60	31	31	62
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	3.3	0.0	1.7	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	3.3	0.0	1.7	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 4	n=	113	99	212	107	113	220	117	110	227	115	110	225	115	114	229
Symptoms present		0.0	1.0	0.5	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	2.0	1.0	1.9	0.9	1.4	3.4	0.9	2.2	7.8	2.7	5.3	7.8	5.3	6.6
Clicking		0.0	2.0	1.0	1.9	0.9	1.4	3.4	0.9	2.2	7.8	2.7	5.3	7.8	4.4	6.1
Tenderness		0.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.9	2.6	1.8	2.2
Reduced jaw mobility		0.0	1.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	2.6	1.8	2.2
Region 5	n=	157	145	302	157	149	306	141	137	278	144	159	303	157	138	295
Symptoms present		2.6	0.8	1.7	2.5	1.5	2.0	2.2	2.2	2.2	2.0	4.5	3.3	1.9	2.8	2.4
Signs present		1.2	0.0	0.6	3.2	1.5	2.4	2.8	3.0	2.9	2.8	7.0	4.9	5.1	7.3	6.2
Clicking		0.6	0.0	0.3	2.5	1.5	2.0	2.2	3.0	2.6	2.0	5.7	3.9	5.1	5.8	5.5
Tenderness		1.2	0.0	0.6	1.9	1.5	1.7	2.8	0.8	1.8	0.8	3.9	2.4	0.6	2.9	1.8
Reduced jaw mobility		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	1.1
Region 6	n=	136	139	275	140	142	282	148	128	276	137	161	298	150	138	288
Symptoms present		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.2	2.4	0.3	1.4	0.4	5.7	3.1
Signs present		0.0	0.4	0.2	0.8	0.0	0.4	2.1	1.3	1.7	7.2	13.1	10.2	16.2	21.0	18.6
Clicking		0.0	0.4	0.2	0.8	0.0	0.4	2.1	1.3	1.7	6.8	12.8	9.8	16.2	20.6	18.4
Tenderness		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	0.4	0.2
Reduced jaw mobility		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0
Region 7	n=	134	138	272	152	134	286	148	128	276	135	155	290	127	150	277
Symptoms present		0.0	0.0	0.0	0.4	0.0	0.2	0.4	0.0	0.2	0.0	1.2	0.6	0.0	0.0	0.0
Signs present		0.0	0.0	0.0	1.2	0.5	0.9	0.4	0.0	0.2	4.8	5.5	5.2	14.3	10.8	12.6
Clicking		0.0	0.0	0.0	1.2	0.5	0.9	0.4	0.0	0.2	4.3	4.3	4.3	12.4	10.8	11.6
Tenderness		0.0	0.0	0.0	1.2	0.5	0.9	0.0	0.0	0.0	0.0	1.2	0.6	0.0	0.4	0.2
Reduced jaw mobility		0.0	0.0	0.0	1.2	0.5	0.9	0.0	0.0	0.0	0.5	1.2	0.9	1.9	0.4	1.2
State Rural	n=	647	610	1257	641	633	1274	640	612	1252	654	659	1313	634	637	1271
Symptoms present		0.6	0.2	0.4	0.6	0.0	0.3	0.8	0.6	0.7	0.9	0.8	0.9	0.8	1.4	1.1
Signs present		0.4	0.7	0.6	1.5	0.2	0.9	2.2	1.1	1.7	4.9	4.1	4.5	6.8	5.3	6.1
Clicking		0.2	0.7	0.5	1.3	0.2	0.8	2.0	1.1	1.6	4.9	3.6	4.3	6.7	4.3	5.5
Tenderness		0.4	0.2	0.3	0.4	0.0	0.2	0.8	0.0	0.4	0.4	0.9	0.7	0.7	1.9	1.3
Reduced jaw mobility		0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.9	0.8	0.9
State Urban	n=	238	249	487	270	254	524	264	242	506	268	278	546	258	268	526
Symptoms present		0.3	0.3	0.3	0.3	0.7	0.5	0.3	0.3	0.3	0.1	1.0	0.6	0.7	0.3	0.5
Signs present		0.0	0.0	0.0	0.8	2.5	1.7	1.3	0.7	1.0	3.3	4.5	3.9	5.2	3.6	4.4
Clicking		0.0	0.0	0.0	0.8	2.5	1.7	1.3	0.7	1.0	3.0	4.1	3.6	5.1	3.3	4.2
Tenderness		0.0	0.0	0.0	0.4	0.7	0.6	0.3	0.3	0.3	0.7	1.0	0.9	0.7	0.3	0.5
Reduced jaw mobility		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	0.3	0.2
State Total	n=	885	859	1744	911	887	1798	904	854	1758	922	937	1859	892	905	1797
Symptoms present		0.5	0.3	0.4	0.5	0.2	0.4	0.5	0.4	0.5	0.6	0.8	0.7	0.7	1.1	0.9
Signs present		0.3	0.6	0.5	1.2	0.7	1.0	1.9	0.9	1.4	4.6	4.1	4.4	6.4	4.8	5.6
Clicking		0.1	0.6	0.4	1.1	0.7	0.9	1.7	0.9	1.3	4.6	3.7	4.2	6.4	4.0	5.2
Tenderness		0.3	0.2	0.3	0.4	0.2	0.3	0.6	0.1	0.4	0.5	0.9	0.7	0.8	1.4	1.1
Reduced jaw mobility		0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.7	0.6	0.7

6.6.3 Enamel defects (opacities, hypoplasia)

Table 6.17 presents the percent subjects with enamel defects by type of defect and Table 6.18 presents the mean number of teeth affected with enamel defects by type of defects.

Seen in 20% of the population in the (5-15) age group but in less than 5% in the adult population. Rural population is more affected. The high scores seen in the younger group needs further analysis.

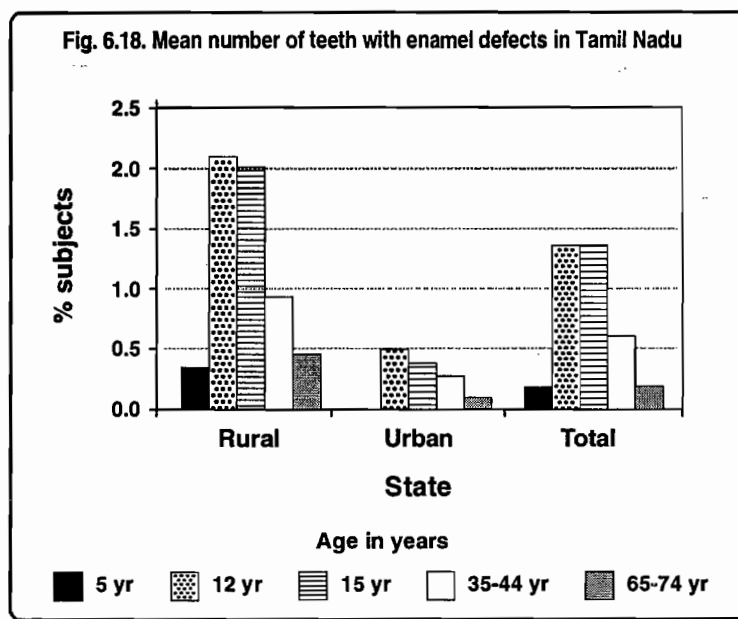
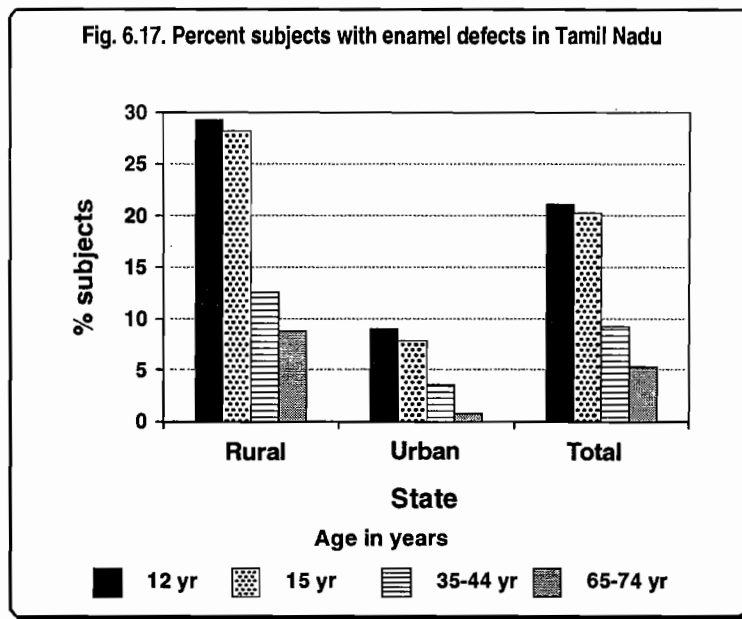


Table 6.17 Percent distribution of subjects with enamel defects (opacities/ hypoplasia) by age, sex & geographical area. State : Tamil Nadu

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=	152	179	331	165	163	328	170	179	349	118	137	255
With enamel defects		37.2	40.6	38.9	37.9	33.5	35.7	19.3	14.2	16.8	10.5	12.3	11.4
with demarcated opacity		23.7	25.0	24.4	26.5	22.7	24.6	12.1	12.0	12.1	7.1	9.9	8.5
with diffuse opacity		13.6	15.0	14.3	11.4	11.4	11.4	7.9	2.8	5.4	4.3	2.3	3.3
with hypoplasia		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0
with other defects		0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.7	2.9	1.8	2.6	2.6	2.6	0.6	0.6	0.6	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=	167	141	308	156	155	311	183	133	316	114	114	228
With enamel defects		22.7	24.0	23.4	20.2	25.4	22.8	10.4	10.2	10.3	7.6	3.6	5.6
with demarcated opacity		20.5	21.2	20.9	16.9	22.5	19.7	9.6	9.1	9.4	7.6	3.6	5.6
with diffuse opacity		1.8	1.6	1.7	1.4	1.4	1.4	0.4	0.0	0.2	0.0	0.0	0.0
with hypoplasia		0.4	1.1	0.8	0.9	0.4	0.7	0.4	1.1	0.8	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		0.4	0.0	0.2	1.5	1.0	1.3	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=	25	28	53	26	28	54	32	31	63	31	29	60
With enamel defects		0.0	7.1	3.6	0.0	3.6	1.8	0.0	0.0	0.0	0.0	0.0	0.0
with demarcated opacity		0.0	7.1	3.6	0.0	3.6	1.8	0.0	0.0	0.0	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 4	n=	110	115	225	121	113	234	119	109	228	82	97	179
With enamel defects		5.5	2.6	4.1	3.3	6.2	4.8	3.4	4.6	4.0	2.4	2.1	2.3
with demarcated opacity		3.6	1.7	2.7	2.5	3.5	3.0	3.4	4.6	4.0	2.4	1.0	1.7
with diffuse opacity		0.0	0.9	0.5	0.8	2.7	1.8	0.8	0.0	0.4	0.0	2.1	1.1
with hypoplasia		1.8	0.0	0.9	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 5	n=	149	149	298	143	137	280	141	150	291	110	106	216
With enamel defects		16.7	9.8	13.3	14.4	13.6	14.0	6.5	1.9	4.2	0.0	2.9	1.5
with demarcated opacity		9.4	7.2	8.3	10.3	10.8	10.6	5.7	1.3	3.5	0.0	1.0	0.5
with diffuse opacity		3.4	0.7	2.1	0.7	1.5	1.1	0.0	0.0	0.0	0.0	0.9	0.5
with hypoplasia		3.3	1.3	2.3	2.7	1.4	2.1	0.0	0.6	0.3	0.0	0.0	0.0
with other defects		0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.0	0.7	0.4	0.7	0.7	0.7	0.0	0.0	0.0	0.0	0.9	0.5
with all three conditions		0.7	0.0	0.4	0.7	0.0	0.4	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=	137	140	277	147	128	275	136	157	293	111	89	200
With enamel defects		13.1	6.9	10.0	8.9	3.7	6.3	0.8	1.3	1.1	0.5	2.8	1.7
with demarcated opacity		8.6	2.2	5.4	6.7	3.3	5.0	0.0	0.7	0.4	0.0	2.2	1.1
with diffuse opacity		4.1	2.6	3.4	3.5	0.0	1.8	0.4	0.3	0.4	0.0	0.0	0.0
with hypoplasia		0.4	0.4	0.4	1.4	0.4	0.9	0.4	0.0	0.2	0.0	0.0	0.0
with other defects		0.0	1.4	0.7	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.3
with all three conditions		0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3
Region 7	n=	152	132	284	147	128	275	129	152	281	88	119	207
With enamel defects		7.1	5.2	6.2	7.5	3.9	5.7	0.0	0.8	0.4	0.0	0.6	0.3
with demarcated opacity		4.7	4.3	4.5	6.6	2.9	4.8	0.0	0.8	0.4	0.0	0.6	0.3
with diffuse opacity		2.0	0.5	1.3	0.9	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0
with hypoplasia		0.4	0.5	0.5	0.4	0.0	0.2	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		0.4	0.0	0.2	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 Rural	n=	630	628	1258	647	607	1254	646	640	1286	471	486	957
With enamel defects		30.0	29.0	29.5	28.0	29.1	28.6	14.1	11.2	12.7	7.9	8.6	8.3
with demarcated opacity		22.1	20.8	21.5	20.5	22.7	21.6	11.0	9.6	10.3	6.6	6.6	6.6
with diffuse opacity		6.2	7.3	6.8	6.1	5.9	6.0	3.6	0.9	2.3	1.6	1.9	1.8
with hypoplasia		1.6	0.4	1.0	1.2	0.6	0.9	0.2	0.6	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		0.5	1.7	1.1	1.6	1.4	1.5	0.3	0.3	0.3	0.0	0.3	0.2
with all three conditions		0.2	0.0	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
State Urban	n=	262	256	518	258	245	503	264	271	535	183	205	388
With enamel defects		7.9	10.3	9.1	7.2	7.9	7.6	4.5	2.9	3.7	1.5	1.0	1.3
with demarcated opacity		4.6	7.0	5.8	5.9	5.6	5.8	3.0	2.5	2.8	1.0	1.0	1.0
with diffuse opacity		3.2	2.5	2.9	0.6	1.9	1.3	0.8	0.9	0.9	0.5	0.0	0.3
with hypoplasia		0.0	0.8	0.4	0.1	0.0	0.1	0.4	0.0	0.2	0.0	0.0	0.0
with other defects		0.0	0.1	0.1	0.4	0.0	0.2	0.3	0.0	0.2	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.0	0.0	0.0	0.8	0.8	0.8	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		892	884	1776	905	852	1757	910	911	1821	654	691	1345
With enamel defects		21.1	21.9	21.5	20.0	20.5	20.3	10.0	7.9	9.0	5.3	5.8	5.6
with demarcated opacity		14.5	14.9	14.7	14.4	15.2	14.8	7.6	6.8	7.2	4.3	4.5	4.4
with diffuse opacity		5.5	6.1	5.8	4.5	4.9	4.7	2.7	0.9	1.8	1.3	1.4	1.4
with hypoplasia		1.0	0.5	0.8	0.7	0.3	0.5	0.2	0.3	0.3	0.0	0.0	0.0
with other defects		0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.3	1.2	0.8	1.4	1.3	1.4	0.2	0.2	0.2	0.0	0.2	0.1
with all three conditions		0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Table 6.18 Mean number of teeth with enamel defects (opacities/ hypoplasia) by age, sex & geographical area. State : Tamil Nadu

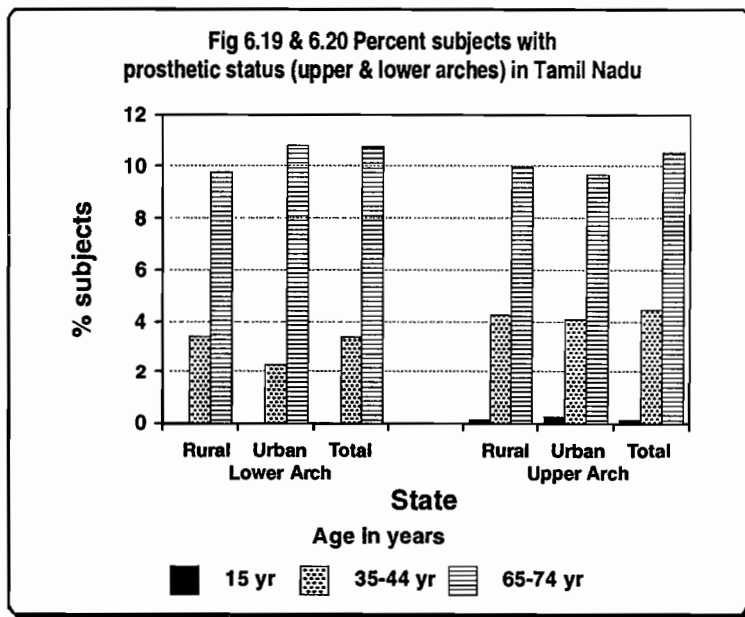
Enamel opacities/Hypoplasia		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	172	171	343	164	190	354	178	175	353	179	204	383	169	187	356
Mean no. of teeth with enamel defects		0.1	0.1	0.1	2.4	2.4	2.4	2.4	2.1	2.3	1.2	0.9	1.1	0.4	0.5	0.5
with demarcated opacity		0.1	0.0	0.1	1.3	1.3	1.3	1.4	1.3	1.4	0.7	0.6	0.7	0.3	0.4	0.4
with diffuse opacity		0.0	0.0	0.0	1.1	1.0	1.1	0.8	0.7	0.8	0.5	0.2	0.4	0.1	0.1	0.1
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	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	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.2	0.2	0.0	0.1	0.1	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	0.0	0.0	0.0
Region 2	n=	163	154	317	169	142	311	157	158	315	185	134	319	153	158	311
Mean no. of teeth with enamel defects		0.4	0.3	0.4	1.9	1.8	1.9	1.4	2.0	1.7	1.0	0.9	1.0	0.5	0.2	0.4
with demarcated opacity		0.3	0.3	0.3	1.7	1.8	1.8	1.2	1.7	1.5	0.9	0.9	0.9	0.5	0.2	0.4
with diffuse opacity		0.0	0.0	0.0	0.2	0.0	0.1	0.1	0.1	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	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	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	0.1	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	0.0	0.0	0.0
Region 3	n=	31	30	61	31	29	60	27	28	55	32	31	63	31	31	62
Mean no. of teeth with enamel defects		0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0
with demarcated opacity		0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.0	0.0	0.0	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	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	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	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	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	0.0	0.0	0.0
Region 4	n=	121	108	229	113	117	230	123	113	236	124	112	236	119	117	236
Mean no. of teeth with enamel defects		0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0
with demarcated opacity		0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.1	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	0.1	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	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	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	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	0.0	0.0	0.0
Region 5	n=	159	146	305	161	152	313	151	138	289	151	165	316	160	142	302
Mean no. of teeth with enamel defects		0.2	0.2	0.2	1.2	0.6	0.9	0.9	1.0	1.0	0.4	0.1	0.3	0.0	0.0	0.0
with demarcated opacity		0.1	0.2	0.2	0.7	0.5	0.6	0.6	0.8	0.7	0.4	0.1	0.3	0.0	0.0	0.0
with diffuse opacity		0.0	0.0	0.0	0.2	0.0	0.1	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	0.3	0.1	0.2	0.2	0.1	0.2	0.0	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	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	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	0.0	0.0	0.0

Enamel opacities/Hypoplasia		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=	138	142	280	142	144	286	148	128	276	138	162	300	153	138	291
Mean no. of teeth with enamel defects		0.0	0.0	0.0	0.6	0.3	0.5	0.5	0.1	0.3	0.0	0.0	0.0	0.0	0.0	0.0
with demarcated opacity		0.0	0.0	0.0	0.4	0.1	0.3	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
with diffuse opacity		0.0	0.0	0.0	0.2	0.2	0.2	0.2	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	0.1	0.0	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	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	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	0.0	0.0	0.0
Region 7	n=	134	139	273	152	134	286	148	129	277	135	155	290	127	150	277
Mean no. of teeth with enamel defects		0.0	0.0	0.0	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 demarcated opacity		0.0	0.0	0.0	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 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	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	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	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	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	0.0	0.0	0.0
State Rural	n=	664	629	1293	655	644	1299	660	621	1281	669	676	1345	649	649	1298
Mean no. of teeth with enamel defects		0.3	0.3	0.3	2.1	2.0	2.1	1.9	2.0	2.0	1.1	0.7	0.9	0.4	0.3	0.4
with demarcated opacity		0.2	0.2	0.2	1.5	1.3	1.4	1.3	1.5	1.4	0.8	0.6	0.7	0.3	0.3	0.3
with diffuse opacity		0.0	0.0	0.0	0.5	0.5	0.5	0.4	0.3	0.4	0.2	0.1	0.2	0.0	0.1	0.1
with hypoplasia		0.0	0.0	0.0	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 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	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.0	0.0	0.0	0.0	0.1	0.1	0.1	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	0.0	0.0	0.0
State Urban	n=	254	261	515	277	264	541	272	248	520	275	287	562	263	274	537
Mean no. of teeth with enamel defects		0.0	0.0	0.0	0.5	0.4	0.5	0.3	0.5	0.4	0.3	0.2	0.3	0.1	0.0	0.1
with demarcated opacity		0.0	0.0	0.0	0.3	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.1	0.0	0.1
with diffuse opacity		0.0	0.0	0.0	0.2	0.1	0.2	0.0	0.1	0.1	0.0	0.1	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	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	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	0.1	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	0.0	0.0	0.0
State Total	n=	918	890	1808	932	908	1840	932	869	1801	944	963	1907	912	923	1835
Mean no. of teeth with enamel defects		0.1	0.2	0.2	1.4	1.4	1.4	1.3	1.4	1.4	0.7	0.5	0.6	0.2	0.2	0.2
with demarcated opacity		0.1	0.1	0.1	0.9	0.9	0.9	0.8	1.0	0.9	0.5	0.4	0.5	0.2	0.2	0.2
with diffuse opacity		0.0	0.0	0.0	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.1	0.2	0.0	0.0	0.0
with hypoplasia		0.0	0.0	0.0	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 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	0.0	0.0	0.0
with combinations of opacities and hypoplasia		0.0	0.0	0.0	0.0	0.1	0.1	0.1	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	0.0	0.0	0.0

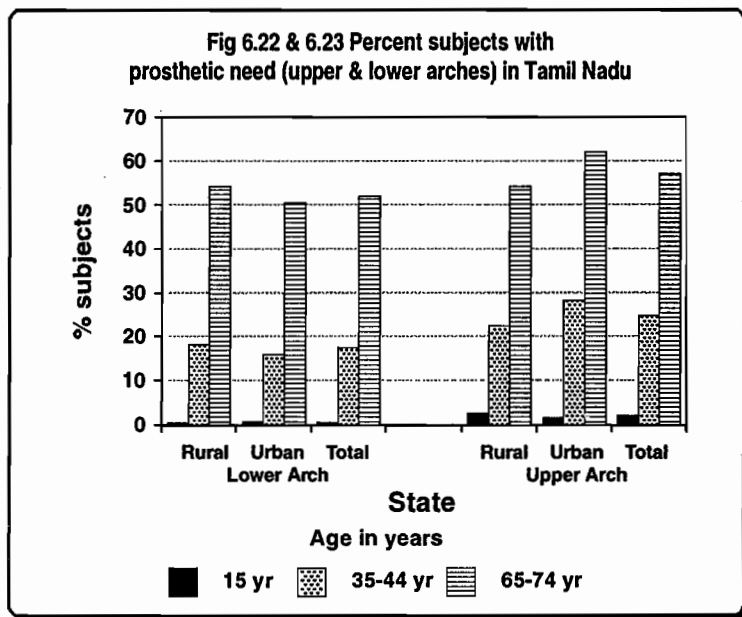
6.6.4 & 6.6.5. Prosthetic status (upper & lower)

The prosthetic status was recorded for subjects aged 15 years and above. The information was collected to assess the extent to which subjects were wearing dental prostheses including bridge, partial dentures and full dentures. The data was recorded separately for upper arch (maxillary teeth) and the lower arch (mandibular teeth).

Tables 6.19 and 6.20 present the percentage of subjects with prosthetic status of upper and lower dental arches, respectively, by type of prostheses. Table 6.23 presents the percentage of subjects wearing full mouth removable dentures.



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



Tables 6.21 and 6.22 present the percentage of subjects with prosthetic need of upper and lower dental arches, respectively, by type of prostheses. Table 6.24 presents the percentage of subjects needing full mouth removable dentures.

Around 10% of the (65-74) years group had prosthesis in the upper & lower arches. The presence of dentures at 35 years suggesting early tooth loss needs attention. 14% of the (35-44) group and 52% of the (65-74) group needed prosthesis. In the earlier group it was multi unit and the latter group complete dentures.

Table 6.19 Percent distribution of subjects with their prosthetic status (Upper arch) by age, sex, and geographical area. State : Tamil Nadu

Prosthetic Status (Upper)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	178	175	353	179	204	383	169	187	356
With Prostheses present		0.0	0.0	0.0	2.8	5.5	4.2	17.8	14.4	16.1
Bridge or more than one bridge		0.0	0.0	0.0	0.0	1.0	0.5	1.7	2.0	1.9
Partial denture		0.0	0.0	0.0	2.8	4.6	3.7	11.5	9.3	10.4
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.6
Full removal Denture		0.0	0.0	0.0	0.0	0.0	0.0	3.5	3.1	3.3
Region 2	n=	157	158	315	185	134	319	153	158	311
With Prostheses present		0.0	0.0	0.0	0.8	0.5	0.7	3.6	3.9	3.8
Bridge or more than one bridge		0.0	0.0	0.0	0.8	0.5	0.7	0.0	1.0	0.5
Partial denture		0.0	0.0	0.0	0.0	0.0	0.0	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 removal Denture		0.0	0.0	0.0	0.0	0.0	0.0	3.6	2.9	3.3
Region 3	n=	27	28	55	32	31	63	31	31	62
With Prostheses present		0.0	0.0	0.0	6.3	3.2	4.8	9.7	12.9	11.3
Bridge or more than one bridge		0.0	0.0	0.0	3.1	0.0	1.6	0.0	0.0	0.0
Partial denture		0.0	0.0	0.0	0.0	3.2	1.6	0.0	3.2	1.6
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	1.6
Full removal Denture		0.0	0.0	0.0	3.1	0.0	1.6	9.7	6.5	8.1
Region 4	n=	123	113	236	124	112	236	119	117	236
With Prostheses present		0.0	0.0	0.0	1.6	5.4	3.5	13.4	19.7	16.6
Bridge or more than one bridge		0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0
Partial denture		0.0	0.0	0.0	0.8	4.5	2.7	3.4	11.1	7.3
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removal Denture		0.0	0.0	0.0	0.0	0.9	0.5	10.1	8.5	9.3
Region 5	n=	151	138	289	151	165	316	160	142	302
With Prostheses present		0.0	0.0	0.0	1.9	4.1	3.0	8.4	2.2	5.3
Bridge or more than one bridge		0.0	0.0	0.0	0.0	1.2	0.6	1.4	0.8	1.1
Partial denture		0.0	0.0	0.0	1.3	2.4	1.9	2.0	0.8	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 removal Denture		0.0	0.0	0.0	0.6	0.6	0.6	5.1	0.7	2.9
Region 6	n=	148	128	276	138	162	300	153	138	291
With Prostheses present		0.0	0.0	0.0	4.0	6.2	5.1	2.1	9.9	6.0
Bridge or more than one bridge		0.0	0.0	0.0	1.2	0.0	0.6	0.0	0.0	0.0
Partial denture		0.0	0.0	0.0	2.8	5.5	4.2	0.0	0.4	0.2
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.4	0.2
Full removal Denture		0.0	0.0	0.0	0.0	0.3	0.2	2.1	9.1	5.6
Region 7	n=	148	129	277	135	155	290	127	150	277
With Prostheses present		0.0	0.0	0.0	5.6	4.7	5.2	7.7	12.4	10.1
Bridge or more than one bridge		0.0	0.0	0.0	1.4	0.4	0.9	0.0	0.4	0.2
Partial denture		0.0	0.0	0.0	3.7	3.9	3.8	2.0	6.4	4.2
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removal Denture		0.0	0.0	0.0	0.5	0.4	0.5	5.7	5.6	5.7
State Rural	n=	660	621	1281	669	676	1345	649	649	1298
With Prostheses present		0.0	0.0	0.0	1.9	5.1	3.5	10.1	9.4	9.8
Bridge or more than one bridge		0.0	0.0	0.0	0.2	0.8	0.5	0.3	0.3	0.3
Partial denture		0.0	0.0	0.0	1.4	3.9	2.7	5.3	6.1	5.7
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2
Full removal Denture		0.0	0.0	0.0	0.2	0.4	0.3	4.2	2.9	3.6
State Urban	n=	272	248	520	275	287	562	263	274	537
With Prostheses present		0.0	0.0	0.0	2.7	1.9	2.3	10.9	10.7	10.8
Bridge or more than one bridge		0.0	0.0	0.0	1.3	0.4	0.9	1.5	2.2	1.9
Partial denture		0.0	0.0	0.0	0.9	1.5	1.2	2.3	2.7	2.5
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.6	0.5
Full removal Denture		0.0	0.0	0.0	0.6	0.0	0.3	6.7	5.1	5.9
State Total		932	869	1801	944	963	1907	912	923	1835
With Prostheses present		0.0	0.0	0.0	2.3	4.3	3.3	10.9	10.6	10.8
Bridge or more than one bridge		0.0	0.0	0.0	0.7	0.6	0.7	0.6	0.9	0.8
Partial denture		0.0	0.0	0.0	1.2	3.4	2.3	4.5	5.4	5.0
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3
Full removal Denture		0.0	0.0	0.0	0.4	0.3	0.4	5.4	4.1	4.8

Note: For information on current status and need for full mouth removable dentures, please refer to Tables 6.24 and 6.25 respectively. present, please refer to

Table 6.20 Percent distribution of subjects with their prosthetic status (Lower arch) by age, sex, and geographical area. State : Tamil Nadu

Prosthetic Status (Lower)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	178	175	353	179	204	383	169	187	356
Prostheses present		0.0	0.0	0.0	4.4	8.3	6.4	16.0	12.1	14.1
Bridge or more than one bridge		0.0	0.0	0.0	0.6	0.5	0.6	1.2	1.5	1.4
Partial denture		0.0	0.0	0.0	3.8	7.8	5.8	9.7	7.0	8.4
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.6
Full removal Denture		0.0	0.0	0.0	0.0	0.0	0.0	4.0	3.6	3.8
Region 2	n=	157	158	315	185	134	319	153	158	311
Prostheses present		0.0	0.0	0.0	0.0	0.0	0.0	5.6	3.8	4.7
Bridge or more than one bridge		0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.4	1.2
Partial denture		0.0	0.0	0.0	0.0	0.0	0.0	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	0.4	0.2
Full removal Denture		0.0	0.0	0.0	0.0	0.0	0.0	3.6	2.9	3.3
Region 3		27.0	28.0	55	32.0	31.0	63	31.0	31.0	62
Prostheses present		0.0	0.0	0.0	6.3	12.9	9.6	6.5	12.9	9.7
Bridge or more than one bridge		0.0	0.0	0.0	0.0	3.2	1.6	0.0	0.0	0.0
Partial denture		0.0	0.0	0.0	3.1	9.7	6.4	0.0	3.2	1.6
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removal Denture		0.0	0.0	0.0	3.1	0.0	1.6	6.5	9.7	8.1
Region 4	n=	123	113	236	124	112	236	119	117	236
Prostheses present		0.0	0.0	0.0	2.4	11.6	7.0	15.1	23.9	19.5
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	2.4	10.7	6.6	4.2	14.5	9.4
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removal Denture		0.0	0.0	0.0	0.0	0.9	0.5	10.9	9.4	10.2
Region 5	n=	151	138	289	151	165	316	160	142	302
Prostheses present		1.4	0.0	0.7	1.3	2.9	2.1	7.1	1.5	4.3
Bridge or more than one bridge		1.4	0.0	0.7	0.0	0.6	0.3	1.4	0.8	1.1
Partial denture		0.0	0.0	0.0	0.6	1.8	1.2	0.6	0.0	0.3
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removal Denture		0.0	0.0	0.0	0.6	0.6	0.6	5.1	0.7	2.9
Region 6	n=	148	128	276	138	162	300	153	138	291
Prostheses present		0.0	0.0	0.0	4.3	3.4	3.9	2.1	11.0	6.6
Bridge or more than one bridge		0.0	0.0	0.0	3.5	1.2	2.4	0.0	0.0	0.0
Partial denture		0.0	0.0	0.0	0.8	1.9	1.4	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	0.4	0.2
Full removal Denture		0.0	0.0	0.0	0.0	0.3	0.2	2.1	10.6	6.4
Region 7	n=	148	129	277	135	155	290	127	150	277
Prostheses present		0.4	0.0	0.2	2.8	2.4	2.6	4.8	8.8	6.8
Bridge or more than one bridge		0.4	0.0	0.2	0.0	0.0	0.0	0.5	1.2	0.9
Partial denture		0.0	0.0	0.0	2.8	1.2	2.0	0.5	3.2	1.9
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Full removal Denture		0.0	0.0	0.0	0.0	1.2	0.6	3.8	4.4	4.1
State Rural		660	621	1281	669	676	1345	649	649	1298
Prostheses present		0.2	0.0	0.1	2.1	6.3	4.2	10.2	9.5	9.9
Bridge or more than one bridge		0.2	0.0	0.1	0.3	0.5	0.4	0.7	0.5	0.6
Partial denture		0.0	0.0	0.0	1.6	5.4	3.5	4.9	5.7	5.3
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.3
Full removal Denture		0.0	0.0	0.0	0.2	0.4	0.3	4.4	3.1	3.8
State Urban	n=	272	248	520	275	287	562	263	274	537
Prostheses present		0.3	0.0	0.2	2.9	5.3	4.1	9.8	9.6	9.7
Bridge or more than one bridge		0.3	0.0	0.2	0.2	0.8	0.5	1.8	1.1	1.5
Partial denture		0.0	0.0	0.0	2.1	4.5	3.3	1.2	2.3	1.8
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.2
Full removal Denture		0.0	0.0	0.0	0.6	0.0	0.3	6.4	6.2	6.3
State Total	n=	932	869	1801	944	963	1907	912	923	1835
Prostheses present		0.2	0.0	0.1	2.5	6.5	4.5	10.6	10.3	10.5
Bridge or more than one bridge		0.2	0.0	0.1	0.3	0.6	0.5	0.9	0.6	0.8
Partial denture		0.0	0.0	0.0	1.8	5.5	3.7	4.0	5.0	4.5
Both Bridge and partial denture		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.2
Full removal Denture		0.0	0.0	0.0	0.4	0.3	0.4	5.3	4.6	5.0

Note: For information on current status and need for full mouth removable dentures, please refer to Tables 6.24 and 6.25 respectively. present, please refer to

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

Prosthetic status (Full mouth removable dentures)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	172	169	341	176	195	371	163	177	340
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.0	0.0	0.0	3.6	3.3	3.5
Region 2	n=	156	156	312	182	134	316	153	157	310
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.0	0.0	0.0	3.6	2.9	3.3
Region 3	n=	26	28	54	32	30	62	31	30	61
% subjects with full mouth removable dentures		0.0	0.0	0.0	3.1	0.0	1.6	6.5	6.7	6.6
Region 4	n=	122	112	234	122	110	232	118	117	235
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.0	0.9	0.5	10.2	7.7	9.0
Region 5	n=	146	136	282	145	160	305	158	135	293
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.7	0.6	0.7	5.1	0.7	2.9
Region 6	n=	148	127	275	137	161	298	152	137	289
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.0	0.3	0.2	2.1	9.1	5.6
Region 7	n=	148	128	276	133	154	287	127	150	277
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.0	0.0	0.0	3.8	4.4	4.1
State Rural	n=	653	613	1266	661	662	1323	642	637	1279
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.2	0.4	0.3	4.2	2.8	3.5
State Urban	n=	265	243	508	266	282	548	260	266	526
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.6	0.0	0.3	6.0	5.3	5.7
State Total	n=	918	856	1774	927	944	1871	902	903	1805
% subjects with full mouth removable dentures		0.0	0.0	0.0	0.4	0.3	0.4	5.2	4.0	4.6

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

Prosthetic Need (Upper)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	178	175	353	179	204	383	169	187	356
With Prosthetic need		2.1	0.0	1.1	15.7	20.1	17.9	50.3	46.2	48.3
Need for one unit prosthesis		1.6	0.0	0.8	8.6	9.8	9.2	15.7	13.2	14.5
Need for multi unit prosthesis		0.0	0.0	0.0	3.9	4.4	4.2	14.5	14.1	14.3
Need for combination of one and/or MUP		0.5	0.0	0.3	3.2	5.9	4.6	5.3	2.6	4.0
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	14.7	16.3	15.5
Region 2	n=	157	158	315	185	134	319	153	158	311
With Prosthetic need		1.0	0.0	0.5	12.5	16.3	14.4	66.7	55.6	61.2
Need for one unit prosthesis		1.0	0.0	0.5	7.6	7.3	7.5	8.2	5.2	6.7
Need for multi unit prosthesis		0.0	0.0	0.0	4.8	8.5	6.7	20.1	18.3	19.2
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	5.6	2.7	4.2
Need for full prosthesis		0.0	0.0	0.0	0.0	0.5	0.3	32.8	29.3	31.1
Region 3	n=	27	28	55	32	31	63	31	31	62
With Prosthetic need		0.0	0.0	0.0	9.4	3.2	6.3	16.1	25.8	21.0
Need for one unit prosthesis		0.0	0.0	0.0	3.1	0.0	1.6	3.2	9.7	6.5
Need for multi unit prosthesis		0.0	0.0	0.0	3.1	3.2	3.2	3.2	9.7	6.5
Need for combination of one and/or MUP		0.0	0.0	0.0	3.1	0.0	1.6	0.0	0.0	0.0
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	9.7	6.5	8.1
Region 4	n=	123	113	236	124	112	236	119	117	236
With Prosthetic need		1.6	0.0	0.8	10.5	9.8	10.2	46.2	40.2	43.2
Need for one unit prosthesis		0.8	0.0	0.4	5.7	7.2	6.5	8.4	11.1	9.8
Need for multi unit prosthesis		0.8	0.0	0.4	3.2	0.9	2.1	6.7	7.7	7.2
Need for combination of one and/or MUP		0.0	0.0	0.0	1.6	0.9	1.3	0.8	3.4	2.1
Need for full prosthesis		0.0	0.0	0.0	0.0	0.9	0.5	30.3	17.9	24.1
Region 5	n=	151	138	289	151	165	316	160	142	302
With Prosthetic need		1.3	2.2	1.8	16.2	30.8	23.5	63.4	63.5	63.5
Need for one unit prosthesis		1.3	0.7	1.0	9.0	9.7	9.4	7.4	2.7	5.1
Need for multi unit prosthesis		0.0	0.7	0.4	7.2	15.2	11.2	19.5	22.2	20.9
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	3.5	1.8	3.6	8.6	6.1
Need for full prosthesis		0.0	0.8	0.4	0.0	2.4	1.2	32.9	30.0	31.5
Region 6	n=	148	128	276	138	162	300	153	138	291
With Prosthetic need		3.1	2.4	2.8	36.9	48.2	42.6	79.8	82.0	80.9
Need for one unit prosthesis		3.1	2.0	2.6	17.8	12.2	15.0	8.0	7.6	7.8
Need for multi unit prosthesis		0.0	0.0	0.0	10.2	24.1	17.2	28.3	20.1	24.2
Need for combination of one and/or MUP		0.0	0.4	0.2	8.9	11.3	10.1	14.9	24.6	19.8
Need for full prosthesis		0.0	0.0	0.0	0.0	0.6	0.3	28.6	29.6	29.1
Region 7	n=	148	129	277	135	155	290	127	150	277
With Prosthetic need		1.7	5.9	3.8	40.5	32.2	36.4	82.7	73.5	78.1
Need for one unit prosthesis		1.7	3.4	2.6	11.9	11.5	11.7	10.6	10.2	10.4
Need for multi unit prosthesis		0.0	0.0	0.0	5.2	3.5	4.4	4.9	5.3	5.1
Need for combination of one and/or MUP		0.0	2.4	1.2	20.5	17.2	18.9	34.3	37.9	36.1
Need for full prosthesis		0.0	0.0	0.0	2.8	0.0	1.4	33.0	20.1	26.6
State Rural	n=	660	621	1281	669	676	1345	649	649	1298
With Prosthetic need		1.1	0.5	0.8	14.8	20.2	17.5	56.8	52.0	54.4
Need for one unit prosthesis		0.9	0.2	0.6	8.9	8.8	8.9	12.3	9.7	11.0
Need for multi unit prosthesis		0.2	0.2	0.2	4.6	6.3	5.5	16.1	14.2	15.2
Need for combination of one and/or MUP		0.0	0.0	0.0	1.3	3.9	2.6	4.4	4.5	4.5
Need for full prosthesis		0.0	0.0	0.0	0.0	1.1	0.6	23.9	23.7	23.8
State Urban	n=	272	248	520	275	287	562	263	274	537
With Prosthetic need		2.1	0.5	1.3	13.8	18.9	16.4	52.2	48.0	50.1
Need for one unit prosthesis		1.7	0.1	0.9	6.2	7.2	6.7	6.1	6.8	6.5
Need for multi unit prosthesis		0.0	0.0	0.0	4.9	9.2	7.1	13.8	17.2	15.5
Need for combination of one and/or MUP		0.4	0.0	0.2	2.6	2.5	2.6	5.1	4.6	4.9
Need for full prosthesis		0.0	0.3	0.2	0.0	0.0	0.0	27.2	19.4	23.3
State Total	n=	932	869	1801	944	963	1907	912	923	1835
With Prosthetic need		1.4	0.4	0.9	14.5	19.4	17.0	54.2	50.4	52.3
Need for one unit prosthesis		1.2	0.2	0.7	8.0	8.2	8.1	10.2	9.4	9.8
Need for multi unit prosthesis		0.1	0.1	0.1	4.8	7.1	6.0	14.7	15.1	14.9
Need for combination of one and/or MUP		0.1	0.0	0.1	1.7	3.4	2.6	4.5	4.1	4.3
Need for full prosthesis		0.0	0.1	0.1	0.0	0.7	0.4	24.8	21.8	23.3

Note : For information on current status and need for full mouth removable dentures, please refer to Tables 6.24 and 6.25 respectively.

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

Prosthetic Need (Lower)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	178	175	353	179	204	383	169	187	356
With Prosthetic need		3.5	2.9	3.2	17.9	25.7	21.8	48.4	46.4	47.4
Need for one unit prosthesis		2.9	1.2	2.1	9.2	16.4	12.8	15.0	16.8	15.9
Need for multi unit prosthesis		0.6	1.2	0.9	3.9	2.5	3.2	13.2	9.3	11.3
Need for combination of one and/or MUP		0.0	0.5	0.3	4.8	6.8	5.8	6.6	5.1	5.9
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	13.6	15.2	14.4
Region 2	n=	157	158	315	185	134	319	153	158	311
With Prosthetic need		2.0	0.0	1.0	16.9	26.1	21.5	70.0	61.2	65.6
Need for one unit prosthesis		2.0	0.0	1.0	9.7	10.7	10.2	8.0	4.5	6.3
Need for multi unit prosthesis		0.0	0.0	0.0	6.1	14.8	10.5	26.2	25.1	25.7
Need for combination of one and/or MUP		0.0	0.0	0.0	1.1	0.0	0.6	5.1	3.2	4.2
Need for full prosthesis		0.0	0.0	0.0	0.0	0.5	0.3	30.7	28.4	29.6
Region 3	n=	27	28	55	32	31	63	31	31	62
With Prosthetic need		0.0	0.0	0.0	40.6	32.3	36.5	64.5	64.5	64.5
Need for one unit prosthesis		0.0	0.0	0.0	18.8	12.9	15.9	19.4	19.4	19.4
Need for multi unit prosthesis		0.0	0.0	0.0	18.8	12.9	15.9	32.3	35.5	33.9
Need for combination of one and/or MUP		0.0	0.0	0.0	3.1	3.2	3.2	0.0	3.2	1.6
Need for full prosthesis		0.0	0.0	0.0	0.0	3.2	1.6	12.9	6.5	9.7
Region 4	n=	123	113	236	124	112	236	119	117	236
With Prosthetic need		3.3	4.4	3.9	12.9	14.3	13.6	42.9	41.0	42.0
Need for one unit prosthesis		2.4	3.5	3.0	8.1	9.8	9.0	7.6	10.3	9.0
Need for multi unit prosthesis		0.8	0.9	0.9	3.2	1.8	2.5	5.0	6.0	5.5
Need for combination of one and/or MUP		0.0	0.0	0.0	1.6	1.8	1.7	0.8	5.1	3.0
Need for full prosthesis		0.0	0.0	0.0	0.0	0.9	0.5	29.4	19.7	24.6
Region 5	n=	151	138	289	151	165	316	160	142	302
With Prosthetic need		0.7	5.1	2.9	22.5	42.1	32.3	65.2	66.1	65.7
Need for one unit prosthesis		0.7	2.1	1.4	12.5	11.3	11.9	5.0	4.2	4.6
Need for multi unit prosthesis		0.0	1.5	0.8	10.0	23.5	16.8	22.0	20.6	21.3
Need for combination of one and/or MUP		0.0	0.7	0.4	0.0	4.9	2.5	4.9	9.1	7.0
Need for full prosthesis		0.0	0.8	0.4	0.0	2.4	1.2	33.2	32.3	32.8
Region 6	n=	148	128	276	138	162	300	153	138	291
With Prosthetic need		4.6	8.5	6.6	51.1	54.1	52.6	82.4	78.2	80.3
Need for one unit prosthesis		4.2	2.8	3.5	23.9	12.8	18.4	10.6	4.3	7.5
Need for multi unit prosthesis		0.0	4.4	2.2	13.9	27.2	20.6	24.9	21.6	23.3
Need for combination of one and/or MUP		0.4	1.3	0.9	13.3	13.5	13.4	18.3	22.6	20.5
Need for full prosthesis		0.0	0.0	0.0	0.0	0.6	0.3	28.5	29.6	29.1
Region 7	n=	148	129	277	135	155	290	127	150	277
With Prosthetic need		5.3	8.3	6.8	39.8	40.3	40.1	72.3	66.5	69.4
Need for one unit prosthesis		4.5	5.9	5.2	18.2	15.2	16.7	8.3	8.6	8.5
Need for multi unit prosthesis		0.0	0.0	0.0	5.2	3.6	4.4	3.9	5.7	4.8
Need for combination of one and/or MUP		0.9	2.4	1.7	15.0	21.5	18.3	28.8	32.8	30.8
Need for full prosthesis		0.0	0.0	0.0	1.4	0.0	0.7	31.2	19.3	25.3
State Rural	n=	660	621	1281	669	676	1345	649	649	1298
With Prosthetic need		2.3	3.3	2.8	17.1	27.8	22.5	55.0	53.6	54.3
Need for one unit prosthesis		1.8	2.0	1.9	10.2	13.6	11.9	9.8	11.6	10.7
Need for multi unit prosthesis		0.5	1.0	0.8	4.7	8.6	6.7	16.1	12.3	14.2
Need for combination of one and/or MUP		0.0	0.3	0.2	2.2	4.4	3.3	4.9	6.0	5.5
Need for full prosthesis		0.0	0.0	0.0	0.0	1.1	0.6	24.2	23.7	24.0
State Urban	n=	272	248	520	275	287	562	263	274	537
With Prosthetic need		2.5	1.5	2.0	25.5	31.2	28.4	65.9	58.5	62.2
Need for one unit prosthesis		2.5	0.2	1.4	12.0	11.9	12.0	11.4	8.2	9.8
Need for multi unit prosthesis		0.0	0.5	0.3	10.2	14.3	12.3	23.7	25.3	24.5
Need for combination of one and/or MUP		0.0	0.5	0.3	3.3	4.4	3.9	5.6	5.8	5.7
Need for full prosthesis		0.0	0.3	0.2	0.0	0.7	0.4	25.1	19.3	22.2
State Total		932	869	1801	944	963	1907	912	923	1835
With Prosthetic need		2.6	2.7	2.7	20.6	29.3	25.0	58.6	55.3	57.0
Need for one unit prosthesis		2.2	1.5	1.9	11.4	13.4	12.4	10.8	10.8	10.8
Need for multi unit prosthesis		0.4	0.9	0.7	6.9	10.5	8.7	18.5	17.2	17.9
Need for combination of one and/or MUP		0.0	0.3	0.2	2.3	4.4	3.4	5.1	5.6	5.4
Need for full prosthesis		0.0	0.1	0.1	0.0	1.0	0.5	24.3	21.6	23.0

Note: For information on current status and need for full mouth removable dentures, please refer to Tables 6.24 and 6.25 respectively.

Table 6.24. Percent subjects with need for full mouth removable denture (upper and lower arch) by age, sex and geographical area. State : Tamil Nadu

Prosthetic need (Full mouth removable dentures)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	172	170	342	176	194	370	162	178	340
% subjects needing full mouth removable dentures		0.0	0.0	0.0	0.0	0.0	0.0	13.5	15.4	14.5
Region 2	n=	150	150	300	175	131	306	149	150	299
% subjects needing full mouth removable dentures		0.0	0.0	0.0	0.0	0.5	0.3	28.2	28.9	28.6
Region 3	n=	23	27	50	31	30	61	31	30	61
% subjects needing full mouth removable dentures		0.0	0.0	0.0	0.0	0.0	0.0	9.7	6.7	8.2
Region 4	n=	122	111	233	122	110	232	116	117	233
% subjects needing full mouth removable dentures		0.0	0.0	0.0	0.0	0.9	0.5	28.4	17.1	22.8
Region 5	n=	143	135	278	142	161	303	157	136	293
% subjects needing full mouth removable dentures		0.0	0.8	0.4	0.0	2.4	1.2	30.2	30.7	30.5
Region 6	n=	148	127	275	137	161	298	151	135	286
% subjects needing full mouth removable dentures		0.0	0.0	0.0	0.0	0.7	0.4	25.3	25.6	25.5
Region 7	n=	147	128	275	133	154	287	127	150	277
% subjects needing full mouth removable dentures		0.0	0.0	0.0	1.5	0.0	0.8	28.8	17.7	23.3
State Rural	n=	646	608	1254	651	659	1310	635	630	1265
% subjects needing full mouth removable dentures		0.0	0.0	0.0	0.0	1.2	0.6	22.5	23.1	22.8
State Urban	n=	259	240	499	265	282	547	258	266	524
% subjects needing full mouth removable dentures		0.0	0.3	0.2	0.0	0.0	0.0	23.1	19.0	21.1
State Total	n=	905	848	1753	916	941	1857	893	896	1789
% subjects needing full mouth removable dentures		0.0	0.1	0.1	0.0	0.7	0.4	22.4	21.0	21.7

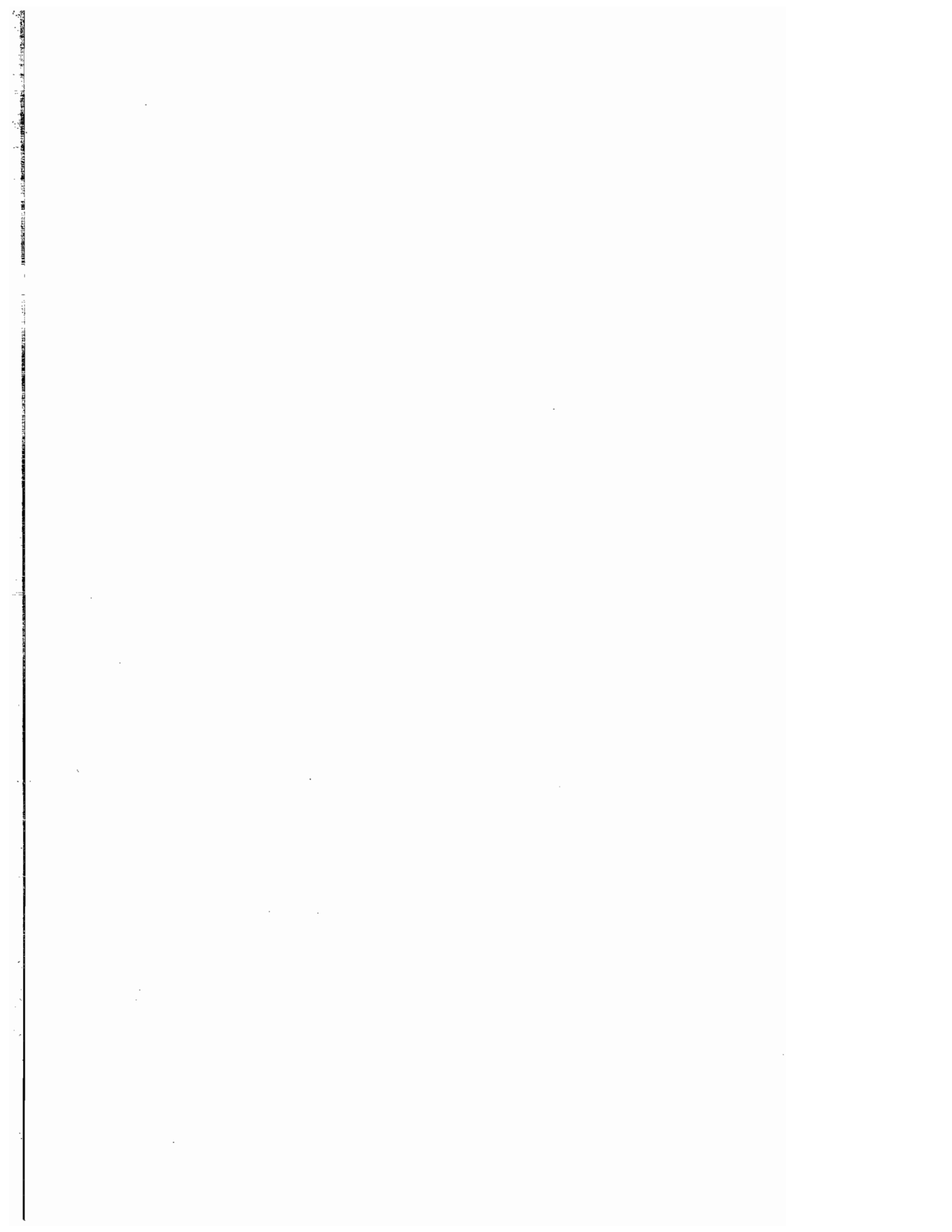
6.6.6 Community need for immediate care and referrals

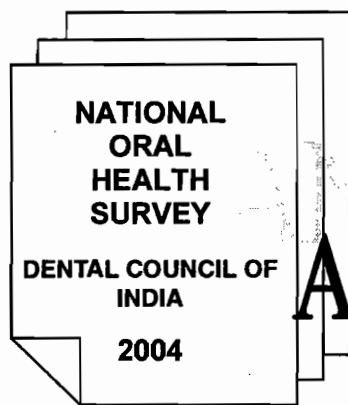
Table 6.25 presents the percent subjects with life threatening conditions, pain or infection, other conditions, and referrals made.

All the cases needing treatment were referred to the closest facility. Less than 0.1% needed immediate care which was life threatening.

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 : Tamil Nadu

Need For Care & Referral	n=	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	162	327	159	173	332	167	172	339	172	194	366	161	176	337
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	0.7	0.5	0.6
Pain or infection		0.0	0.0	0.0	0.7	0.0	0.4	0.6	0.0	0.3	0.0	0.5	0.3	2.0	0.6	1.3
Other condition		0.0	0.0	0.0	0.0	0.5	0.3	0.0	0.0	0.0	0.6	0.0	0.3	0.6	0.0	0.3
Referral		0.0	0.0	0.0	0.7	0.0	0.4	0.6	0.0	0.3	0.0	0.5	0.3	3.3	1.1	2.2
Region 2	n=	163	152	315	169	139	308	157	156	313	182	132	314	150	156	306
Life threatening condition		0.0	0.0	0.0	0.4	1.0	0.7	1.9	0.0	1.0	1.6	0.5	1.1	0.5	0.4	0.5
Pain or infection		0.0	0.0	0.0	0.0	1.0	0.5	1.5	0.4	1.0	2.5	1.1	1.8	0.5	0.4	0.5
Other condition		0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.4	0.7	0.0	1.2	0.6	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	0.5	0.3	0.0	0.0	0.0
Region 3	n=	28	30	58	31	29	60	26	28	54	32	31	63	31	31	62
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	0.0	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 4	n=	120	106	226	106	111	217	116	108	224	120	107	227	109	114	223
Life threatening condition		0.0	0.0	0.0	0.0	0.9	0.5	0.0	0.0	0.0	0.8	0.0	0.4	0.9	0.0	0.5
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	0.9	0.0	0.5
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	1.8	0.0	0.9
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	0.9	0.0	0.5
Region 5	n=	153	138	291	152	141	293	144	131	275	142	155	297	152	132	284
Life threatening condition		0.0	0.0	0.0	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.7
Pain or infection		1.3	0.0	0.7	0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.6	0.3	0.6	0.0	0.3
Other condition		0.0	0.0	0.0	0.6	0.8	0.7	0.0	0.0	0.0	0.7	0.6	0.7	0.0	0.0	0.0
Referral		0.6	0.0	0.3	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.6	0.3	0.6	0.0	0.3
Region 6	n=	134	140	274	139	140	279	148	128	276	136	161	297	151	137	288
Life threatening condition		0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.6
Pain or infection		0.0	0.0	0.0	1.8	1.1	1.5	0.0	0.4	0.2	0.8	1.0	0.9	4.6	2.0	3.3
Other condition		0.0	1.5	0.8	0.8	0.0	0.4	0.0	0.0	0.0	0.4	0.3	0.4	0.7	1.2	1.0
Referral		0.0	1.5	0.8	2.6	1.1	1.9	0.0	0.4	0.2	1.3	1.3	1.3	3.6	2.8	3.2
Region 7	n=	133	139	272	152	134	286	148	128	276	134	154	288	126	148	274
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	0.4	0.2
Pain or infection		0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.2	1.0	0.0	0.5	1.9	0.4	1.2
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	1.0	0.0	0.5	0.0	0.4	0.2
State Rural	n=	652	612	1264	636	613	1249	641	609	###	650	652	1302	624	627	1251
Life threatening condition		0.0	0.0	0.0	0.2	0.8	0.5	0.4	0.0	0.2	0.6	0.2	0.4	0.7	0.3	0.5
Pain or infection		0.4	0.0	0.2	0.3	0.5	0.4	0.5	0.2	0.4	0.1	0.9	0.5	1.7	0.6	1.2
Other condition		0.0	0.0	0.0	0.2	0.0	0.1	0.0	0.2	0.1	0.5	0.2	0.4	0.7	0.1	0.4
Referral		0.2	0.0	0.1	0.4	0.1	0.3	0.3	0.0	0.2	0.1	0.8	0.5	2.1	0.4	1.3
State Urban	n=	244	255	499	272	254	526	265	242	507	268	282	550	256	267	523
Life threatening condition		0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	0.7	0.0	0.4	0.7	0.4	0.6
Pain or infection		0.0	0.0	0.0	0.1	0.0	0.1	0.8	0.3	0.6	2.0	0.0	1.0	0.1	0.0	0.1
Other condition		0.0	0.1	0.1	0.0	0.8	0.4	0.8	0.0	0.4	0.0	0.7	0.4	0.0	0.0	0.0
Referral		0.0	0.1	0.1	0.1	0.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2
State Total		896	867	1763	908	867	1775	906	851	###	918	934	1852	880	894	1774
Life threatening condition		0.0	0.0	0.0	0.1	0.5	0.3	0.5	0.0	0.3	0.6	0.1	0.4	0.7	0.2	0.5
Pain or infection		0.2	0.0	0.1	0.3	0.2	0.3	0.6	0.2	0.4	0.8	0.5	0.7	1.2	0.3	0.8
Other condition		0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.1	0.2	0.3	0.4	0.4	0.5	0.0	0.3
Referral		0.1	0.0	0.1	0.3	0.1	0.2	0.2	0.0	0.1	0.0	0.5	0.3	1.5	0.4	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 Ratollikar,
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. Shiv Kumar

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

Mr. Praveen Kumar

Mr. C.L. Bhatia

Mr. S. S. Kanyal

Mr. K. V. Abraham

Mr. Puneet Bansal

Mr. P. K. De

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 Brahmaputra	02	Kamrup
		Upper Brahmaputra	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

LIST OF PARTICIPATING DENTAL COLLEGES

1.	Regional Dental College, Guwahati, (Assam)
2.	Govt. Dental College & Hospital, Ahmedabad, (Gujarat)
3.	Maulana Azad Dental College & Hospital, MAMC, 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 & Hospita, Pune
10.	Dental Wing, S.C.B. Medical College, Cuttak (Orissa)
11.	Mahatma Gandhi Dental College & Hospital, Pondicherry
12.	Faculty of Dental Science, C. S. M. S. S. University, Lucknow
13.	College of Dentistry, Indore (M.P)
14.	Sri Sai College of Dental Surgery, Vikarabad – 501 101 (R.R. Dist. – A.P.)
15.	Govt. Dental College, Thiruvananthapuram, Kerala
16.	Govt. Dental College, Calicut, Kerala
17.	Govt. Dental College, Kottayam. Kerala.

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 (TAMIL NADU)

A. REGIONAL COORDINATOR (Tamilnadu & Pondicherry)

Dr. M.B. Aswath Narayanan, B.Sc., MDS
Professor and Head

B. SUPERVISORS (3)

I. TAMIL NADU

- i) Thanjavur
- ii) Chennai
- iii) Salem

(1) Dr. V. Sivakumar, MDS
Associate Professor

- i) Tirunelveli
- ii) Coimbatore

(2) Dr. J. Chandrasekhar, MDS.
Assistance Proffessor

- i) Kanyakumari
- ii) Nilgris

(3) Dr. A.G. Hari Kiran MDS.
Assistant Professor

C. TEAMS

RAGAS DENTAL COLLEGE

1. K. Shanthini
2. E. Lalitha Prabha
3. R. Savithra
4. G. Mahalakshmi
5. M. Purushothama Narayanan
6. J. Jayanth Prasad Kumar
7. M. Deepashri
8. N.T. Vicsagan
9. V.M. Jayanthi
10. Santhosh Rohira
11. Muthusivasubramanyam
12. Kameswaran
13. Sheik Dawood

RAMACHANDRA DENTAL COLLEGE

1. Senthil
2. Savitha
3. Sindhu
4. Subhulakshmi Hari
5. Seethalakshmi
6. Sarulatha
7. Malarvizhi
8. Mahendrael
9. Sakhanbari
10. Shanthini
11. Palaniappan
12. Supriya
13. Renugalakshmi
14. Umadevi
15. Aneel
16. Anjankumar
17. Anitha
18. Anubama
19. Arthi
20. Prathiba
21. Praveen Mathan
22. Priya S
23. Priya B

R.V. DENTAL COLLEGE

1. Uday
2. Rajiv
3. Sudhakar
4. Akhilesh
5. K.R. Ajay
6. Vimal
7. Prem Kishore
8. Soumyashri
9. Prabha
10. Vanitha
11. Vinodhini
12. Chandraiah
13. Shalini Kalia
14. Savitha

DENTAL COUNCIL OF INDIA, NEW DELHI
भारतीय दंत चिकित्सा परिषद, नई दिल्ली

ANNEXURE - 7

NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING 2002

राष्ट्रीय मुख स्वास्थ्य सर्वेक्षण तथा फ्लोराइड मैपिंग 2002

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

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	(DAY)	(MONTH)	0	2	(YEAR)		कार्म संख्या	1	0	
STATE / राज्य	<input type="text"/>					(6-7)	TEAM NO.	<input type="text"/>		(3-5)
ZONE / क्षेत्र (जोन)	<input type="text"/>					(8-9)	दल संख्या (टीम)	<input type="text"/>		
DISTRICT / जिला	<input type="text"/>					(10)				

NAME OF VILLAGE / URBAN BLOCK _____ (11-12)
गांव/शहरी ब्लॉक 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 _____ (NAME) / नाम (SIGN) / हस्ताक्षर
साक्षात्कार कर्ता का नाम

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

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

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

FORM NO.

फार्म संख्या

1

1

A. SOCIO-ECONOMIC & DEMOGRAPHIC CHARACTERISTICS OF THE FAMILY

अ. परिवार की सामाजिक-आर्थिक विशेषताएं

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	Self/ स्वयं 1 FATHER/ पिता 2 MOTHER/ माता 3 BROTHER/ भाई 4 OTHER/ अन्य 5
2.	Age of Respondent (in completed years) उत्तरदाता की आयु (पूर्ण वर्षों में)	Yrs./ वर्ष
3.	Sex of the Respondent उत्तरदाता का लिंग	M=1/ पु. M=2/ स्त्री
4.	Religion of the Household धर्म	Hindu/ हिन्दू 1 Muslim/ मुस्लिम 2 Sikh/ सिख 3 Christian/ ईसाई 4 Others/ अन्य 5
5.	Caste of the Household जाति	SC/ अनु. जाति 1 ST/ आदिम जाति 2 OBC/ अन्य पिछड़ा वर्ग 3 Others/ अन्य 4
6.	What is the highest educational level completed by the Head of the HH? मुखिया का शिक्षा स्तर	Illiterate अशिक्षित 1 High School 4 Primary 2 Graduate 5 Middle 3 Professional 6 मिडिल व्यवसायिक
7.	How much is the TOTAL Monthly Expenditure of the Household? घर का कुल मासिक व्यय कितना है?	TOTAL Rs. कुल रु.
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

(17-18)

(19)

(20)

(21)

(22)

(23-27)

(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 / पुरु F / स्त्री (29-30)
10.	No. of persons 5 years old पांच वर्ष की आयु के व्यक्तियों की संख्या	M / पुरु F / स्त्री (31-32)
11.	No. of persons 12 years old बारह वर्ष की आयु के व्यक्तियों की संख्या	M / पुरु F / स्त्री (33-34)
12.	No. of persons 15 years old पन्द्रह वर्ष की आयु के व्यक्तियों की संख्या	M / पुरु F / स्त्री (35-36)
13.	No. of persons 35-44 years old 35-44 वर्ष की आयु के व्यक्तियों की संख्या	M / पुरु F / स्त्री (37-38)
14.	No. of persons 65-74 years old 65-74 वर्ष की आयु के व्यक्तियों की संख्या	M / पुरु 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 चिह्न लगायें)	Wheat / गेहूँ 1 Rice / चावल 2 Maize / मक्का 3 Jowar / ज्वार 4 Bajra / बाजरा 5 Others / अन्य 6
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 चिह्न लगायें)	Pipe/Tap / पाईप/टोटी 1 Tubewell/Handpump / ट्यूबवैल 2 Draw Well / हैंड पम्प 3 Pond / कूआँ 4 River / नदी 5 Others / अन्य 6
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?	<input type="text"/>
18.	Is your family predominantly Veg./Non-Veg. क्या आपका परिवार मुख्य रूप से शाकाहारी/सामिश्र है? (Tick One)/ (एक पर चिह्न लगायें)	Veg. / शाकाहारी 1 Non-Veg. / सामिश्र 2

FORM NO.

1

2

फार्म संख्या

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 characteristics of the individual
अ. व्यक्ति की सामाजिक विशेषताएं

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										(45-49) N.A. N.A. N.A.
21.	Age of Individual (Interviewee) (in completed years) / साक्षात्कार देने वाले की आयु (पूर्ण वर्षों में)											(50-59) 5 Yrs. 12 Yrs. 15 Yrs.
22.	Sex / लिंग	M=1 पुरुष-1 F=2 स्त्री-2										(60-64) M = 1 F = 2 M = 1 F = 2 M = 1 F = 2
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										(65-69) NOT TO BE ASKED (MENTION CODE 1-6 AS APPLICABLE AGAINST EACH AGE GROUP)

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 व्हाइट-कोलर कार्य Skilled Worker 6 सीखा हुआ कर्मचारी Unskilled Worker 7 बिना सीखा हुआ कर्मचारी Other (Specify) 8 अन्य		A D	A S K E D				
25.	How often do you read a Newspaper? / आप समाचार-पत्र कब पढ़ते हैं?	Daily 1 प्रतिदिन Sometime 2 कभी-कभी Not at all 3 कभी नहीं		B E	B E				
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				
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	T T				
28.	How often do you watch Cinema in a Hall? / आप सिनेमा हाल में कब देखते हैं?	Once in 3 months 1 3 माह में एक बार Less often 2 बहुत कम Not at all 3 कभी नहीं		O N	O N				

(70-74)

(75-79)

(80-84)

(85-89)

(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
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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 Mouth/ मुँह 2 Can't Say/ कह नहीं सकता 3						(95-99)
30.	Did/does the interviewee have a habit of sucking or biting his/her fingers or Thumb? क्या आपको अपनी उँगली चूसने या दातों से दबाने की आदत है या थी? (देखें और लिखें)	No/ नहीं 1 Yes/ हाँ 2 Can't Say/ कह नहीं सकता 3						(100-104)
31.	Did/does the interviewee have a habit of thrusting his/her tongue on his/her teeth? (Observe & Record) / क्या आपको अपनी जीभ दातों पर दबाने की आदत है या थी? (देखें और लिखें)	No/ नहीं 1 Yes/ हाँ 2 Can't Say/ कह नहीं सकता 3						(105-109)
32.	Did/does the interviewee have a habit of biting 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 Yes/ हाँ 2 Can't Say/ कह नहीं सकता 3						(110-114)
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 In Sleep/ नींद में 2 In Stress/ दबाव में 3 Can't Say/ कह नहीं सकता 4						(115-119)

C. Eating Habits

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 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						(120-124)
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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..... 1 भोजन के समय In Between Meals 2 भोजन के समय के बीच During & In Between Meals भोजन के समय व बीच में N.A. / लागू नहीं होता 4	1 2 3 4					

(125-129)

D. Oral Hygiene Practices

द. मुख की सफाई

S. No.	Question	Response	Code	5 Yrs.	12 Yrs.	15 Yrs.	35-44 Yrs.	65-74 Yrs.
36.	How do you generally clean your teeth? सामान्यतः आप अपने दांत कैसे साफ करते हैं?	Finger/ उंगली से 1 Brush/ ब्रश से 2 Datum/ दातुन 3 Others (Specify) 4 अन्य	1 2 3 4					
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 1 Twice/ दिन में दो बार 2 After every meal 3 प्रति भोजन के बाद Don't clean every day 4 प्रतिदिन साफ नहीं करते	1 2 3 4					
38.	What are your timings of cleaning teeth ?/ दांत साफ करने का समय क्या है?	Morning only/ केवल प्रातःकाल 1 Night only (before going to bed) 2 केवल रात में सोने से पहले Morning & Night 3 प्रातःकाल व रात After meals 4 भोजन के बाद Others (Specify) 5 अन्य	1 2 3 4 5					
39.	What material do you generally use to clean teeth ?/ सामान्यतः आप अपने दांत किस चीज से साफ करते हैं?	Toothpaste 1 दूधपेस्ट Toothpowder 2 दूधपाउडर Others (Specify) 3 अन्य	1 2 3					

(130-134)

(135-139)

(140-144)

(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.	<p>Check tooth paste/powder used and record whether it is fluoridated or non-fluoridated?</p> <p>प्रयुक्त किये गए दूध पेस्ट/पाउडर को चैक करें व लिखें वह फ्लोराइड-युक्त है या फ्लोराइड रहित?</p>	<p>Fluoridated 1 फ्लोराइड-युक्त</p> <p>Non-Fluoridated 2 फ्लोराइड-रहित</p> <p>Can't Say 3 कह नहीं सकता</p> <p>None 4 सर्वदा</p>						(150-154)
41.	<p>(Ask only if code in Q. 36 was 2.)</p> <p>How often do you change your toothbrush?</p> <p>आप अपना दूध ब्रश कितने समय बाद बदलते हैं?</p>	<p>1-3 months/ 1-3 माह 1</p> <p>4-6 months/ 4-6 माह 2</p> <p>6 + months/ 3 6 से अधिक</p> <p>NA (Not using/ 4 Brush)</p>						(155-159)
42.	<p>How often you rinse your mouth with water after eating? / क्या भोजन करने के बाद आप पानी से कुल्ला करते हैं।</p>	<p>Never 1 कभी नहीं</p> <p>Sometimes 2 कभी-कभी</p> <p>Always 3 सर्वदा</p>						(160-164)
43.	<p>Do you use any other oral hygiene aids? क्या आप मुँह साफ करने के लिए किसी अन्य साधन का इस्तेमाल करते हैं?</p> <p>(Tick as many as reported) (जितना बताएं सब लिखें)</p>	<p>Dental Floss 1 डेन्टल फ्लॉश</p> <p>Interdental Brush 2 इन्टरडेन्टल ब्रुश</p> <p>Toothpicks 3 दूध पिकस</p> <p>Fluoride Mouthrinse 4 फ्लोराइड माउथरिन्स</p> <p>Other 5</p> <p>Mouthwash/Rinse (Specify) अन्य माउथवॉश/रिन्स लिखें</p> <p>None/ कोई नहीं 6</p>						(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
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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 / हाँ Can't Say/ कह नहीं सकता	1 2 3						(185-189)
45.	What were or was the problem? यदि हाँ, तो समस्या क्या थी या है?	Dental decay दंत-क्षय Gum disease मसूड़ों की बीमारी Foul breath दुर्गन्धित सांस Bleeding gums मसूड़ों से खून बहना Trauma ट्रौमा (चोट) Abscess एब्ससेस (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?	None/ कोई नहीं Friend/Neighbour मित्र / पड़ोसी Relative/ रिश्तेदार Med. Practitioner मेडिकल प्रैक्टिशनर Pharmacist/ Chemist फार्मासिस्ट / कैमिस्ट Untrained Dentist अनट्रेण्ड डेन्टिस्ट Trained Dentist ट्रेण्ड डेन्टिस्ट Others (Specify) अन्य	1 2 3 4 5 6 7 8						(210-229)
	(Tick as many as reported) (जितना बताएं सब लिखें)								
	(Tick as many as reported) (जितना बताएं सब लिखें)								

(230-249)

(250-269)

(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
47.	<p>Are you suffering or have you ever suffered from one or more of the following: क्या आपको कभी निम्न बीमारियों थीं या हैं?</p> <p>(Tick as many as reported) (जितना बताएं सब लिखें)</p>	<p>None/ कोई नहीं 1</p> <p>Hypertension 2 हाईपरटेन्शन</p> <p>Diabetes 3 डायबिटीज</p> <p>Epilepsy 4 एपिलेप्सी</p> <p>Jaundice 5 जोन्डिस</p> <p>Asthma 6 अस्थमा</p> <p>Others (Specify) 7 अन्य</p> <p>Can't Say/ 8 कह नहीं सकता</p>						
48.	<p>What is or are the availability of dental treatment facilities in your area? / आपके क्षेत्र में दंत-चिकित्सा संस्थानी क्या सुविधाएं उपलब्ध हैं?</p> <p>(Tick as many as reported) (जितना बताएं सब लिखें)</p>	<p>None/ कोई नहीं 1</p> <p>Govt. Hosp./ 2 Dispensary सरकारी हस्पताल/ डिस्पेंसरी</p> <p>Private Hospitals 3 निजी हस्पताल</p> <p>Private Practitioner 4 प्राइवेट प्रैक्टिशनर</p> <p>Don't Know 5 नहीं जानते</p>						
49.	<p>How accessible are the Oral health facilities with available transport? उपलब्ध परिवहन द्वारा मुख-स्वास्थ्य सुविधाओं तक पहुंच का समय।</p>	<p>Less than 1/2 hour 1 आधा घण्टा से कम</p> <p>1/2 to 1 hour 2 आधा से 1 घण्टा</p> <p>> 1 hour 3 1 घण्टा से अधिक</p> <p>Can't Say 4 कह नहीं सकता</p>						

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
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F. Awareness and Knowledge of Dental Health Problems

एफ. दंत-स्वास्थ्य समस्याओं की जानकारी व जागरूकता

50.	<p><i>What, in your opinion, are the common problems associated with mouth and teeth? /</i> आपकी राय में मुख व दांतों से सम्बन्धित सामान्य समस्याएँ क्या हैं?</p> <p><i>(Tick as many as reported)</i> (जितना बताएं सब लिखें)</p>	<p>Tooth Decay 1 दंत-क्षय</p> <p>Gum Disease 2 मसूड़ों की बीमारी</p> <p>Bad Smell 3 दुर्गन्ध</p> <p>Crooked teeth 4 टेढ़े-मेढ़े दांत</p> <p>Mouth Ulcers 5 मुख का अल्सर</p> <p>Stained teeth 6 गन्दे दांत</p> <p>Others (Specify) 7 अन्य</p> <p>Don't Know 8 नहीं जानता</p>							
51.	<p><i>What, in your opinion, are the major factors which cause dental problems? /</i> आपकी राय में, किन मुख्य कारणों से दांतों की समस्याएँ पैदा होती हैं?</p> <p><i>(Tick as many as reported)</i> (जितना बताएं सब लिखें)</p>	<p>Eating sweets 1 icecreams/chocolates मिठाई / आइसक्रीम / चाकलेट खाना</p> <p>Not brushing 2 regularly नियमित रूप से ब्रुश न करना</p> <p>Not rinsing 3 पानी से मुख साफ न करना</p> <p>Consuming 4 Tobacco products/ तम्बाकू, उत्पाद खाना</p> <p>Others (Specify) 5 अन्य</p> <p>Don't Know 6 नहीं जानता</p>							

(275-294)

(295-314)

(315-334)

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?	<p>Not consuming tobacco products / तम्बाकू उत्पादों का इस्तेमाल न करके</p> <p>Regular cleaning of teeth with brush ब्रुश द्वारा दांतों की नियमित सफाई</p> <p>Visiting dentist regularly दंत-चिकित्सक द्वारा नियमित जांच</p> <p>Using Fluoride Toothpaste फ्लोराइड टूथ-पेस्ट का इस्तेमाल</p> <p>Avoiding sweets icecreams/chocolates मिठाई, आइसक्रीम व चाकलेट छोड़कर</p> <p>Others (Specify) 6 अन्य तरीके</p> <p>Don't Know 7 नहीं जानता</p>	1 2 3 4 5 6 7					
	(Tick as many as reported) (जितना बताएं सब लिखें)			D	E	K	S	A

G. Tobacco Smoking and Chewing Habits

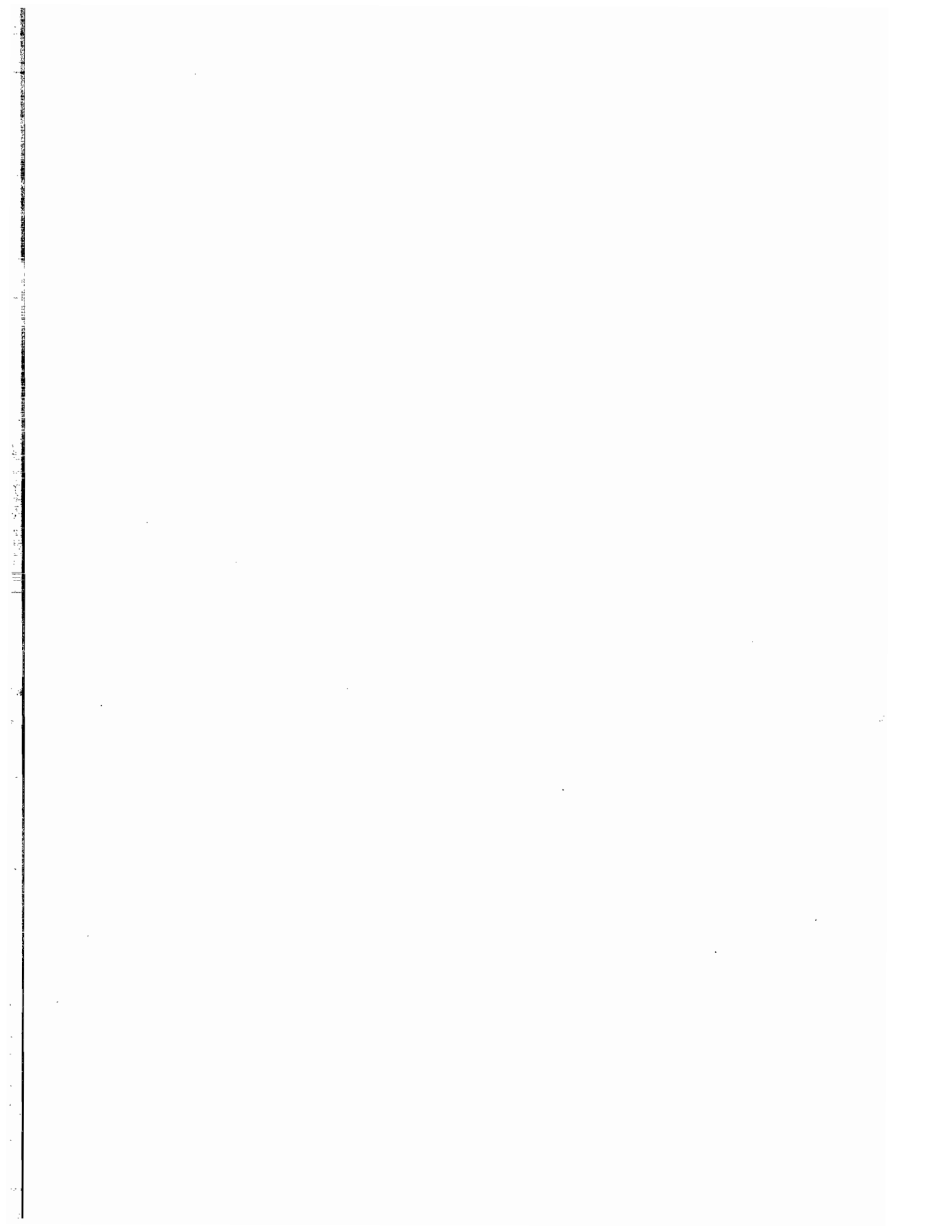
जी. तम्बाकू चबाने व पीने की आदतें

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
53.	Do you smoke? / क्या आप धूम्रपान करते हैं?	<p>No/ नहीं 1</p> <p>Yes/ हाँ 2</p>	1 2					
	(Tick as many as reported) (जितना बताएं सब लिखें)			B	O	T	N	
54.	What do you smoke? / आप कौन सा धूम्रपान करते हैं?	<p>Chillum/ चिलम 1</p> <p>Hookah/ हुक्का 2</p> <p>Cigars/ सिगार 3</p> <p>Cigarettes/ सिगरेट 4</p> <p>Bidis/ बिड़ी 5</p> <p>Others (Specify)/ अन्य 6</p>	1 2 3 4 5 6					
	(Tick as many as reported) (जितना बताएं सब लिखें)							

(335-339)

(340-359)

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	(360-364)
55.	Whether it is with or without Filter? क्या यह फिल्टर सहित है या फिल्टर रहित?	With Filter/ फिल्टर युक्त 1 Without Filter/ फिल्टर रहित 2 Don't Know/ नहीं जानता 3		D					(365-369)
56.	How many times a day do you normally Smoke? / एक दिन में सामान्यतः कितनी बार धूम्रपान करते हैं?	< 5 times/ पांच बार तक 1 5-10 times/ पांच से दस बार 2 10-20 times/ दस से बीस बार 3 > 20 times/ बीस से अधिक 4		F					(370-374)
57.	Did you or do you chew pan with tobacco? / क्या आप पान तम्बाकू के साथ चबाते हैं या चबाते थे?	No/ नहीं 1 Yes/ हाँ 2 Don't Know/ पता नहीं 3		S					(375-379)
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 1 Yes/ हाँ 2 Don't Know/ पता नहीं 3		A					(380-384)
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 रहे हैं? (एक पर टिक लगायें)	< 5 Yrs./ 5 साल से 1 5-10 Yrs./ 5-10 साल से 2 > 10 Yrs./ 10 साल से अधिक 3		F					(385-389)
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 1 5-10 times/ 5-10 बार 2 > 10 times/ 10 से अधिक 3		O					(390-394)
61.	Did you or do you take Alcohol? / क्या आप अल्कोहल (शराब) लेते थे या लेते हैं? (एक पर टिक लगायें)	No/ नहीं 1 Yes/ हाँ 2		T					(395-399)
62.	How often do you take Alcohol/ आप अल्कोहल (शराब) कितनी बार लेते हैं या लेते थे? (एक पर टिक लगायें)	Daily/ प्रतिदिन 1 3 times a week/ सप्ताह में 3 बार 2 Occasionally/ कभी-कभी 3 < 3 times a week/ सप्ताह में 3 बार से अधिक 4		O					



WHO ORAL HEALTH ASSESSMENT FORM (1997)

GENERAL INFORMATION

Name (29)

Date of birth (17) Year Month (20) Occupation (25) (30)

Age in years (21) (22) Geographical location (26) (27) **CONTRAINDICATION TO EXAMINATION**

Sex (M = 1, F = 2) (23) Location type : (28) Reason..... (31)

Ethnic group (24) 1 = Urban 0 = No
2 = Periurban 1 = yes
3 = Rural

OTHER DATA (specify and provide codes)

CLINICAL ASSESSMENT

EXTRA-ORAL EXAMINATION (32)

- 0 = Normal extra-oral appearance
- 1 = Ulceration, sores, erosions, fissures (head, neck, limbs)
- 2 = Ulceration, sores, erosions, fissures (nose, cheeks, chin)
- 3 = Ulceration, sores, erosions, fissures (commissures)
- 4 = Ulceration, sores, erosions, fissures (vermillion 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 ASSESSMENT

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 tumour (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

	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

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

*Not recorded under 15 years of age

*Not recorded under 15 years of age

DENTITION STATUS AND TREATMENT NEED

	55	54	53	52	51	61	62	63	64	65						
Crown (66)	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Root (82)																
Treatment (98)																

	85	84	83	82	81	71	72	73	74	75						
Crown (114)	48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38
Root (130)																
Treatment (146)																

Primary teeth Permanent teeth

Crown	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	4 Missing, as a result of caries
-	5	5 Missing, any other reason
F	6	6 Fissure sealant
G	7	7 Bridge abutment, special crown or veneer/implant
-	8	8 Unruptured tooth, (Crown) / unexposed root
T	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

Identification Number

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PROSTHETIC STATUS

- 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

Upper Lower
(162) (163)

PROSTHETIC NEED

- 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

Upper Lower
(164) (165)

DENTOFACIAL ANOMALIES

DENTITION

(166) (167)

Missing incisor, canine and premolar teeth-maxillary and mandibular - enter number of teeth

SPACE

(168)

(169)

(170)

(171)

(172)

Crowding in the incisal segments.

- 0 = No crowding
- 1 = One segment crowding
- 2 = Two segments crowding

Spacing in the incisal segments:

- 0 = No spacing
- 1 = One segment spaced
- 2 = Two segments spaced

Diastema in mm

Largest anterior maxillary irregularity in mm

Largest anterior mandibular irregularity in mm

OCCCLUSION

(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

NEED FOR IMMEDIATE CARE AND REFERRAL

Life-threatening condition

(177)

0 = Absent

Pain or infection

(178)

1 = Present

Other condition (specify).....

(179)

2 = Not recorded

Referral

0 = No

(180)

1 = Yes

9 = Not recorded

NOTES

