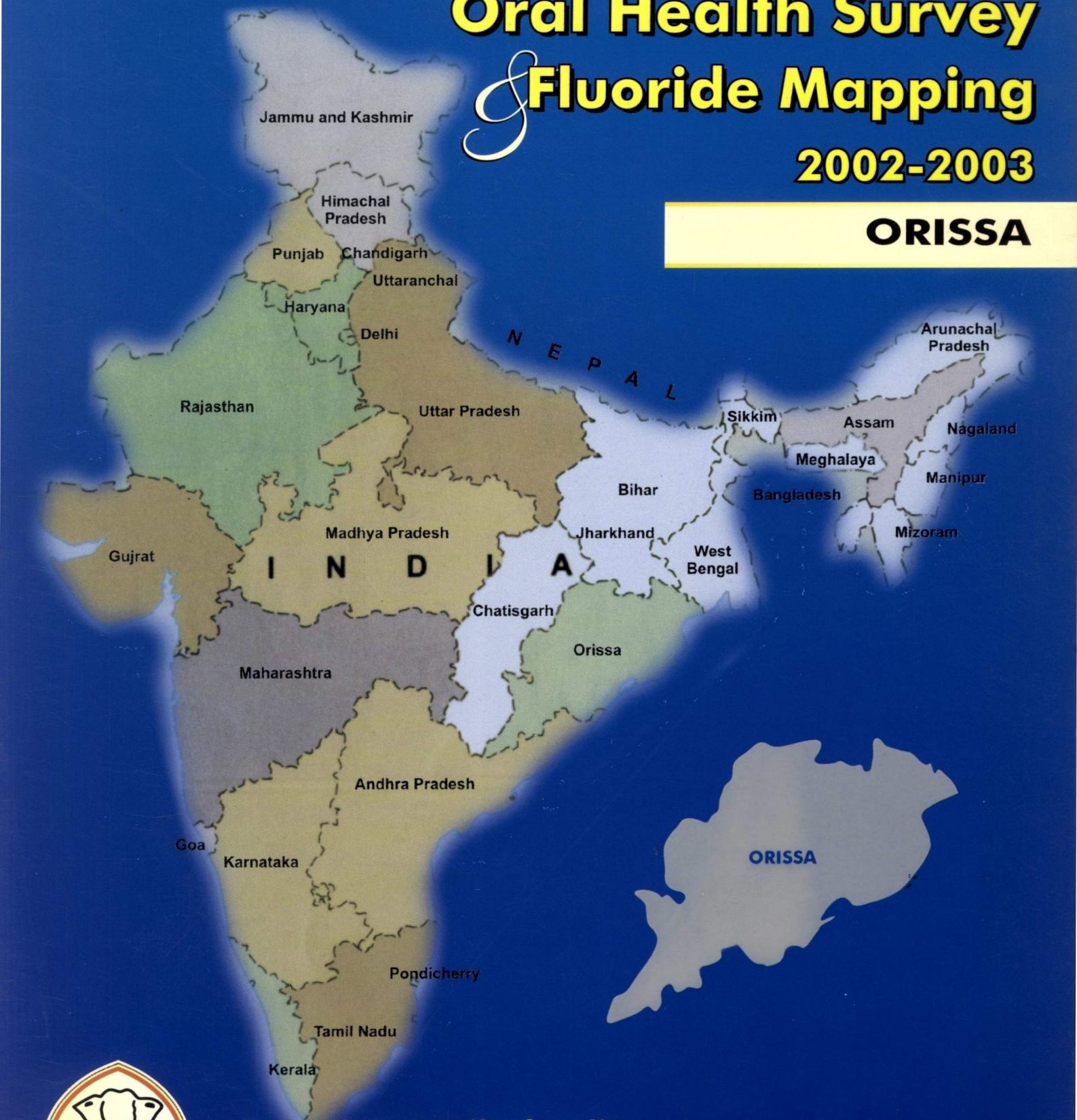
National Oral Health Survey & Fluoride Mapping 2002-2003

ORISSA



Dental Council of India
New Delhi
2004

NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING

2002-2003

ORISSA

Authors

Dr. R. K. Bali
Dr. V. B. Mathur
Prof. P. P. Talwar
H. B. Chanana

Co-authors

Dr. Ashok Kumar Mohapatra

DENTAL COUNCIL OF INDIA
NEW DELHI
2004

DENTAL COUNCIL OF INDIA
Aiwane - Ghalib Marg
Kotla Lane
New Delhi - 110002
Phones : 23220204, 23236740, 23238542
Fax : 23231252

MINISTRY OF HEALTH & FAMILY WELFARE
Government of India,
Nirman Bhawan,
New Delhi

Project Supported by :

Colgate - Palmolive Co. U.S.A.
Colgate - Palmolive (India) Ltd.

Colgate

TABLE OF CONTENTS

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)

FOREWORD

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

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

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

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

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

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

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

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

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

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

Dr R. K. Bali

President, Dental Council of India.

July 2004.

PREFACE

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Dr. R. K. Bali

Dr. V. B. Mathur

Prof. P. P. Talwar

H.B. Chanana

July 2004.

ACKNOWLEDGEMENTS

As a community Dentist and teacher of the subject I my self was in dark regarding the prevalence of oral diseases in the state in particular and whole of India in general, like any other. Reason lack of any documented study & data. The National oral health survey and fluoride mapping of India 02 was a brain child of no other than one and only. (Padmashree) Dr. R.K. Bali, the president of Dental Council of India. I was selected as state coordinator for Orissa region; at his insistence. First and above all I acknowledge his gesture and confidence in me for that stupendous job not so easy, not so difficult but challenging.

My sincere thanks to the cooperation and interest shown by the then Principal secretary of state Health & Family Welfare Miss Meena Gupta IAS who had helped me spontaneously and willingly. My sincere thanks to the Director of health & Family Welfare for his kind advise.

To be more practical was the nature of my Vice-Principal Dental wing, SCB Medical College, Cuttack Dr. P.C. Das. He knew the difficulties I will be facing in future. He knew his limitation to render help and cooperation. He knew that I was the only teaching staff in whole department. Still he helped & tried his level best to manage. I acknowledged his gesture & help. My thanks to the then principal S.C.B. Medical College, Cuttack for the official cooperation.

I humbly acknowledge the help & cooperation to CDMO of Cuttack, Dhenkanal, Keonjhar, Koraput and Ganjam District. The gesture of the CDMO, Dhenkanai Dr. Umesh Chandra Mohapatra, Dr. Alok Dey, C.D.M.O., Keonjhar Addl. C.D.M.O., Keonjhar & CDMO, Cuttack are commendable. Special thanks to all of them. I acknowledge with thanks the active participants partly or fully participation of following Doctors & Staffs.

I repeat my thanks to the Central survey Team Members especially to Dr. V.B. Mathur, Mr. H.B. Chanana, Prof. P.P.Talwar who were in constant touch with me in every step of my Survey work – field or finance, material or money.

Every good thing has a dark shadow. With constant encouragement by no other than Dr. R.K. Bali and Dr. V. B. Mathur. I could not have come out successfully, the obstacle after obstacles in completion the Survey.

Lastly I acknowledge the help & participating fully or partly of the team members in ensuring the success of the survey.

Dr. Ashok Kumar Mohapatra
Regional Coordinators
Orissa State

LIST OF TABLES

LIST OF FIGURES

CHAPTER 0
EXECUTIVE SUMMARY

1. GENESIS

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

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

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

2. SCOPE OF THE SURVEY

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

- Level of Fluoride in the drinking water
- Incidence/Prevalence of oral health problems
- Eating habits affecting oral health

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

It may be noted that this survey has gone much beyond the usual oral health surveys that generally focus on the levels and problems of oral health in the community. This survey has collected data on many of the dimensions that could help to understand practices people adopt that cause oral health problems and steps they take to seek treatment.

3. DESIGN OF THE SURVEY

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

3.1 Sample size

Three considerations were made in deciding the sample size: (1) The estimates should be valid at state level, (2) Intra-state regional variations may be captured in the oral health problems and practices, and (3) it could be completed within limited budget available for this survey. With this in view, World Health Organization's (WHO) recommendation that a sample of 300-600 dental examinations of people of ages 5, 12, 15, 35-44 and 65-74 from a homogeneous region was adopted. It was decided that 315 households covering both rural and urban areas would be taken from each homogeneous region in a state. The sample of households would increase in case all the sample of 315 subjects from each of the five age groups (5, 12, 15, 35-44 and 65-74) was not available from 315 households selected. The major considerations on the number of households were that oral examination is done on 315 subjects in the age/age group 5, 12, 15, 35-44 and 65-74 years. Thus the sample of households from each homogeneous region would generally be more than 315 households. The sample of 315 households was split into 210 households from rural areas and 105 from urban to give representation to the urban oral health situation. Besides, it was also decided that total number of examinations in each age group will be equally distributed between males and females; that is, 105 males and 105 females will be examined in each of the five age groups in rural areas and 53 males and 53 females from each age group in urban areas.

3.2 Sample selection

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

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

In the case of 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 more or less same population size). In the next stage, 7 households were selected from each CEB. Again, examination was to be done for 105 subjects from each age group (5, 12, 15, 35-44 and 65-74), half of them were to be males and half females.

4. STUDY TOOLS

In order to cover total scope of the study, two types of questionnaires/schedules were used in this survey. One was WHO schedule on Oral Health Assessment and the second was individual questionnaire (specially developed by Dental Council of India) 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.

5. DATA COLLECTION

A small nucleus Central Survey Unit was set up in the office of the Dental Council of India in Delhi. For the fieldwork, one dental state coordinator and his/her dental college were selected for each state. This coordinator was to oversee the total 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; dentists were to examine oral health of the subjects and record information on the Oral Health Assessment Questionnaire and the social worker was to record information on the individual questionnaire of etiological factors.

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

Water sample were taken from the selected households for testing the fluoride levels. The test for the level of fluoride for all water samples was done in a laboratory in Mumbai.

6. CALIBRATION AND TRAINING WORKSHOPS

A three days calibration and training workshop was organized where all the Coordinators and Supervisors were given thorough training in field logistics, data collection and standardization of the assessment of the oral health problems. The last was very important so that all field team adopt uniform assessment methods to record the dental problems; a very thorough training was given on this aspect. Another workshop on Report writing was organized in Mumbai to standardize the format of each state report.

7. AREA COVERAGE IN THE SURVEY

National Oral Health Survey was designed to cover all Agro-Climatic regions of the state. All the five regions in which the state has been divided, were covered in the survey.

8. FINDINGS (ORAL HEALTH KNOWLEDGE AND PRACTICES)

8.1 Characteristics of households surveyed

(i) Only 20 percent of respondents, more in urban live in pucca houses.

(ii) 82 percent of households, more in rural reported monthly-expenditure of Rs 2500/- & below. Only 3 percent, more in urban were spending Rs 5501 & more per month.

(iii) About 95 percent of households in the state, belong to Hindus.

(iv) About two third of households, more in rural belong to Schedule Castes/Schedule Tribes & backward classes.

(v) Only about 10 percent of households, mostly in urban reported getting piped/tap water for drinking.

(vi) Rice is the staple food of almost all & 96 percent reported vegetarian.

8.2 Profile of population across age groups

(i) There was increase in percent of illiterate with the increase in age of respondents.

(ii) More than 70 percent across both sexes & more in rural, across age groups did not reading newspaper at all.

(iii) About67 percent, across both sexes & more in rural, across age groups, did not listen to radio at all.

(iv) About 66 percent, across both sexes & more in rural, across age groups, did not watch TV at all.

(v) Nearly 90 percent, across both sexes & more in rural, across age groups did not watch cinema at all.

8.3 Abnormal habits across age groups

41 percent & 7 percent of respondents aged 5 & 12 years across both sexes respectively and 3 percent of respondents, more males & more in rural from each of subsequent age/age groups reported the habit of "grinding/gritting teeth".

A few or none of respondents from each age/age group reported any other abnormal oral health habit in the state.

8.4 Eating habits across age groups

Nearly three fourth of respondents, across both sexes & more in rural irrespective of age differences did not take sugar in last one day. There was however increase in the percent of respondents, who took sugar one time & more times in last one day with increase in their age. These were equally divided by sex & more of them living in urban area of the state.

8.5 Oral hygiene practices across age groups

(i) About 50 percent of respondents from each age group, except 24 percent aged 65-74, across both sexes more in urban had cleaned teeth with brush.

(ii) Almost all irrespective of age, sex & places of residence reported cleaning teeth once a day.

(iii) About 70 percent, across both sexes & more in urban & other about 20 percent, more males & more in rural irrespective of age differences, reported using tooth paste & tooth powder respectively in the state.

(iv) 36 percent, & other about 44 percent, across both sexes & more in rural irrespective of age differences had used fluoridated & non-fluoridated toothpaste respectively in the state.

(v) Half of respondents, across both sexes & more in urban, irrespective of age differences, had changed toothbrushes once in 1-3 months. While the rest, across both sexes & more in rural irrespective of age differences reported changing tooth brushes once in 4 & more months.

(vi) Nearly 95 percent, irrespective of age differences, had rinsed mouth always after eating.

8.6 Dental problems and treatment practices across age groups

(i) The percent of respondents, more females & more in urban reported dental problems in last one year and percent of such increased with increase in their age.

(ii) One third of those had dental problem, had dental decay. These were more males & more of them living in urban areas of state. The rest had foul breath & gum disease in last one year.

(iii) Less than 20 percent, across both sexes & more in urban from each age group consulted trained dentist.

(iv) 20-30 percent, from each age group of respondents, more in urban had knowledge of Govt. & Pvt. Dental care facility places in their respective areas.

(v) Nearly 70 percent from each age group of respondents, mostly living in urban areas, reported less than half hour to reach facility places.

8.7 Awareness of dental health problems across age groups

About 70 percent of respondents irrespective of their age differences, mostly in rural, reported no knowledge of oral health problems its causative factors and its preventive measures.

Those aware, told

(i) Oral Health problems such as tooth decay, gum disease & strained teeth.

(ii) its causative factors such as not brushing regularly, eating sweet items/ice cream & not rinsing and

(iii) its preventive measures such as regular cleaning of teeth, not consuming tobacco etc.

8.8 Tobacco smoking and chewing habits across age groups

About one third of respondents from age group 35-44 & 65-74, more males & more in rural had the habit of smoking tobacco. 45 percent of smokers, more males & more in rural reported smoking Bidis.

Other about 20 percent, across both sexes & places of residence reported smoking Chillum & Hookah. About 90 percent across both sexes & places of residence were smoking less than 10 times in a day.

About 46 percent of respondents, more males & more in rural reported chewing pan or pan masala with tobacco. Approximately 95 percent had this habit for the last ten years & below & were chewing ten times in a day.

Nearly 22 percent, more males & more in rural reported taking alcohol. About 45 percent of these were consuming alcohol occasionally.

9. FINDINGS (CLINICAL)

9.1 Dental caries

The prevalence of caries experience in 5 year old children with only primary teeth, was marginally higher in rural (52.2 percent) compared with urban residents (49.2 percent). There were no marked gender related differentials in the state and there were no marked regional differentials.

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 52.4; at 15 years it was 56.3; at 35-44 years it was 69.2; and at 65-74 years, it peaked at about 81.3 percent.

The majority of the affected subjects in 12, 15 and 35-44 years had experienced caries in upto one half (50 percent) of their teeth but in 65-74 years, 26.1 percent subjects had experienced caries in more than 16 teeth (over one half of teeth normally present).

The mean DMFT was lowest in the subjects aged 12 years (1.4); it was 1.8 in subjects aged 15 years; 3.4 in subjects aged 35-44 years and highest (11.8) in 65-74 years. While the decayed teeth (DT) component contributed mainly to the DMFT value in the age groups of 12, 15 and 35-44 years, it was the missing teeth component (MT) which contributed most to the DMFT value in subjects aged 65-74 years. Except in the age group of 65-74 years, where almost all teeth missing were due to reasons other than caries, it was nearly always that caries was responsible for missing teeth. Filled teeth were virtually absent.

The SIC Index was 6.8 in 5 year olds and 3.6 in 12 year olds. It was 4.7 in 15 year olds; 7.7 in 35-44 year olds; and peaked at 24 in the highest age group of 65-74 years. Thus, it can be seen that SiC index was two to two-and-one-half times higher than dmft/DMFT.

Overall, there was marginally higher caries prevalence in rural, rather than urban areas. However, the pattern of distribution of caries by DMFT was similar in rural and urban areas and in between regions.

About 11.8 percent subjects, more females than males, and more in rural than urban areas, in the age group of 65-74 years were edentulous (without natural teeth).

Overall, the number of teeth present in the mouth of individuals surveyed decreased as age advanced.

9.2 Root caries

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 and 65-74 years.

The percentage of subjects with root caries was approximately one percent and 3.9 percent respectively in the age groups 35-44 and 65-74 years. The mean number of teeth with root caries in these age groups was 0.1 and 0.2, meaning that on average, fewer than one tooth per affected mouth had root caries in the subjects examined.

Root caries was more prevalent in urban residents compared to rural residents and more male subjects than female subjects had root caries in 65-74 years. The prevalence was uneven when compared in between regions: the prevalence was lowest in Region 2 (1.9 percent) and highest in Region 4 (8.7 percent).

A very small percentage of subjects aged 35-44 and 65-74 years (0.1 and 0.2 percent respectively) had root fillings in the state amongst rural and urban residents and in both male and female subjects.

In conclusion, 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. The lack of priority of the people to avail the services appears to be the primary cause for their neglect of dental health. Intensive motivational health education may help in raising the priority of oral health care in people's minds.

9.3 Treatment need

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.

The percent subjects requiring treatment was consistently high in all age groups in the state and ranged from 47.8 percent subjects needing treatment in the 5 year age group to a maximum of about 73.3 percent in 65-74 years. The predominant treatment need was for one or more surface fillings, followed by pulp care and extractions, except in the age group of 65-74 years where the need for extractions was the highest.

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 rural areas of residence. The pattern of need by type of need was similar in between regions.

The mean number of teeth requiring treatment was the lowest (1.6) in 12 year olds and the highest (9.4) in the age group of 65-74 years. The mean number of teeth requiring fillings (one or more surface) was higher than for other treatment requirements across age groups except in 65-74 years where mean number of teeth needing extraction was higher.

9.4 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 epithelial attachment was also measured to provide an indication of the status of periodontal health.

In subjects aged 12 years and above, the prevalence of periodontal disease increased as age advanced (Table 6.07). The percentage of subjects with bleeding, calculus and/ or pockets was 53.2 in 12 year olds; 65.8 in 15 year olds; 89.9 in 35-44 year olds; and 93.9 in 65-4 year olds.

Bleeding was more prevalent than calculus in 12 year olds while the opposite was true in 15, 35-44 and 65-74 year old subjects. Shallow pockets (4-5 mm) were prevalent in 7.1 percent subjects in the age group of 65-74 years but were rarely present in other age groups. Deep pockets (higher than 4-5 mm) were virtually absent.

Overall, prevalence of periodontal disease was higher in rural residents across age groups and was uniformly distributed in the regions surveyed. There were no marked gender related differentials. The pattern of distribution of periodontal disease, by type of condition was similar in between the regions

The mean number of sextants with periodontal disease was highest in 35-44 year old subjects (4.6) followed by the 65-74 year old subjects (3.6). The mean number of sextants with pockets was less than one tooth (0.7) in the 65-74 year olds and less than half a tooth (0.2) for 35-44 year olds. The mean number of teeth with calculus was higher than that with bleeding or with pockets.

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

9.5 Loss of attachment

Overall, the prevalence proportion of subjects with loss of attachment (Table 6.09) in one or more sextants was highest in 65-74 years (57.4 percent) in the state followed by the 35-44 year age group (25.6 percent). It was almost equally distributed by sex in the age groups of 35-44 yr and 65-74 yr. 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 of loss of attachment was higher in rural than in urban areas. The pattern of distribution of severity of the loss of attachment remained similar in rural and urban areas and in between regions. There were no major gender related differentials.

The mean number of sextants with loss of attachment was 1.1 and 0.6 respectively in subjects aged 65-74 and 35-44 years. The mean number of teeth with loss of attachment of 4-5 mm was the highest and this number decreased as the measure of loss of attachment was increased to 12 mm or more.

9.6 Malocclusion status

Malocclusion was not widely prevalent in the state: it appeared in 6.6 percent subjects aged 12 years and 7.5 percent subjects aged 15 years. The prevalence of severe malocclusion in 12 and 15 year old subjects was very low and the prevalence of very severe malocclusion was higher than severe malocclusion.

Malocclusion appeared more prevalent in rural than in urban areas although the differences were small. There were no marked gender related differentials. There was no marked inter-regional differential.

9.7 Oral cancer & oral mucosal lesions

The prevalence of oral mucosal lesions was one percent on average in the 5, 12 and 15 year age groups but significantly increased in 35-44 year olds (12%) and 65-74 year olds (20.5%). Oral cancers were reported from all age groups except the 15 year olds. While one or two cases of oral cancers were reported from each age group, there were 4 cases (1.5%) in the 35-44 year olds. The most prevalent condition in all age groups was ulceration followed by leukoplakia (35-44 years and 65-74 years) and abscesses.

There appeared to be a higher prevalence of oral mucosal lesions in the rural areas except in the 65-74 year age group where the urban residents had more oral mucosal lesions than their rural counterparts. There were no major differentials in the pattern of distribution of the lesions related to gender or in between regions.

The lesions were also analysed by their location in the mouth (Table 6.13). it was revealed that the highest number of lesions were on the buccal mucosa in the state. The lesions, in order of prevalence, were leukoplakia, ulcerations, lichen planus and others.

There were three instances of oral cancer located on the buccal mucosa out of a total of 6 instances. Oral cancer also occurred on the vermillion border, floor of mouth and the hard or soft palate.

Oral cancer was detected in one (0.1%) female subject, aged 65-74 yr, from the urban area. The lesion was located on the vermillion border in the mouth. Leukoplakia is the most common precancerous lesion while lichen planus is categorized as a probable precancerous lesion (Mehta & Hammer, 1993). Leukoplakia was detected in 3 males (0.7%) in the age group of 35-44 yr and 2 females (0.5%) in the age group of 65-74 yr (Tables 6.11 & 6.12). It was located on the sulci and buccal mucosa, and equally distributed in rural and urban area.

The other more prevalent but still very rare conditions were Ulceration and Abscess, appearing on the alveolar ridges and gingiva.

A broad analysis of the lesions by location in the oral mucosa (Table 6.12) showed that Ulceration was distributed on the buccal mucosa, vermillion border and tongue; and abscesses occurred on alveolar border/ gingiva.

9.8 Dental fluorosis status

Fluorosis was not widely prevalent in the state. In 5 year old children, it appeared in 2.8 percent of the subjects examined. The corresponding prevalence percentages were 6.1 percent (12 years); 4.4 percent (15 years); 5.9 percent (35-44 years); and 4.9 percent (65-74 years). The level of severity (Dean's Index) which was most prevalent in the state across age groups was 'very mild and mild'. An almost equal proportion of subjects in the state had 'questionable' fluorosis.

Fluorosis was marginally higher in rural residents compared with their rural counterparts. There were wide inter-regional differences. Male and female differentials were noted in between age groups but a clear gender based pattern did not emerge.

9.9 Other lesions

9.9.1 Extra oral lesions

Extra oral lesions were reported in all age groups although the prevalence was very low. While subjects in the age group of 35-44 years had the lowest prevalence of these lesions (2 percent), the highest prevalence of the lesions appeared in of subjects in the age group of 65-74 years. (4.3 percent). The lesions recorded were ulceration, sores, erosions and fissures; enlarged lymph nodes of the head and neck; cancrum oris; and abnormalities of upper and lower lips.

The prevalence was higher in rural than in urban areas. More males than females were affected except in the age group of 12 years where the opposite was true. There were wide inter-regional variations with virtually no lesions detected in Region 3.

9.9.2 T M joint symptoms and signs

Overall, TM Joint symptoms and signs did not appear to be a major public health problem in the state as the prevalence was very low. Symptoms and signs were not reported in 5 year old subjects. The prevalence of TM Joint symptoms and signs was lowest in the age group of 12 years and highest in the age group 35-44 years. Signs present included clicking, tenderness and reduced jaw mobility in that order.

The prevalence of signs and symptoms was similar in rural and urban areas and in between regions. There were no marked differentials in the pattern of distribution of signs and symptoms. There were no gender related differentials.

9.9.3 Enamel defects (opacities, hypoplasia)

Overall, there was a relatively low but evenly distributed prevalence of enamel defects in the state across age groups from 12 to 65-74 years. In all age groups, the most prevalent type of enamel defect was demarcated opacity, followed by diffuse opacity and enamel hypoplasia.

Enamel defects were higher in prevalence in rural residents compared with urban residents. More females were affected except in 65-74 years where more males were affected.

The mean number of teeth with enamel defects was less than one tooth across age groups.

9.9.4 Prosthetic status

In 65-74 year old subjects, prostheses were present in 1.8 percent subjects (upper dental arch) and 1.3 percent subjects (lower dental arch) respectively. The corresponding percentage for 35-44 year old subjects was 0.4 for both upper and lower dental arches. In both age groups, partial dentures followed by bridges were prevalent, in that order. Full removable dentures in both upper and lower dental arches were rare (0.4 percent) in 65-74 year old subjects and these were absent in the 35-44 year age group. There were no gender related differentials. Urban residents were wearing more prostheses than their rural counterparts in the 35-44 year age group while in 65-74 year age group, there were no marked rural and urban differentials.

The pattern of distribution of the type of prostheses was similar between regions.

The overall percent of subjects in 65-74 years who were wearing full mouth removable dentures was 0.4 percent (Table 6.21). There were virtually no subjects in Region 3, 4 and 5 who were wearing full mouth removable dentures.

9.9.5 Prosthetic need

Dental prostheses was needed in 54.7 percent subjects in the upper dental arch in the age group of 65-74 years. The corrsoponding figure for lower dental arch was 62.1 percent. Multi-unit prostheses, full prostheses and one-unit prostheses were required, in that order. Te need for prostheses was much lower in 35-44 year age group where the need was higher for one unit prostheses, followed by multi-unit prostheses.

There were no marked rural and urban differentials or marked gender based differentials. Inter-regional differentials were not marked.

The need for full mouth removable dentures was 11.8 percent in subjects aged 65-74 years. The need was higher in rural as compared to urban areas. There were inter-regional variations and the need was lowest in Region 1 (4.9 percent) while it was highest in Region 3 (22.9 percent).

9.9.6 Community need for immediate care and referrals

Overall, life threatening conditions had a low prevalence in the state and appeared in 0.3 percent subjects in 12, 35-44 and 65-74 year age-groups. Pain and infection appeared in 15.4 percent subjects aged 5 years to a maximum of 31.8 percent subjects in the age group of 65-74 years. Referrals were made for almost all of the conditions recorded.

The prevalence of conditions by type of condition were not uniformaly distributed by rural and urban areas and there were some gender related differentials. There were also wide inter-regional variations.

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

	Findings	Age in years				
		5	12	15	35-44	65-74
1.	**Oral disease conditions**					
1.1	Dental Caries					
	% Prevalence	51.2	52.4	56.3	69.2	81.3
	Mean DMFT	2.6	1.4	1.8	3.4	11.8
	SiC Index	6.8	3.6	4.7	7.7	24.0
1.2	Periodontal disease					
	Bleeding, calculus or pockets					
	% Prevalence	34.4	53.2	65.8	89.9	93.9
	Mean no of Sextants affected	0.3	2.3	3.2	4.6	3.6
1.3	Loss of attachment					
	% Prevalence	NA	NA	7.8	25.6	57.4
	Mean no of Sextants affected	NA	NA	0.2	0.6	1.1
1.4	Malocclusion (%)	0.0	6.6	7.5	14.3	NA
1.5	Dental Fluorosis (%)	2.8	6.1	4.4	5.9	4.9
1.6	Oral mucosal conditions (nos.)	7	56	76	186	204
1.7	Oral Cancer (nos.)	0	1	1	4	4
1.8	Edentulousness (nos.)	NA	NA	0.0	0.0	11.8
2	**Oral Health Practices**					
2.1	Sugar Intake in last 24 hours					
	Once	14.5	15.5	18.8	31.1	23.4
	Two & more times	6.4	6.6	7.3	7.1	6.2
2.2	Clean teeth with					
	Tooth Brush	51.5	51.5	50.4	39.7	24.3
	Fingers	12.9	1.9	1.8	2.4	7.0
2.3	Rinsing mouth					
	Always	94.0	93.9	95.0	95.2	94.5
	Sometimes	2.8	3.1	2.0	1.3	1.1
2.4	Tobacco smoking	NA	NA	NA	27.1	31.0
2.5	Frequency of tobacco smoking					
	Less than 10 times	NA	NA	NA	98.2	96.6
	10 or more times	NA	NA	NA	1.9	3.5

CHAPTER I
INTRODUCTION

1.1 BACKGROUND OF THE STATE

1.1.1 Geographical location

Orissa was formed as a linguistic province in 1936. After independence the ex-princely states were merged and the state was organized into 13 districts (Government of Orissa, 1991). It now has Bhubaneshwar as its capital. The state has an area of 155,707 square kilometers and comprises of 30 districts and three revenue divisions: Central, Southern and Northern. The Central divison comprises of districts Cuttack, Jagatsinghpur, Kenderapara, Japur, Baleswar, Bhadrak, Mayurbhanj, Puri, Khordha and Nayagarh. The Sothern divison comprises of districts Ganjam, Gajapati, Boudh, Kandhamal, Koraput, Nawarangpur, Rayagada, Malkangiri, Kalahandi and Nawapada . The Northern division comprises of remaining ten district of Sambalpur, Bargarh, Deogarh, Jharsugua, Sundargarh, Balangir, Sonepur, Dhenkanal, Angul and Kendujhar. These districts were formed by subdividing the 13 pre-1991 district after the 1991 Census.

1.1.2 Population and demographic profile

According to the 1991 Census, Orissa had a population of 31.7 million, accounting for 4 percent of the total population of India. The 1981-91 intercensal increase in population (20.1 percent) was lower than the increase for the country as a whole (23.9 percent). Population density is lower in Orissa than in India as a whole. (203 compared with 273 persons per square kilometer), and the level of urbanization is also lower (13 compared with 26 percent). The sex ratio of the population (number of females per 1,000 males) is higher in Orissa than in India as a whole (971 versus 927). According to the 1991 Census, the proportion of the total population designated as scheduled caste is about the same in Orissa (16 percent) as in all India, whereas the proportion designated as scheduled tribe is much higher in Orissa (22 percent) than in all India (8 percent). The scheduled-caste population of Orissa increased slightly from 15 to 16 percent of the state population between 1971 and 1991, and the scheduled-tribe population decreased slightly from 23 to 22 percent.

For 1998, the Sample Registration System (SRS) estimated an infant mortality rate of 98 per 1,000 live births in Orissa, compared with 72 in India. For 1996-2001, life expectancy is projected to be 58.5 years for males and 58.1 years for females, indicating substantial increases from 54.1 years for males and 51.9 years for females in 1981-86. For 1998, the SRS estimate of the crude birth rate and crude death rate are 25.7 and 11.1, respectively. The couple protection rate (defined as the percentage of eligible couples effectively protected against pregnancy by various methods of contraception) in Orissa was 39 percent in 1998, compared with 15 percent in 1971. The couple protection rate of 39 percent in the state is somewhat lower than the rate of 45.4 percent for all India.

Between 1971 and 1998, fertility declined substantially in the state. The crude birth rate declined from 34.6 per 1,000 populations in 1971 to 25.7 in 1998. The total fertility rate also declined substantially, from 4.7 to 3.0 children per woman between 1971 and 1997. The crude death rate also declined, from 15.4 to 11.1 per 1,000 populations between 1971 and 1998. The infant mortality rate declined from 127 to 98 per 1,000 live births between 1971 and 1998.

1.1.3 Composition of population

The total population of the state was 21.9 million in 1971, 26.4 million in 1981, and 31.7 million in 1991. The decadal growth rate decreased from 25.1 percent during 1961-71 to 20.2 percent during 1971-81 to 20.1 percent during 1981-91. Population density, which was 141 persons per km in 1971, increased to 169 in 1981 and 203 in 1991. The increase of 62 persons per km in population density between 1971 and 1991 indicates increasing pressure on agricultural and forest land.

Orissa has been urbanizing slowly, especially between 1981 and 1991. The urban population increased from 8 percent of total population in 1971 to 12 percent in 1981 and13 percent in 1991. The sex ratio of population in the state declined from 988 females per 1,000 males in 1971 to 981 in 1981 and 971 in 1991. The percentage of population age 0-14 years decreased considerably, from 42 to 35 percent, between 1971 and 1991. The percentage of population age 65 and above increased marginally from 3 to 4 percent during the same period.

1.1.4 Socio–Economic characteristics

In terms of educational levels of its population, Orissa resembles the country as a whole. According to the 1991 Census, the literacy rate for the population age 7 and above was 49 percent, compared with 52 percent for India as a whole. By sex, literacy rates were 63 percent for males and 35 percent for females in the state, compared with 64 percent for males and 39 percent for females for India as a whole.

Orissa is predominantly an agricultural state, although it has been changing rapidly. The contribution of the agricultural sector to the State Domestic Product declined from 47 percent in 1980-81 to 27 percent in 1996-97. The contribution of manufacturing sector increased from 10 percent to 15 percent, and the share of other sectors increased from 43 to 59 percent during the same period (EPW Research Foundation, 1998). At the time of the 1991 Census, agriculture provided a livelihood for nearly 75 percent of the working population (Office of the Registrar General and Census Commissioner, 1992). Paddy is the main crop of the state. Other crops, including pulses, oil seed, jute, mustard, turmeric and sugarcane, are also extensively cultivated. Orissa is one of the maritime states of India, and has a long coastline. The harbour at Paradip is a major exporter of iron ore to Japan and other countries. Prawns and fish are also exported from this port, reflecting a rapid increase in pisciculture within the state as well as an increasing number of deep-sea fishing trawlers owned by private companies. Between 1980-81 and 1996-97, annual per capita income in the state (measured in constant 1980-81 prices) increased from Rs 1314 to Rs. 1314 to Rs. 1595 (equivalent to Rs 6422 in current prices). (EPW Research Foundation, 1998). According to estimates given by the Planning Commission 50 percent of the rural population and 42 percent of the urban population in Orissa were below the poverty line in 1993-94 (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, and 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 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. Strong need exists to know the oral health care practices of people, treatment-seeking behaviour 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 improve 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 knowledge and behavioural practices of people for prevention and curing the 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 President ship 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 under the President ship 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, move presiding financial commitments, could not provide financial assistance. However, the Ministry of Heath & Family Welfare agreed to support the Council's efforts to seek financial and technical support from other agencies.

1.4.2 Support from colgate India/International

The President of the Dental Council of India, Dr R K Bali, 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 major financial assistance for the national survey.

1.4.3 Support of individuals and dental colleges in India

The Dental Council of India did not have manpower to manage this large survey itself and thus decided to carry it out by collaborating with the dental colleges in India and Indian Association of Public Health Dentistry. A bare minimum technical unit was set up for this purpose. It consisted of Dr. R.K.Bali as Chairman & Project Coordinator, Dr.V.B.Mathur as Project officer and Mr. H.B.Chanana as Statistician. Professor P.P.Talwar 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 Dental Council of India office in New Delhi. It was decided that the Central Survey Team will involve Principals/ Deans/ Heads of Dental Colleges at Regional/ State & a few members of Indian Association of Public Health Dentistry levels for technical development of the survey, data collection in their states and later 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 endeavour.

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 incidence/ 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
- Eating habits affecting oral health
- 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 was to be addressed in the survey.

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

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

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

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

- Food habits (affecting oral health)
- Eating habits (affecting oral health)
- Dental cleaning practices, and
- Intake of fluoride

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

1.6.4 To determine 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 each state comprise 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 CONSIDERATION 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:

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

(ii) 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 5x315= 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 18 major states 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 (other than 18), 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 315was equally divided between males and females. **Annexure - 3**

2.2.2.1 Rural sample

In order to get a sample of rural households in a stratum (region), 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, 350 or more to cover 28350 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 1,41,750. The actual coverage comes to a minimum of 18585 households. That is, 92925 examinations were done. Their state-wise, rural/urban distribution is shown below:

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

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

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

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

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

Code	Region	Districts	Sampled District	*Coverage as per design*			*Actual Coverage*		
				No. of Households			*No. of Households*		
				Rural	Urban	Total	Rural	Urban	Total
1	Inland	i) Balangir							
		ii) Dhenkanal	Dhankonal	210	105	315	210	105	315
		iii) Sambalpur							
		iv) Boudh							
		v) Debgarh							
		vi) Baragarh							
		vii) Anugul							
		viii) Sonapur							
2	Northern Plateau & Hills	i) Keonjar	Keonjar	210	105	315	210	105	315
		ii) Mayurbhanj							
		iii) Sundargadh							
		iv) Jharsuguda							
3	S. W. Hills	i) Kalahandi							
		ii) Koraput	Koraput	210	105	315	210	105	315
		iii) Naupawada							
		iv) Malkangiri							
		v) Nawarangpur							
		vi) Rayagarh							
		vii) Kandhamal							
4	Coastal	i) Baleshwar							
		ii) Cuttack	Cuttack	210	105	315	210	105	315
		iii) Puri							
		iv) Jagatsingpur							
		v) Nayagada							
		vi) Kendrapara							
		vii) Khurda							
		viii) Jajapur							
		ix) Bhadrak							
5	Ganjam	i) Ganjam	Ganjam	210	105	315	210	105	315
		ii) Gajapathi							
Total	**5**	**30**	**5**	**1050**	**525**	**1575**	**1050**	**525**	**1575**

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 appended 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 food habits and oral health 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. **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 taken on deputation from the Delhi Municipal Corporation, a full-time statistician and a part-time consultant in survey techniques.

This Central Survey Unit worked out the fieldwork logistics to get maximum output at 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. The Technical Committee of the survey identified them. These Coordinators were asked to find out senior dental surgeons from the dental colleges as their field team supervisors at the ratio of one supervisor for four teams. **Annexure - 5**

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 9 dentists involved in the field work) 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. For such training and standardization exercise, the Dental Council of India collaborated with the Manipal Academy of Higher Education (MAHE). A three-day Calibration workshop was organized 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 & 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 Assessment; Enamel Opacities and Hypoplasia; Prosthetic Status & 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 years, 15 years and 35-44 years 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:

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

2.7 FLUORIDE ESTIMATION IN DRINKING WATER SAMPLES

As stated earlier, the analysis of the drinking water samples from various states were directly sent to M/s Medlar Laboratories Pvt Ltd., (a Unit of M/s CIPLA), Mumbai by the various Regional Coordinators Dr. P M Dixit, Chief Chemist, has prouded— the following in function 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 analyzer:

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- Mis 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

Since Govt. Dental College in the State of Orissa had only one person to teach. Special efforts on the part of DCI were need to get involved in this important Survey.

There was overwhelming response for training as good as 30 members participated in the pre survey training. But during field training the number reduced to 20 because of arduous task of field work. After training. one team left for Ganjam and other team left for Dhenkanal. It was of course mid summer with temperature hovering over 44^{0}C. The distance between two district was 600 Km. The supervisor of the Ganjam team had problems in negotiating the district authority. He could not secure the accommodation for 10 members including ladies in any of the Govt. Circuit or Guest House. Problems for female team members were acute. The vehicle provided needed repairs almost everyday. Anyhow the survey started. But two lady doctors could not withstand the heat & received 'Sunstroke' and were admitted to Hospital. I had to leave Dehnkanal to reach Ganjam to solve the problems.

Unfotunately the supervisor was withdrawn from the survey team because he was needed for teaching. Even some more team members withdrew. There was a constant change of Doctors & staff among the trained dentist. Suggestion of training more members then actually required proved to be helpful to replace the one who decided to discontinue. **Annexure -6**

The area was mainly hilly and non-motarble, therefore one had to ride the terras 3 km. to reach the sampled village. Small hilly rivers had to be crossed walking through the stream. Many times the teams had to work without food which was not available some villages. Many times the teams were surrounded and people wanted that there immediately problems should be solved.

It was decided to carry some medicine to win cooperation of the village people. The demands for medicine was quite large as people had all sorts of sickness. The team field short of supplies, in such cases cooperation of people needed.

Those teams were to interview the selected household but many other household wanted to get their teeth examined. It was done to please them though that data (non sampled household) was not household in the survey.

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 filled in forms before the team returned from the area of data collection. It was his/her responsibility to scrutinize the forms if they could not be checked in the field. This scrutiny was necessary before they were submitted to the state Coordinator for onward transmission to the Central Survey Unit. The Coordinator was also responsible to scrutinize the forms, fully in the initial stages and then on sample basis before sending them to the Central Survey Unit in Delhi.

The Central Survey Unit at DCI was particularly careful in scrutiny of the forms from each state. First two batches of forms of each survey team from each state were thoroughly scrutinized to determine gaps in the form of blanks, wrong recording and inconsistencies. The Coordinators were immediately contacted by telephone to point out the data problems. The same concerns were reinforced by sending a Fax. After such reporting, the next batch received was also scrutinized carefully to ensure that deficiencies pointed out earlier have been taken care of in the next batch of forms filled. After initial total scrutiny, the data were scrutinized on a sample basis to ensure that there was no slackness in efforts later – the fatigue factor should not reduce quality of data.

2.10 DATA ANALYSIS

In the absence of any resources for data analysis at the Dental Council of India, the total job of data entry, validity checks and production of desired tables (as per analysis plan) was contracted out to TNS MODE, an organization with a good deal of research experience in studies related to health. All efforts were made to monitor quality of this work at this stage. The Central Survey Unit had worked out the type of tables needed, the level (Zone or Region/ State/ Country) for which such analysis was needed. The necessary weights were also worked out to ensure that the estimates were valid for the level to which they relate. These blank tables were given to the agency (TNS MODE) to fill in the data in different cells. In order to ensure that the values given in each cell of the table 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 Assam as model reports after detailed discussions on the report format and the format of tables. 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, for which they had collected data. The idea was to conduct a Report Writing Workshop to orient them with the cauterization plan, data tables of their own states and share with them style of writing adopted in the model reports (Delhi and Assam). This was felt necessary to make sure that all state reports were written in uniform style/pattern. For other states, it was decided that the Central Survey Unit, Delhi would write reports and send 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 for all the reports. These chapters were also given to the states Coordinators who were involved inn the Report Writing Workshop.

Dr. S. G. Damle, Dean, Nair Hospital Dental, Mumbai and Additional Director Health, 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 the Coordinators of the States: Andhra Pradesh, Goa, Haryana, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Pondicherry, Punjab and Tamil Nadu.. They were given two reports (model), a set of tables for their own state and even a CD containing raw data for their own state. They were told that their state report should adopt the format shown in the model reports; they can 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 SURVEYED

(i) Type of households

The characteristics of surveyed households presented in Table- 3.1, reveal that 49 percent & another 30 percent of respondents more in rural live in Kuccha & Semi-Pucca houses respectively. Only 20 percent of respondents, more in urban live in pucca houses in the state.

As regard type of houses in regions, two third of respondents in Inland, North Plateau Hills & South-West Hills regions & about one third in Coastal & Ganjam regions live in kuccha houses while 10 & below percent in Inland, North Plateau Hills & South-West Hills & nearly one third in Coastal & Ganjam regions live in the pucca houses.

(ii) Monthly expenditure

82 percent of households, more in rural, reported monthly expenditure of Rs 2500/- & below. While other 15 percent, more in urban, had monthly expenditure of Rs 2501- 5500. Only 3 percent, more in urban than in rural, were spending Rs 5501 & more per month, in the state.

Nearly 90 percent of respondents in Inland, North Plateau Hills & South-West Hills & about 70 percent is Coastal & Ganjam regions had monthly expenditure of Rs 2500/- & below per month.

(iii) Religion

About 95 percent of household in the state as well as in each region belonged to Hindus, followed by Muslims who had 4 percent of the households,

(iv) Caste

About two third of household more in rural in the state belonged to Schedule Castes, Schedule Tribes & Backward Classes. The remaining one was of higher castes.

Nearly 70 & more percent of households in Inland, North Plateau Hills & South-West Hills & less than 45 percent in Coastal & Ganjam regions belonged to Schedule Caste, Schedule tribes & other Backward Classes.

(v) Sources of drinking water

Only about 10 percent of households, mostly in urban reported drinking piped/tap water. The rest more in rural, were getting drinking water either from tube Well/Hand pumps or from other sources, in the state.

More than 85 percent in each region, reported getting drinking water either from tube Well/Hand pumps or from other sources.

(vi) Staple food

Rice was reported staple food of almost all in the state as well as in each region.

(vii) Nature of food

96 percent in the state as well as in each region reported vegetarian.

Table : 3.1 Percent distribution of the households by characteristics and geographical area. **STATE : Orissa**

	Household Charactersties		REGIONS					STATE		
			1	2	3	4	5	R	U	T
1	**Type of household**	n=	516	439	469	508	418	1581	769	2350
	Kuccha		69.2	66.1	68.7	27.3	34.7	51.5	33.5	49.4
	Semi Pucca		22.1	30.9	21.1	38.9	29.1	31.1	28.0	30.1
	Pucca		8.6	3.0	10.2	33.8	36.2	17.4	38.5	20.5
2	**Monthly expenditure (in Rs.)**									
	<= 2500		86.8	90.3	93.0	73.5	72.2	85.2	62.2	82.1
	2,501 - 5,500		12.4	8.4	5.8	22.5	21.0	13.0	29.6	15.1
	5,501 - 10,000		0.6	0.8	0.9	3.1	5.1	1.2	6.7	2.0
	10,000 +		0.2	0.6	0.3	0.9	1.7	0.6	1.5	0.7
3	**Religon**									
	Hindus		99.1	98.7	95.2	88.0	98.7	93.8	99.3	94.8
	Muslims		0.2	1.0	4.2	9.1	0.6	5.3	0.3	4.4
	Sikhs		0.0	0.3	0.0	0.2	0.0	0.2	0.0	0.1
	Christians		0.0	0.0	0.6	0.5	0.0	0.3	0.1	0.3
4	**Caste**									
	Scheduled Caste		8.0	11.9	3.0	17.6	17.3	12.0	16.3	12.3
	Scheduled Tribe		10.2	51.1	69.6	1.9	3.2	23.4	14.6	22.8
	Other Backward Classes		51.3	31.9	12.5	20.8	23.4	28.1	25.3	27.8
	Others		30.5	5.1	14.9	59.6	56.0	36.5	43.8	37.1
5	**Sources of drinking water**									
	Pipe/tap		9.9	12.8	6.2	7.8	16.0	2.3	50.8	9.5
	Tubewell/handpump		18.7	42.1	67.4	59.4	46.2	53.9	20.4	48.7
	Others		71.5	45.1	26.3	32.8	37.8	43.8	28.8	41.7
6	**Staple food**									
	Wheat		0.3	0.0	2.7	0.2	1.1	0.7	0.8	0.7
	Rice		99.1	99.9	92.0	99.8	98.4	99.2	98.9	99.2
7	**Nature of food**									
	Vegetarian		99.1	100.0	98.8	97.9	72.8	97.0	93.1	96.4
	Non-vegetarian		0.9	0.0	1.2	2.1	27.2	3.0	6.9	3.6

CHARACTERISTICS OF HOUSEHOLDS (SUMMING UP)

(i) Only 20 percent of respondents, more in urban live in pucca houses.

(ii) 82 percent of households, more in rural reported monthly expenditure of Rs 2500/- below. Only 3 percent, more in urban were spending Rs 5501 & more per month.

(iii) About 95 percent of households in the state, belong to Hindus.

(iv) About two third of households, more in rural belong to Schedule Castes/Schedule Tribes & backward classes.

(v) Only about 10 percent of households, mostly in urban reported getting piped/tap water for drinking.

(vi) Rice is the staple food of almost all & 96 percent reported vegetarian.

3.2 PROFILE OF POPULATION

The profile of subjects aged 12, 15, 35-44 and 65-74 years interviewed are presented in Tables 3.2.2 to 3.2.5 and discussed as below. The information on socio-economic characteristics of 5 years old were not collected hence has not formed part of discussion \in the present section.

3.2.2 12 year olds

3.2.2.1 Educational levels

About 17 percent, more females & more in rural, were illiterate. The remaining 83 percent, more males & more in urban, had education up middle & above in the state.

About 85-95 percent, in all except 29 percent in South-West Hills, across both sexes, had education up to Middle & above in each region. **Table 3.2.2**

3.2.3 15 year olds

3.2.3.1 Education levels

17 percent, across both sexes, more in rural were illiterate. Another 32 percent, across both sexes and more in urban, had education up to Middle. The remaining 51 percent, across both sexes & places of residence were high school & above in the state.

As regard literacy in & between regions, except 20 percent in North Plateau Hills & 67 percent in South-West Hills, there were very small percent illiterate in the remaining regions. About 98 percent, except in North Plateau Hills & South-West Hills, had education up to Middle & above in each of remaining three regions. **Table 3.2.3**

3.2.3.2 Exposure to media

About 83 percent, across both sexes & more in rural, did not read newspapers at all. Only 7 percent across both sexes & more in urban were reading newspapers daily. The remaining more males & more in urban, had the habit of reading newspapers sometimes in the state. As regard to regions more than 80 percent reported not reading newspapers in each region. There were small percent except about 12 percent in Coastal region, reading newspaper daily in rest of regions.

67 percent, across both sexes & more in rural, did not listen to radio at all. Only 4 percent across both sexes & places of residence, listened to radio daily. The rest across both sexes & more in urban, listened to radio sometimes in the state.

There were a few in some regions & none in other regions, irrespective of sex, reported listening to radio daily. But there were about 80 percent except in North Plateau Hills, and South West Hills region's, did not listen to radio at all in each of remaining region. This shows that this media is not popular with the people in regions & state.

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

AGE: 12 yrs **STATE: Orissa**

Educational level & Media Exposure		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Educational level	n=	167	182	185	157	133	556	268	824	167	175	205	150	120	553	264	817	1641
Illiterate		0.8	15.6	68.5	0.8	1.9	17.6	8.7	14.7	3.0	22.5	71.6	2.8	1.0	21.7	12.0	18.6	**16.7**
Upto middle		97.3	84.4	31.2	94.5	98.1	81.1	84.9	82.3	93.3	77.5	27.5	88.4	98.2	74.4	83.0	77.2	**79.8**
High school & above		1.9	0.0	0.3	4.7	0.0	1.3	6.4	3.0	3.7	0.0	1.0	8.8	0.8	3.9	4.9	4.2	**3.6**
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: Orissa

Educational level & Media Exposure		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Educational level	n=	165	191	195	145	144	558	282	840	171	161	195	151	125	557	246	803	1643
Illiterate		3.2	16.9	64.3	2.4	0.0	18.6	10.8	16.0	1.5	22.5	69.5	2.8	2.0	20.1	11.5	17.5	**16.8**
Upto middle		37.0	53.4	28.5	14.2	20.7	28.5	35.4	30.8	44.7	49.4	22.3	24.8	22.2	32.1	35.2	33.1	**32.0**
High school & above		59.8	29.6	7.2	83.4	79.3	52.8	53.8	53.1	53.9	28.1	8.2	72.4	75.9	47.8	53.3	49.5	**51.3**
2 Newspaper reading habits																		
Daily		0.4	3.3	7.1	11.2	3.3	5.6	9.8	7.0	1.2	2.7	6.3	11.9	6.8	5.9	12.2	7.8	**7.4**
Sometimes		9.0	13.6	10.6	7.5	7.9	8.9	12.9	10.3	11.0	5.7	5.0	4.6	7.2	5.0	15.1	8.1	**9.2**
Not at all		90.5	83.1	82.3	81.3	88.7	85.5	77.3	82.7	87.8	91.6	88.7	83.4	86.1	89.1	72.7	84.0	**83.4**
3 Radio listening habits																		
Daily		0.0	0.9	4.0	6.0	2.1	3.5	2.0	3.0	0.0	0.0	7.0	6.6	7.3	4.3	5.1	4.5	**3.8**
Sometimes		17.8	70.9	32.3	11.2	16.5	24.3	37.8	29.0	26.0	67.5	38.2	11.6	13.2	26.6	35.8	29.5	**29.3**
Not at all		82.2	28.2	63.7	82.8	81.4	72.2	60.2	68.0	74.0	32.5	54.7	81.8	79.4	69.1	59.1	66.0	**67.0**
4 TV watching habits																		
Daily		0.7	3.9	4.4	49.0	12.6	17.5	33.0	22.9	2.9	1.9	7.7	45.9	19.4	17.6	40.4	24.7	**23.8**
Sometimes		11.5	7.0	7.9	2.3	18.1	5.0	20.8	10.5	12.5	8.9	6.8	0.3	20.9	5.4	17.8	9.3	**9.9**
Not at all		87.8	89.1	87.7	48.6	69.3	77.4	46.1	66.7	84.6	89.2	85.5	53.8	59.7	77.0	41.8	66.0	**66.4**
5 Cinema watching habits																		
Once in 3 months		0.5	0.0	2.4	0.7	2.2	0.6	3.2	1.5	0.2	1.4	2.7	1.2	0.4	1.0	2.6	1.5	**1.5**
Less often		0.2	8.7	15.4	7.5	4.6	5.7	17.3	9.7	1.6	6.4	14.0	7.8	2.2	4.6	22.2	10.1	**9.9**
Not at all		99.3	91.3	82.2	91.8	93.1	93.6	79.5	88.8	98.2	92.2	83.3	91.1	97.5	94.4	75.2	88.4	**88.6**

About 66 percent, across both sexes & more in rural did not watch TV at all. Another 24 percent & 10 percent across both sexes & more in urban, had watched TV daily & sometimes respectively, in the state.

Nearly 86 percent in Inland, North Plateau Hills & South-West Hills & 50-60 percent in Coastal & Ganjam regions, did not watch TV at all. Comparatively more watched TV daily in Coastal region than in rest of regions.

About 89 percent of respondents, across both sexes & more in rural, did not watch Cinema at all. Only 2 percent & other 10 percent, more in urban, watched cinema once in three months and sometimes respectively in the state. Situation in this regard in regions was similar to that in the state. This might be due to in accessibility or none availability of cinema houses in the state as well as in regions.

3.2.4 35-44 year olds

3.2.4.1 Educational levels

33 percent of respondents, more females & more in rural, were illiterate. Another 46 percent, across both sexes & more in urban, had education up to Middle. While other 21 percent of them, more males & more in urban, were high school & above in the state.

50 & more percent, except in South-West Hills regions, were high school & above, in the remaining regions. **Table 3.2.4**

3.2.4.2 Exposure to media

81 percent of respondents, across both sexes & more in rural did not have the habit of reading newspapers at all. The rest about 19 percent, across both sexes & more in urban, had read newspaper daily & sometimes in the state. As regard regions, nearly 85 percent irrespective of their sex did not read newspaper at all in each region.

About 63 percent, across both sexes & more in rural, did not have the habit of listening to radio at all. Only about 5 percent, across both sexes & places of residence listened to radio daily. The rest, across both sexes & more in urban, listened to radio sometimes in the state. 5 & below percent in each region reported listening radio daily while 60 & more percent, except 28 percent in North Plateau Hills, did not have the habit of listening to radio at all in rest of regions.

Approximately 66 percent of the respondents, across both sexes & more in rural, did not watch TV at all. About 24 percent & 9 percent across both sexes & more in urban, had watched TV daily & sometimes respectively, in the state.

There was comparatively more watched TV daily in Coastal & Ganjam region and more not watched TV at all, in Inland, North Plateau Hills & South-West Hills regions.

About 86 percent of respondents, across both sexes & more in rural, did not watch cinema at all. One percent & 13 percent watched cinema once in three months and less often respectively. This may be either due to lack of Cinema Halls or their locations at in-accessible places in the state.

90 & more percent of respondents in each region, did not watch cinema at all.

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: Orissa

Educational level & Media Exposure		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Educational level	n=	178	272	248	149	127	667	307	974	236	155	226	150	113	582	298	880	1854
Illiterate		7.7	35.4	73.3	8.5	18.7	31.7	20.1	28.1	20.0	59.0	81.2	24.3	32.2	42.8	28.0	38.1	33.1
Upto middle		66.9	52.3	18.8	39.8	50.5	42.5	50.4	45.0	74.6	34.2	14.3	49.3	53.3	46.2	48.7	47.0	46.0
High school & above		25.5	12.2	7.9	51.6	30.8	25.8	29.5	27.0	5.5	6.8	4.5	26.4	14.5	11.0	23.3	14.9	21.0
2 Newspaper reading habits																		
Daily		3.8	2.9	7.4	14.4	7.5	6.1	19.7	10.5	2.4	1.9	4.0	17.4	8.5	7.0	14.1	9.3	9.9
Sometimes		11.2	7.3	6.3	3.5	7.3	5.1	15.4	8.4	8.5	13.4	6.3	4.2	6.1	5.4	16.6	9.1	8.8
Not at all		85.0	89.8	86.3	82.0	85.1	88.8	65.0	81.1	89.0	84.7	89.8	78.4	85.3	87.6	69.3	81.6	81.4
3 Radio listening habits																		
Daily		0.2	1.2	6.9	8.0	5.3	4.9	3.8	4.6	0.6	2.0	4.5	8.4	6.8	4.4	5.4	4.8	4.7
Sometimes		27.9	70.7	32.3	11.5	15.5	28.9	42.8	33.5	25.7	70.8	38.2	14.9	9.9	27.5	39.2	31.3	32.4
Not at all		71.9	28.1	60.7	80.6	79.2	66.1	53.3	61.9	73.8	27.2	57.3	76.7	83.3	68.1	55.4	63.9	62.9
4 TV watching habits																		
Daily		2.4	1.5	7.5	54.2	20.8	18.9	32.5	23.3	3.8	2.0	6.3	51.1	22.8	17.1	42.5	25.5	24.4
Sometimes		13.5	8.2	6.3	2.7	10.9	5.1	20.1	10.0	8.3	8.1	6.9	0.3	14.9	3.5	19.4	8.7	9.4
Not at all		84.0	90.3	86.2	43.1	68.3	76.0	47.3	66.7	87.9	89.9	86.8	48.6	62.3	79.4	38.1	65.8	66.3
5 Cinema watching habits																		
Once in 3 months		0.6	0.0	2.4	0.0	1.0	0.7	1.2	0.8	0.3	1.0	2.2	0.7	0.4	0.6	2.6	1.3	1.1
Less often		4.7	6.3	15.2	10.1	9.7	5.9	30.5	13.9	4.0	10.4	16.0	10.7	4.1	7.3	22.3	12.2	13.1
Not at all		94.7	93.7	82.4	89.9	89.4	93.4	68.3	85.3	95.7	88.6	81.8	88.6	95.5	92.1	75.1	86.5	85.9

3.2.5 65-74 year olds

3.2.5.1 Education levels

Approximately 69 percent, more females than males, across places of residence, were illiterate. Another 31 percent. more males. across places of residence, had education up to middle & above in the state. As regard regions more than 60 percent comparatively more females in each region were illiterate while comparatively more males had education up to middle & above in each region. Table – 3.2.5.

3.2.5.2 Exposure to media

87 percent of respondents, across both sexes & more in rural, did not read newspapers at all. Another 13 percent across both sexes & more in urban, reported reading newspapers daily or sometimes in the state. 85 & more percent, more females in each region, did not read newspaper at all. The rest in each region, reported reading newspapers daily or sometimes.

About 67 percent, more females & more in rural did not listen to radio at all. Only 4 percent, across both sexes & places of residence reported listening to radio daily. The rest across both sexes & more in urban listened to radio sometimes in the state.

More than 75 percent in all, except 27 percent in North Plateau Hills, regions, did not listen to radio at all. There were more listening to radio sometimes than always in each region.

Nearly 67 percent of respondents, more females & more in rural, did not watch TV at all. About 24 percent, more males & more in urban, reported watching TV daily. The rest, across both sexes & more in urban, were watching TV sometimes, in the state.

More than 75 percent except little less in Coastal regions, did not watch TV at all in each of remaining regions. The percent watching TV daily or sometimes was 10 & below in all, except coastal, regions.

Approximately 92 percent of respondents, across both sexes & more in rural, did not watch cinema at all. A negligible percent of respondent had watched cinema once in three months but approximately 7 percent watched cinema sometimes in the state. Situation in this regard in each region was similar to that in the state.

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: Orissa**

Educational level & Media Exposure		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Educational level	n=	181	156	179	148	131	546	249	795	154	125	172	140	101	484	208	692	1487
Illiterate		51.8	66.7	84.9	41.4	50.0	57.5	52.5	56.0	72.1	90.5	90.6	81.3	57.9	81.7	76.9	80.3	68.2
Upto middle		44.4	27.2	13.7	42.9	42.0	34.8	36.2	35.2	27.9	9.5	8.3	15.8	38.8	17.3	18.5	17.6	26.4
High school & above		3.7	6.1	1.4	15.7	8.0	7.7	11.3	8.8	0.0	0.0	1.1	2.8	3.2	1.0	4.6	2.1	5.5
2 Newspaper reading habits																		
Daily		1.1	4.3	5.0	12.2	7.6	5.6	14.4	8.4	0.9	1.6	5.8	9.4	2.9	4.6	10.1	6.3	7.4
Sometimes		6.4	6.8	5.2	3.1	6.2	4.1	10.4	6.1	6.2	6.6	3.0	0.0	2.9	1.8	11.0	4.6	5.4
Not at all		92.5	88.9	89.8	84.7	86.2	90.3	75.3	85.5	92.9	91.8	91.3	90.6	94.2	93.7	78.9	89.2	87.4
3 Radio listening habits																		
Daily		0.0	2.1	5.6	7.2	5.1	4.5	4.1	4.3	0.6	0.0	4.9	6.7	5.7	3.7	6.6	4.6	4.5
Sometimes		26.6	71.4	37.6	13.3	13.6	26.0	41.5	31.0	27.8	68.4	29.5	7.4	8.0	22.4	35.2	26.3	28.7
Not at all		73.4	26.5	56.8	79.4	81.3	69.5	54.4	64.7	71.6	31.6	65.6	85.9	86.3	73.9	58.2	69.1	66.9
4 TV watching habits																		
Daily		3.1	5.3	5.0	54.7	18.4	21.7	37.2	26.7	0.6	1.6	6.9	39.9	15.6	15.0	37.1	21.7	24.2
Sometimes		8.4	4.2	6.4	4.3	15.2	5.0	16.1	8.6	6.9	7.0	4.6	5.2	12.2	3.8	21.9	9.3	9.0
Not at all		88.6	90.5	88.6	41.0	66.4	73.2	46.7	64.7	92.5	91.3	88.4	54.8	72.1	81.1	41.0	69.0	66.9
5 Cinema watching habits																		
Once in 3 months		0.0	0.0	0.5	0.7	1.2	0.1	2.6	0.9	0.2	0.0	3.4	0.0	0.4	0.7	0.9	0.8	0.9
Less often		1.1	6.7	18.6	3.7	1.4	5.0	12.3	7.3	0.6	5.8	9.3	3.3	1.8	2.4	15.2	6.3	6.8
Not at all		98.9	93.3	80.9	95.7	97.4	94.9	85.1	91.8	99.1	94.2	87.4	96.7	97.8	96.8	84.0	92.9	92.4

PROFILE OF POPULATION (SUMMING UP)

(i) There was increase in percent of illiterate with the increase in the age of respondents.

(ii) More than 70 percent across both sexes & more in rural, across age groups did not reading newspaper at all.

(iii) About67 percent, across both sexes & more in rural, across age groups, did not listen to radio at all.

(iv) About 66 percent, across both sexes & more in rural, across age groups, did not watch TV at all.

(v) Nearly 90 percent, across both sexes & more in rural, across age groups did not watch cinema at all.

CHAPTER IV

MAPPING OF THE FLUORIDE LEVELS

4.1 INTRODUCTION

As stated in the section on objectives (chapter 2), 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 water samples from the households they visited for collection of information related to oral health practices and the current situation of the oral health. This chapter presents results of the analysis of the fluoride levels from those 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 will carry along with them a set of sterilized plastic bottles supplied to them when they go to the field. These bottles were ordered from a manufacturer in Hyderabad specially for this purpose and had the following characteristics:

   (1) Its capacity was 500 ml as per recommendations of the Medlab, Mumbai, India where the water samples were to be analyzed for fluoride levels. (This lab, now has agreed that a sample of even 200 ml would have been enough).This quantity of water was decided to take account of the possible spillage of water during transportation.

   (2) The quality of plastic for bottles was so decided that they could stand the pressure of transportation from Hyderabad to each state where survey was conducted, travel with the field teams and then dispatched to Mumbai for analysis.

   (3) It was sterilized to ensure that collected water did not get contaminated from any source, and

   (4) The bottles had two corks to make sure that spillage of water was minimum and the Medlab got quantity of water sufficient to analyze its fluoride levels.

2. Every field team was instructed to collect water samples from the first household they visited every day. Water sample was collected from the next household only if the source of drinking water of the household was different from the previous household from where water sample was collected. In other words, water samples were collected from all the sampled households that had different sources of drinking water in the area of coverage. If the source of drinking water in the household was the same as collected previously then water sample was not collected. It means that water samples were collected from a representative sample of households of the villages/urban blocks and one knew number of household in the sampled area who were using water of the specific ppm level. 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 and the results give distribution of household with different levels of ppm.

3. All water sample bottles had identification particulars of the household including its state, zone and serial number of the household, which were numbered within each zone.

4. Since a specified number of households were covered from each zone, the field teams were instructed to number the households in each zone serially, starting from 1 to the last number in a zone. Thus, every household covered had a unique serial number within a zone. The water sample bottles had this number recorded; thus, each water sample was uniquely matched with the household so that the water sample could be linked to the household from where other information on oral health was collected.

5. The collected water samples were transported to Medlab, Mumbai, India for analysis.

This collection of water sample and its linking with the household was done for two purposes. The first was that the collected household drinking water samples represent the situation of rural and urban households of the zone and ultimately of the state (by giving proper weights to the rural and urban areas of the zone/state). This analysis would help to map the fluoride levels in different areas of the state and the country as the sampled areas and households were a representative sample of the total areas. The other purpose was to try to relate the fluoride levels of drinking water, oral health related dental practices and the actual status of the oral health of the households and individuals.

4.3 ANALYSIS OF WATER SAMPLES

Since analysis of water samples for its fluoride levels requires special equipment, the President, Dental Council of India, Dr. R.K.Bali contacted the Colgate-India for help in the analysis. They have been supportive to the total effort of the Dental Council of India in the conduct of the National Oral Health Survey including the funding they provided. They agreed to the request of the Dental Council of India for the analysis of the water samples for fluoride levels and identified Medlab, Mumbai for such analysis.

The methodology they adopted in analysis of the fluoride levels has been described in section 2.3.3 of the chapter on Methodology and Data Collection.

4.4 FINDINGS

The levels of fluoride levels in different regions, rural, urban areas and total Orissa are shown in Table 4.1.

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

Levels of ppm	Regions					State		
	I	II	III	IV	V	Rural	Urban	Total
0.0-0.5	72.8	90.1	96.5	71.2	49.6	81.9	39.4	76.4
0.51-1.00	19.4	9.3	0.0	6.0	14.9	8.7	12.9	9.5
1.01-1.50	2.2	0.0	0.0	0.2	7.7	1.0	2.6	1.2
1.51-2.00	1.6	0.0	3.6	0.8	7.9	1.3	5.9	1.9
2.01-4.00	4.1	0.6	0.0	21.8	19.9	7.0	39.3	10.9
4,01-8.00	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8.00+	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Note: The state of Orissa has been divided into five regions namely (i) Inland, (ii) North Plateau Hills, (iii) South-West Hills, (iv) Coastal, (v) Ganjam. Their boundaries and districts within them may be seen in the state map.

About 13 percent of the households in Orissa use drinking water with fluoride levels of 1.5 ppm or above. This percentage in urban areas is very high –almost 45 percent.

The region V has the highest percentage of households (28 %) of ppm levels of 1.5 and above. The region IV follows it closely with about 23 percent households with fluoride levels of 1.5 and above. Such percentages in other regions are relatively small.

Fig. 4.1 Drinking water levels of fluoride in Orissa

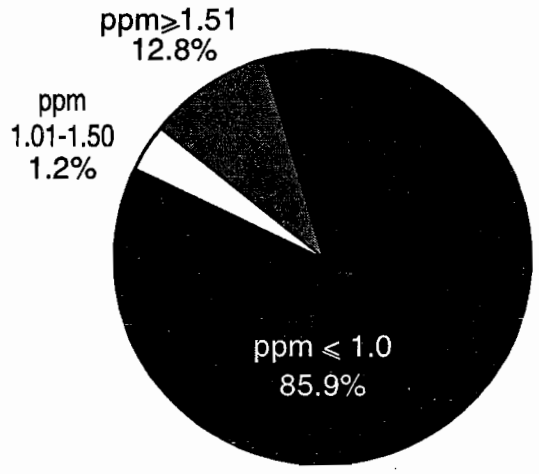
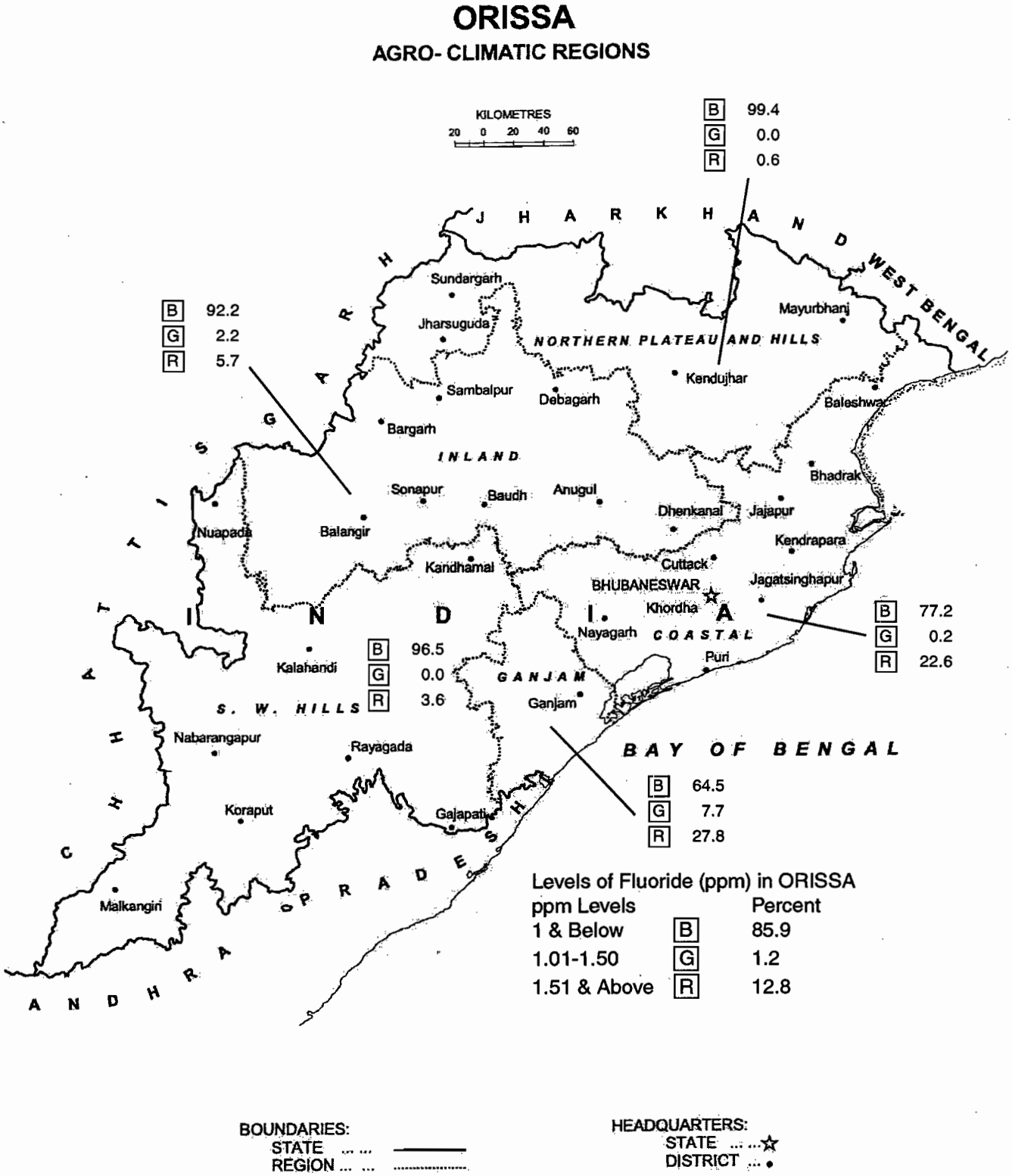


Fig. 4.1 Drinking water levels of Fluoride (ppm) in Orissa, INDIA



CHAPTER V

ORAL HEALTH KNOWLEDGE AND PRACTICES

A series of questions were asked on food habits & other habits/practices from respondents belonging to different ages/age group, both sexes & places of residence across state & regions. The responses to each of these questions are discussed in the present chapter. This is likely to provide information on oral risk practices which may likely be used for initiating educational activities for bringing improvement in oral health conditions of the people.

5.1 ABNORMAL ORAL HEALTH HABITS

Five questions on abnormal habits such as "breathing from mouth" "habit of sucking or biting fingers or thumbs", "thrusting tongue or teeth", "biting nails, lips or object like pencil" & "habit of "grinding/gritting teeth" teeth" were asked from each respondent (in case of 5 years old respondents, these questions on his/her behalf were asked from his/her care taker). The responses as obtained from 5, 12, 15, (35-44) & (65-74) years old respondents by their sex & places of residence are presented in Table 5.1 are discussed as below:

5.1.1 5 years old

Except the habit of "grinding/gritting teeth" in 41 percent of respondents, across both sexes & more in urban, the occurrence of each other abnormal habits in them, was very low, in the state. As regard regions, 50 & more percent except in Coastal region had the habit of "grinding/gritting teeth" in each of remaining regions. The occurrence of other abnormal habits, such as "sucking or biting fingers/thumbs", "thrusting tongue or teeth" and "biting nails/lips/object like pencils" were either zero or negligible in each region.

5.1.2 12 year olds

About 7 percent of respondents, across both sexes & more in rural, had the habit of "grinding/ gritting teeth" while the occurrence of each of other abnormal habits, was reported in one & below percent of respondents in the state.

None of the respondents in Inland & North Plateau Hills regions except the habit of "grinding & gritting teeth" in small percent, reported any other abnormal habits affecting oral health. However a small percent of respondents in Coastal region & 20 percent in South-West Hills & 7 percent in Ganjam regions reported the habit of "grinding/gritting teeth".

5.1.3 15 year olds

Only about 3 percent, of respondents of this age, more males & more in rural, reported the habit of "grinding & gritting teeth". While a negligible percent of respondents reported each of other abnormal, in the state.

Except the habit of "grinding/gritting teeth" reported by small percent of respondents in some regions, the reporting of other abnormal habits in regions were very small.

5.1.4 35-44 year olds

Except reporting the habits of "grinding/gritting teeth" by about 3 percent of respondents, more males & more in rural, neither of other abnormal habit was reported by any one in the state. There were comparatively more (about 13 percent) respondents in South-West Hills region had the habit of grinding/ gritting than in other regions.

5.1.5 65-74 year olds

Except the habit of "grinding/gritting teeth" in about three percent of respondents, across both sexes & places of residence, a negligible percent of respondents reported either of other abnormal habits in the state. But about 14 percent of respondents in North-West Hills region, reported the habit of "grinding/gritting teeth" while insignificant number of respondents reported either of other abnormal habits in each regions.

ABNORMAL ORAL HABITS ACROSS AGE GROUPS (SUMMING UP)

41 percent & 7 percent of respondents aged 5 & 12 years, across both sexes respectively and 3 percent of respondents, more males & more in rural from each of subsequent age/age groups reported the habit of "grinding/gritting teeth".

A few or none of respondents from each age/age group reported any other abnormal oral health habit in the state.

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

AGE: 5 yrs — **STATE: Orissa**

Habits affecting oral health		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	187	112	184	150	130	512	251	763	149	100	159	151	130	453	236	689	1452
1 Breathing from mouth		0.0	0.0	0.0	0.3	0.0	0.0	0.9	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
2 Sucking or biting fingers/thumb		0.0	0.0	0.0	3.5	2.0	1.2	2.5	1.7	0.0	0.0	0.0	3.7	3.8	1.2	5.4	2.6	2.2
3 Thrusting tongue on teeth		0.0	0.0	0.0	0.0	1.4	0.1	0.2	0.1	0.0	0.0	0.0	1.7	0.0	0.8	0.0	0.5	0.3
4 Biting nails/lips/objects like pencil		0.9	0.0	0.0	1.7	2.3	1.1	0.5	0.9	0.0	0.0	0.0	2.0	0.9	0.9	0.9	0.9	0.9
5 Grinding / gritting teeth		58.5	70.9	69.1	3.6	44.7	41.7	40.2	41.2	53.6	68.3	75.2	5.3	40.2	37.1	47.7	40.7	41.0

AGE: 12 yrs — **STATE: Orissa**

Habits affecting oral health		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	168	112	178	156	143	502	255	757	169	105	196	150	132	503	249	752	1509
1 Breathing from mouth		0.0	0.0	0.0	0.3	0.0	0.0	0.8	0.3	0.0	0.0	0.0	0.7	0.0	0.0	1.7	0.6	0.5
2 Sucking or biting fingers/thumb		0.0	0.0	0.0	0.7	1.7	0.1	2.1	0.8	0.0	0.0	0.0	2.0	0.0	0.7	0.9	0.8	0.8
3 Thrusting tongue on teeth		0.8	0.0	0.0	0.0	0.4	0.2	0.2	0.2	1.7	0.0	0.0	0.8	0.0	0.7	0.3	0.6	0.4
4 Biting nails/lips/objects like pencil		0.0	0.0	0.0	2.4	2.9	0.9	2.3	1.4	1.5	0.0	0.0	2.0	1.0	1.2	0.9	1.1	1.3
5 Grinding / gritting teeth		8.4	0.0	18.2	1.0	9.6	7.0	5.0	6.3	8.1	1.2	21.0	1.9	3.5	7.8	4.8	6.9	6.6

AGE: 15 yrs — **STATE: Orissa**

Habits affecting oral health		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	160	122	181	141	149	488	265	753	171	98	188	150	128	503	232	735	1488
1 Breathing from mouth		0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.1	0.0	0.0	0.9	0.7	0.0	0.2	2.1	0.8	0.5
2 Sucking or biting fingers/thumb		0.0	0.0	0.0	0.0	0.0	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 Thrusting tongue on teeth		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.4	0.0	0.3	0.2
4 Biting nails/lips/objects like pencil		0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.1	0.7	0.0	0.0	0.0	2.2	0.3	0.7	0.4	0.3
5 Grinding / gritting teeth		1.8	0.0	21.6	0.9	2.9	6.3	0.5	4.3	0.9	0.0	9.0	0.3	3.9	2.7	1.5	2.3	3.3

AGE: 35-44 yrs — **STATE: Orissa**

Habits affecting oral health		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	189	143	240	148	130	570	280	850	240	108	221	148	115	540	292	832	1682
1 Breathing from mouth		0.2	0.0	0.5	0.0	1.0	0.2	0.3	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.8	0.3	0.3
2 Sucking or biting fingers/thumb		0.0	0.0	0.0	0.0	0.0	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 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	0.4	0.0	0.2	0.1	0.1
4 Biting nails/lips/objects like pencil		0.0	0.0	0.0	0.0	0.0	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 Grinding / gritting teeth		1.5	0.4	16.4	0.0	1.0	5.2	0.4	3.6	0.4	0.0	10.5	0.9	1.7	3.0	1.8	2.6	3.1

AGE: 65-74 yrs — **STATE: Orissa**

Habits affecting oral health		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	190	90	168	150	140	498	240	738	158	85	163	142	114	452	210	662	1400
1 Breathing from mouth		0.0	0.0	0.0	1.2	0.0	0.4	0.9	0.5	0.0	0.0	0.8	0.0	0.0	0.2	0.0	0.1	0.3
2 Sucking or biting fingers/thumb		0.0	0.0	0.0	0.0	0.0	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 Thrusting tongue on teeth		0.7	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.8	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1
4 Biting nails/lips/objects like pencil		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	0.1	0.0	0.1	0.1
5 Grinding / gritting teeth		1.1	0.6	7.9	0.8	3.2	2.5	2.1	2.4	1.0	0.0	20.3	0.0	2.5	5.1	1.2	3.9	3.2

5.2 SWEET / SUGAR TAKING HABITS

Since sweet taking habits affect oral health, the respondents belonging to ages/age groups 5, 12, 15, (35-44) & (65-74) years, both sexes by places of residence, were asked on theirs pattern of sugar in take in last one day. The responses obtained from each group of respondents, are presented in Table 5.2 and Fig. 5.1 and are discussed below:

5.2.1 5 year olds

About 79 percent of respondents, of this age group, across both sexes & more in rural did not take sugar in last one day. While others 14 percent & 6 percent, across both sexes, more in urban had taken sugar one time & two & more times in last one day respectively, in the state.

As regard region nearly 75 percent of respondents, across both sexes in each region did not take sugar in last one day. 7 percent in North Plateau Hills, 13 percent in each other region had taken sugar one time in last one day. About 2 percent in Inland & Coastal regions & 10 & more percent in rest of three regions had taken sugar two & more times in last one day.

5.2.2 12 year olds

Approximately 78 percent of respondents, more males & more in rural, did not take sugar in last one day. While 15 percent & 6 percent across both sexes & more in urban, had taken sugar one time & two times in last one day respectively. Another about 2 percent, more in rural, had taken sugar more than two times in last one day in the state.

More than 75 percent, except 66 percent in South-West Hills across both sexes, did not take sugar in last one day in remaining regions. 13 & more percent except 8 percent in North Plateau Hills, had taken sugar one time in last one day in remaining regions. Comparatively more percent of respondents had taken sugar two times than those had taken more than two times, in each region.

5.2.3 15 year olds

74 percent of respondents, more females & more in rural did not take sugar in last one day while 19 percent & about 6 percent across both sexes and more in urban, reported taken sugar one time & two times in last one day respectively. And rest had taken sugar more than two times in last one day, in the state.

75 & more percent, except 62 percent in South-West Hills did not take sugar in last one day in the remaining regions. About 22 percent in Inland & South-West Hills & nearly 13 percent in each of the remaining regions had taken sugar one time in last one day. More in each region reported taken sugar two times than there taken two & more times in last one day.

5.2.4 35-44 year olds

Nearly 66 percent, across both sexes & more in rural, did not take sugar in last one day. About 31 percent & 5 percent, across both sexes & more in urban reported taken sugar one time & two times in last one day respectively. Only 2 percent had taken sugar more than two times in last one day in the state. Approximately 45 percent of respondents in Inland, North Plateau Hills & South-West Hills and 80-85 percent in Coastal & Ganjam regions, did not take sugar in last one day.

There were comparatively more in inland, North Plateau Hills & South-West Hills & less in Coastal & Ganjam regions had taken sugar one time in last one day. There were comparatively more in North Plateau Hills & South-West Hills than in remaining regions reported taken sugar two times & more in last one day.

5.2.5 65-74 year olds

70 percent of respondents, across both sexes, & more in rural, did not take sugar in last one day. 23 percent & 5 percent across both sexes & more in urban, reported taken sugar one & two times in last one day respectively. Only one percent across both sexes & places of residence had taken sugar more than two times in last one day in the state.

About 55 percent in Inland, North Plateau Hills & South-West Hills & about 85 percent in Coastal & Ganjam regions did not take sugar in last one day. Nearly one third in Inland, North Plateau Hills & South-West Hills & about 10 percent in Coastal & Ganjam regions had taken sugar one time in last one day. Except North Plateau Hills & South-West Hills, there were 2-3 percent of respondents in rest of regions had taken sugar two & more times in last one day.

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

Nearly three fourth of respondents, across both sexes & more in rural irrespective of age differences did not take sugar in last one day. There was however increase in the percent of respondents, who took sugar one time & more times in last one day with increase in their age. These were equally divided by sex & more of them living in urban area of the state.

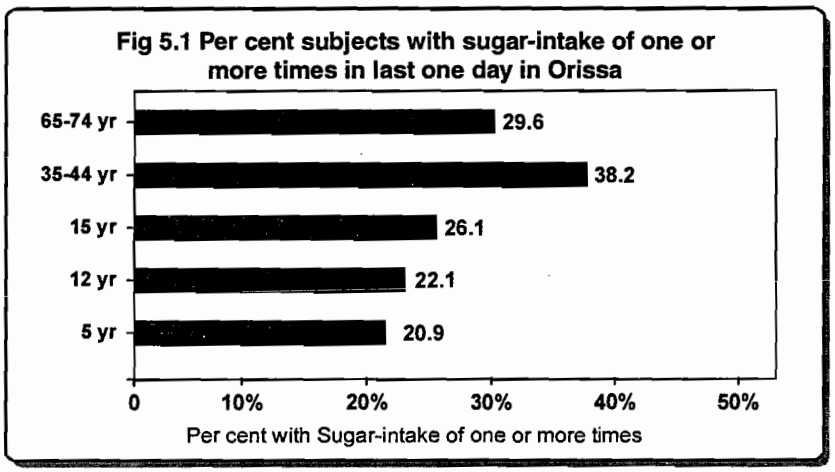


Table 5.2 Percent respondents by pattern of sugar intake, age, sex and geographical area.

AGE: 5 yrs **STATE: Orissa**

Pattern of Sugar intake in last one day		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	187	112	183	150	133	515	250	765	149	100	161	149	129	453	235	688	1453
1 Not taken		86.1	83.2	73.2	85.6	76.6	84.2	69.9	79.6	83.2	81.1	73.0	85.0	74.2	82.8	70.1	78.6	**79.1**
2 Taken one time		11.4	6.9	13.6	13.7	17.1	11.2	21.3	14.4	14.9	7.6	13.4	12.4	19.4	12.0	19.6	14.6	**14.5**
3 Taken two times		0.4	9.4	8.3	0.3	5.0	3.0	6.4	4.1	0.7	11.3	9.1	2.3	2.6	3.5	8.8	5.3	**4.7**
4 Taken 2+ times		2.1	0.5	4.9	0.3	1.3	1.7	2.4	1.9	1.1	0.0	4.5	0.3	3.8	1.6	1.4	1.5	**1.7**

AGE: 12 yrs **STATE: Orissa**

Pattern of Sugar intake in last one day		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	169	112	178	154	143	501	255	756	170	105	198	147	132	504	248	752	1508
1 Not taken		87.2	81.0	66.0	89.1	79.4	84.1	72.5	80.3	82.5	82.0	66.6	85.7	72.8	82.3	61.9	75.8	**78.1**
2 Taken one time		12.2	8.2	17.4	9.9	14.1	11.1	17.4	13.2	16.4	8.8	18.6	13.1	19.2	12.8	28.7	17.8	**15.5**
3 Taken two times		0.6	9.1	10.1	1.0	3.0	3.0	8.8	4.9	0.4	7.5	10.4	1.2	7.1	3.5	8.8	5.2	**5.1**
4 Taken 2+ times		0.0	1.6	6.5	0.0	3.4	1.8	1.3	1.7	0.8	1.7	4.3	0.0	0.9	1.5	0.7	1.2	**1.5**

AGE: 15 yrs **STATE: Orissa**

Pattern of Sugar intake in last one day		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	161	122	181	141	148	490	263	753	173	98	189	150	129	506	233	739	1492
1 Not taken		74.3	70.2	62.2	87.7	75.8	79.6	57.5	72.1	81.5	78.6	62.1	85.4	79.8	80.7	64.2	75.7	**73.9**
2 Taken one time		24.6	13.8	24.1	10.7	16.1	14.8	30.9	20.3	17.9	12.5	19.3	13.1	13.1	13.9	25.2	17.3	**18.8**
3 Taken two times		1.1	13.4	9.7	1.2	5.2	4.2	8.8	5.8	0.6	7.7	13.4	1.5	7.2	4.0	10.3	5.9	**5.9**
4 Taken 2+ times		0.0	2.5	4.1	0.4	2.9	1.4	2.8	1.8	0.0	1.2	5.3	0.0	0.0	1.4	0.2	1.0	**1.4**

AGE: 35-44 yrs **STATE: Orissa**

Pattern of Sugar intake in last one day		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	188	143	241	148	130	571	279	850	240	108	224	145	115	538	294	832	1682
1 Not taken		45.2	47.1	58.7	85.7	82.7	69.0	40.9	60.2	53.7	48.8	54.2	88.0	81.1	68.9	52.7	63.5	**61.9**
2 Taken one time		52.2	42.1	25.9	13.9	15.6	25.9	46.8	32.5	45.5	37.6	30.3	10.1	14.3	26.0	36.9	29.6	**31.1**
3 Taken two times		1.7	9.6	7.9	0.3	1.7	2.9	9.9	5.1	0.7	11.2	10.4	1.6	4.2	3.6	9.5	5.5	**5.3**
4 Taken 2+ times		0.9	1.2	7.6	0.0	0.0	2.2	2.4	2.2	0.0	2.3	5.1	0.4	0.4	1.6	1.0	1.4	**1.8**

AGE: 65-74 yrs **STATE: Orissa**

Pattern of Sugar intake in last one day		MALE								FEMALE								State Total
		Regions					State			Regions					State			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
	n=	189	89	168	149	140	497	238	735	158	85	163	142	114	452	210	662	1397
1 Not taken		69.2	54.9	51.3	88.8	87.7	76.3	56.4	70.1	69.0	61.0	61.2	85.0	84.3	76.6	57.5	70.8	**70.5**
2 Taken one time		29.2	36.9	31.9	8.5	9.5	18.7	34.1	23.5	30.4	23.2	23.5	14.6	13.7	18.8	33.8	23.3	**23.4**
3 Taken two times		0.7	8.2	9.5	2.3	2.8	3.3	8.0	4.8	0.4	15.2	12.9	0.4	0.0	4.0	7.3	5.0	**4.9**
4 Taken 2+ times		0.9	0.0	7.3	0.3	0.0	1.8	1.5	1.7	0.2	0.7	2.4	0.0	2.0	0.7	1.4	0.9	**1.3**

5.3 ORAL HEALTH PRACTICES

A series of questions were asked on oral hygiene practices, covering aspects like: how the teeth are cleaned, what material is used to clean, whether it is fluoridated, how often teeth are cleaned and whether and how often mouth rinsed after eating. The responses that obtained from the respondents, belonging to ages/age groups, 5, 12, 15, (35-44) & (65-74) years, both sexes by places of residence, are presented in Tables 5.3.1 to 5.3.5 and Fig. 5.2 & discussed as below:

5.3.1 5 year olds

51 percent of respondents, across both sexes & more in urban, reported cleaning teeth with brush in the state

There were different percent of brush users in different regions. There were 80 percent in Coastal region, nearly, 45 to 50 percent in Inland & Ganjam regions & 13 percent in North Plateau Hills & South-West Hills cleaned teeth with brush.

Almost all respondents across both sexes & places of residence in each region as well as in the state reported cleaning teeth once a day.

About 64 percent of respondents, across both sexes & more in urban, & 16 percent more in rural told the use of tooth pastes & tooth powder respectively in the state. In regions 88 & more percent in Inland & Ganjam regions, 66 percent in Coastal & about 17 percent in North Plateau Hills & South-West Hills reported the use of tooth pastes.

While 32 percent in Coastal & 11 percent in Ganjam regions, three & below percent in each of remaining regions reported the use of tooth powder.

About 36 percent, more females and more in rural had used fluoridated tooth pastes/powder. While approximately 44 percent, more males & more in rural reported the use of non-fluoridated tooth pastes/powder in the state. This shows that there were more using non fluoridated than fluoridated tooth pastes/powder. There were comparatively more using fluoridated tooth pastes/powder in Coastal & Ganjam than in other three regions. While more except in North Plateau Hills region, were using non fluoridated tooth paste/powder in rest of regions.

As regard change of tooth brush, about 42 percent of respondents, across both sexes & more in urban changed tooth brush once in 1-3 months while another 40 percent of respondents across both sexes & more in rural had changed tooth brushes once in 4-6 months. Another 15 percent, more males & more in rural, had changed tooth brushes once after 6 months in the state.

There was comparatively more in each region changed tooth brush once in 1-3 months followed by those changed tooth brushes once in 4-6 months.

Approximately 94 percent, across both sexes & places of residence rinsed month always after eating in the state as well as in each region. **Table 5.3.1**

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

AGE: 5 yrs STATE: Orissa

Oral Hygiene Practices		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Clean teeth with	**n=**	**188**	**120**	**183**	**150**	**133**	**518**	**256**	**774**	**149**	**105**	**162**	**149**	**131**	**456**	**240**	**696**	**1470**
finger		0.7	50.0	23.8	2.8	3.6	12.9	11.5	12.5	1.8	43.7	21.3	6.1	5.5	11.8	16.0	13.2	**12.9**
brush		40.3	12.8	8.2	82.7	54.4	43.1	67.6	51.0	42.8	14.1	18.7	76.7	49.9	46.8	62.1	51.9	**51.5**
datun		58.3	37.2	66.4	14.5	42.0	43.4	20.6	36.1	54.5	42.2	59.9	17.2	44.5	41.2	21.7	34.6	**35.4**
others		0.7	0.0	1.6	0.0	0.0	0.5	0.2	0.4	0.9	0.0	0.2	0.0	0.0	0.2	0.2	0.2	**0.3**
2 Frequency of cleaning teeth	**n=**	**89**	**76**	**67**	**132**	**84**	**264**	**184**	**448**	**71**	**63**	**75**	**127**	**79**	**242**	**173**	**415**	**863**
Once a day		99.1	100.0	93.2	99.2	95.0	98.6	97.1	98.0	98.4	100.0	99.5	100.0	96.4	99.8	97.6	98.9	**98.5**
Twice a day		0.9	0.0	2.3	0.8	5.0	0.8	2.9	1.6	1.6	0.0	0.5	0.0	2.0	0.0	2.4	1.0	**1.3**
After every meal		0.0	0.0	2.3	0.0	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.0	1.7	0.2	0.0	0.1	**0.2**
3 Material used for cleaning teeth																		
Tooth paste		96.9	14.9	13.9	67.0	87.1	55.9	79.3	65.3	94.4	21.1	19.3	66.5	87.3	59.7	69.1	63.5	**64.4**
Tooth powder		0.9	1.6	0.0	31.1	11.3	19.9	6.6	14.6	3.6	0.0	5.2	32.6	11.0	21.2	13.0	17.9	**16.3**
4 Type of toothpaste/ powder	**n=**	**87**	**13**	**21**	**130**	**84**	**181**	**154**	**335**	**71**	**13**	**31**	**126**	**78**	**181**	**138**	**319**	**654**
Flouridated		2.7	9.7	0.0	48.5	17.7	35.5	29.1	32.7	2.6	0.0	10.6	59.5	19.4	44.8	30.1	38.8	**35.8**
Non flouridated		89.5	19.3	39.1	36.9	40.5	51.0	33.4	43.4	91.6	30.5	30.8	28.1	31.9	41.2	33.7	38.2	**40.8**
5 Change of toothbrush once in	**n=**	**88**	**16**	**27**	**128**	**79**	**185**	**153**	**338**	**69**	**14**	**43**	**119**	**70**	**183**	**132**	**315**	**653**
1-3 months		53.1	61.0	83.5	30.3	42.9	35.8	51.1	42.3	47.8	78.2	83.3	30.1	44.1	37.3	51.0	42.8	**42.6**
4-6 months		13.8	15.6	1.9	51.8	49.8	43.0	33.5	39.0	15.9	8.8	0.0	56.4	46.2	43.9	37.9	41.5	**40.3**
6 + months		32.6	0.0	1.9	17.9	3.8	19.3	14.3	17.2	36.3	0.0	0.0	13.6	4.0	16.6	9.2	13.6	**15.4**
6 Rinse mouth after eating	**n=**	**188**	**120**	**183**	**150**	**133**	**518**	**256**	**774**	**149**	**105**	**162**	**149**	**131**	**456**	**240**	**696**	**1470**
Sometimes		0.7	0.0	1.6	2.7	1.3	0.6	7.1	2.7	0.0	2.5	4.3	2.5	2.2	1.9	4.6	2.8	**2.8**
Always		98.2	89.1	94.3	96.1	92.2	96.3	87.5	93.5	99.8	90.3	93.2	95.8	92.9	95.8	91.7	94.4	**94.0**

5.3.2 12 year olds

About 51 percent, across both sexes & more in urban reported cleaning teeth with brush in the state.

There were about half of respondents in Inland, Coastal & Ganjam & about 15 percent in North Plateau & South-West Hills regions had cleaned teeth with brush.

Almost all respondents in each region as well as in state reported cleaned teeth once a day.

Approximately 75 percent more females & more in urban, reported the use of tooth pastes & 22 percent, more males & more, in rural were using tooth powder.

80 & more percent of respondents in Inland, North Plateau Hills, & Ganjam regions, about 64 & 40 percent in Coastal & South-West Hills regions reported the use of tooth pastes. While except Coastal region, there was either negligible or none had used tooth powder in each of remaining regions.

33 percent of respondents across both sexes & more in rural reported the use of fluoridated tooth paste/powder. While approximately 44 percent, across both sexes & more in rural reported the use of non-fluoridated tooth paste/powder in the state.

The use of fluoridated tooth paste/powder except in Coastal & Ganjam regions, was comparatively low in rest of regions. Whereas the use of non fluoridated toothpastes/powder except about 94 percent in Inland region, one third or more of respondents reported the use of non-fluoridated tooth paste/powder in each of remaining regions.

About 42 percent of respondents, across both sexes & more in urban had changed tooth brush once in 1-3 months. While another 56 percent across both sexes & more in rural reported change of tooth brush once after 4 months of use, in the state.

There was 50 & more percent of respondents in each except Coastal region, had changed tooth brush once in 1-3 months. Whereas except one third in Inland region, very few in remaining regions had changed tooth brush once after 6 months.

About 92 percent, across both sexes & more in rural had rinsed mouth always after eating in the state as well as in each region. **Table 5.3.2**

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

AGE: 12 yrs **STATE: Orissa**

Oral Hygiene Practices		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Clean teeth with	n=	171	121	176	153	144	504	261	765	170	111	197	147	133	504	254	758	1523
finger		0.0	0.0	0.8	5.3	3.7	2.6	1.4	2.2	0.0	0.5	1.5	2.5	1.6	1.3	2.0	1.6	1.9
brush		36.5	10.5	17.1	77.1	54.0	42.4	66.7	50.5	44.9	18.6	10.7	79.9	53.4	45.0	65.8	51.7	51.1
datun		61.3	89.5	80.2	17.6	42.3	54.1	31.5	46.5	52.1	79.7	87.7	17.6	45.0	52.8	32.0	46.0	46.3
others		2.2	0.0	1.9	0.0	0.0	0.9	0.4	0.8	3.0	1.1	0.2	0.0	0.0	0.9	0.2	0.7	0.75
2 Frequency of cleaning teeth	n=	71	15	44	131	88	193	156	349	83	20	47	125	82	198	159	357	706
Once a day		98.4	100.0	100.0	99.6	96.3	99.6	97.2	98.6	99.6	100.0	98.7	99.2	96.4	99.8	95.8	98.1	98.4
Twice a day		1.6	0.0	0.0	0.4	3.7	0.4	2.8	1.4	0.4	0.0	1.3	0.8	3.6	0.2	4.2	1.9	1.7
After every meal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3 Material used for cleaning teeth																		
Tooth paste		97.8	90.8	32.2	56.0	88.0	61.2	82.4	70.4	98.2	73.4	51.3	72.7	84.9	76.4	84.1	79.6	75.0
Tooth powder		2.2	0.0	9.7	39.6	12.0	31.0	13.3	23.3	1.3	5.9	1.3	26.3	12.1	18.6	13.9	16.7	20.0
4 Type of toothpaste/ powder	n=	71	13	26	126	88	177	147	324	82	16	38	124	79	185	154	339	663
Flouridated		2.6	0.0	12.7	49.0	25.8	38.7	24.1	32.2	3.4	0.0	0.0	53.5	13.1	38.1	25.5	32.8	32.5
Non flouridated		92.7	43.0	39.1	34.0	36.2	47.2	37.5	42.9	93.9	44.9	48.1	30.3	36.9	47.0	38.3	43.3	43.1
5 Change of toothbrush once in	n=	71	15	43	124	82	183	152	335	83	19	41	122	79	193	151	344	679
1-3 months		50.6	85.6	85.9	28.3	48.1	38.4	45.8	41.7	42.9	57.2	86.2	32.9	42.7	36.4	52.0	42.8	42.3
4-6 months		17.0	9.8	1.0	58.5	41.1	44.7	40.7	43.0	22.4	30.6	1.4	51.4	46.6	44.1	32.1	39.1	41.1
6 + months		32.4	0.0	0.0	13.3	9.2	15.8	11.5	13.9	34.7	0.0	0.0	15.7	3.8	17.5	14.6	16.3	15.1
6 Rinse mouth after eating	n=	171	121	176	153	144	504	261	765	170	111	197	147	133	504	254	758	1523
Sometimes		0.7	0.0	3.1	3.3	5.0	2.0	4.9	3.0	1.5	0.0	3.7	3.8	0.7	2.0	5.7	3.2	3.1
Always		98.5	92.9	92.0	96.8	88.9	95.9	90.6	94.1	97.3	92.8	95.0	94.2	96.3	96.3	88.2	93.6	93.9

5.3.3 15 year olds

Half of respondents, across both sexes, more in urban reported cleaning teeth with brush in the state.

There were comparatively more in Inland, Coastal & Ganjam regions than in other two regions cleaning teeth with brush.

As regard change of tooth brushes about 43 percent, across both sexes, more in urban had changed tooth brush once in 1-3 months. While other 39 percent, across both sexes & places of residence, had changed tooth brush once in 4-6 months. Only 15 percent across both sexes & more in rural had changed tooth brush once after 6 months, in the state.

There were comparatively more of respondents in each region changed brushes once in 1-3 months than those changed tooth-brushes once in (4-6) months & after 6 months of use. Almost all, irrespective of their sex & places of residence, in each region as well as in the state cleaned teeth once a day.

About 74 percent of respondents, more females & more in urban reported the use of tooth pastes. While about 22 percent, more males & more in rural, had used tooth powder in the state.

Three fourth & more respondents except 38 percent in South West Hills, reported the use of tooth pastes in each region. One third of respondents, across both sexes & more in rural had used fluoridated tooth pastes. Another 43 percent of respondents across both sexes & more in rural reported the use of non-fluoridated tooth pastes in the state.

There were comparatively more except in Coastal region, using non-fluoridated tooth pastes than those using fluoridated tooth pastes in the remaining regions.

About 95 percent reported rinsed mouth always after eating in each regions as well as in the state.
Table 5.3.3

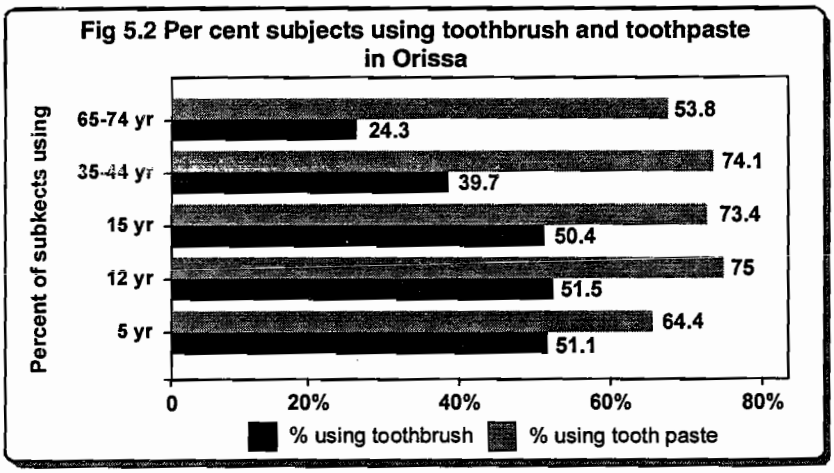


Table 5.3.3 Percent 15 year olds by oral hygiene practices, sex & geographical area.

AGE: 15 yrs

STATE: Orissa

Oral Hygiene Practices		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Clean teeth with	**n=**	**163**	**129**	**182**	**142**	**150**	**496**	**270**	**766**	**173**	**103**	**185**	**149**	**129**	**502**	**237**	**739**	**1505**
finger		0.8	0.5	1.1	4.4	4.2	2.5	1.9	2.3	0.0	0.0	2.0	1.2	3.3	1.0	1.8	1.3	**1.8**
brush		36.6	15.7	11.4	78.7	53.7	41.8	64.4	49.5	43.9	16.0	16.9	73.1	53.4	43.4	68.4	51.2	**50.4**
datun		57.8	83.8	86.7	16.9	41.8	54.3	33.2	47.1	53.2	82.8	80.9	24.8	43.3	54.3	29.5	46.6	**46.9**
others		4.9	0.0	0.9	0.0	0.3	1.4	0.4	1.0	2.9	1.2	0.2	0.8	0.0	1.3	0.2	1.0	**1.0**
2 Frequency of cleaning teeth	**n=**	**74**	**22**	**37**	**122**	**94**	**186**	**163**	**349**	**81**	**16**	**54**	**117**	**80**	**197**	**151**	**348**	**697**
Once a day		98.3	100.0	100.0	99.1	99.4	100.0	96.0	98.2	100.0	100.0	96.0	99.1	97.0	99.4	96.8	98.3	**98.3**
Twice a day		1.7	0.0	0.0	0.9	0.6	0.0	4.0	1.8	0.0	0.0	4.0	0.9	3.0	0.6	3.2	1.7	**1.8**
After every meal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
3 Material used for cleaning teeth																		
Tooth paste		96.1	72.7	30.9	58.2	90.9	64.2	79.1	70.7	99.1	85.6	44.8	64.0	86.7	70.2	84.2	76.0	**73.4**
Tooth powder		3.9	0.0	12.0	38.7	7.6	28.7	16.8	23.5	0.9	7.2	1.7	34.4	13.3	23.6	13.8	19.5	**21.5**
4 Type of toothpaste/ powder	**n=**	**74**	**16**	**22**	**119**	**93**	**171**	**153**	**324**	**82**	**15**	**39**	**115**	**80**	**183**	**148**	**331**	**655**
Flouridated		2.7	0.0	0.0	50.4	22.1	37.3	29.4	33.8	3.7	0.0	5.6	58.0	16.7	40.6	24.4	33.7	**33.8**
Non flouridated		96.1	46.5	39.8	34.1	37.9	48.0	38.4	43.7	94.6	50.2	50.1	26.3	41.7	46.4	40.3	43.8	**43.8**
5 Change of toothbrush once in	**n=**	**73**	**21**	**34**	**117**	**86**	**176**	**155**	**331**	**81**	**16**	**49**	**115**	**76**	**191**	**146**	**337**	**668**
1-3 months		48.4	71.5	81.2	30.9	45.2	37.2	49.7	42.8	51.3	71.2	79.8	31.4	39.4	40.1	47.1	43.0	**42.9**
4-6 months		28.7	12.7	0.0	52.9	44.3	44.2	39.8	42.3	20.1	21.6	2.9	49.9	53.0	39.1	40.2	39.5	**40.9**
6 + months		22.9	0.0	8.0	16.2	8.8	17.1	8.9	13.4	28.7	0.0	0.0	18.7	3.2	18.9	10.9	15.6	**14.5**
6 Rinse mouth after eating	**n=**	**163**	**129**	**182**	**142**	**150**	**496**	**270**	**766**	**173**	**103**	**185**	**149**	**129**	**502**	**237**	**739**	**1505**
Sometimes		1.6	0.0	3.0	1.9	2.4	1.7	2.8	2.1	1.5	0.0	3.9	1.0	0.8	1.3	3.4	1.9	**2.0**
Always		97.1	94.2	91.2	96.8	93.9	95.8	91.1	94.2	98.5	92.1	96.0	97.8	93.7	97.3	92.1	95.7	**95.0**

5.3.4 35-44 year olds

About 49 percent of respondents, across both sexes & more in urban, reported cleaning teeth with brush in the state.

About 12-14 percent in North Plateau Hills & South-West Hills, one third of respondents in remaining regions, had cleaned teeth with brush.

Almost all, irrespective of sex & places of residence, in each region & state had cleaned teeth once a day.

74 percent across both sexes, more in urban, reported the use of tooth pastes. While about 19 percent across both sexes, more in rural, reported the use of tooth powder, in the state.

There were comparatively more used tooth pastes than tooth powder in each region.

Approximately 35 percent, more females & more in rural reported the use of fluoridated tooth pastes/powder. Another 44 percent, across both sexes & more in rural reported the use of non-fluoridated tooth pastes/powder in the state.

Comparatively large percent of respondents reported the use of non-fluoridated tooth pastes/ powder than fluoridated tooth pastes/powder, in each region.

As regard change of tooth brushes, 47 percent, more females & more in urban, had changed tooth brush once in 1-3 months. While other 4 percent, across both sexes & places of residence reported change of tooth brush once in 4-6 months. The remaining 12 percent, more males, more in rural had changed tooth brush once after 6 months, in the state.

There were comparatively more respondents reported change of brushes once in 1-3 months than those changed brushes once in 4-6 months, and after six months in each region.

About 90-95 percent reported rinsed mouths always after eating in each region as well as in the state. **Table 5.3.4**

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

AGE: 35-44 yrs

STATE: Orissa

Oral Hygiene Practices		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Clean teeth with	n=	189	158	240	148	129	572	292	864	240	108	221	146	115	536	294	830	1694
finger		0.0	0.8	1.6	8.3	1.1	3.7	1.4	2.9	1.1	0.5	1.2	2.1	2.8	1.3	2.8	1.8	**2.4**
brush		26.4	9.6	14.4	61.0	33.8	28.1	60.6	38.7	22.8	14.7	14.4	67.3	28.0	30.8	60.7	40.7	**39.7**
datun		73.6	89.2	82.9	30.6	64.1	67.9	37.6	58.0	75.4	84.7	83.5	29.8	67.7	67.2	35.9	56.8	**57.4**
others		0.0	0.4	1.1	0.0	1.0	0.4	0.4	0.4	0.7	0.0	0.8	0.9	1.5	0.8	0.7	0.7	**0.6**
2 Frequency of cleaning teeth	n=	65	18	61	110	55	144	165	309	75	16	56	109	45	137	164	301	610
Once a day		96.3	100.0	91.6	99.0	95.1	98.7	94.1	96.5	94.6	100.0	90.8	98.5	95.0	98.1	93.6	95.9	**96.2**
Twice a day		3.7	0.0	8.4	1.0	4.9	1.3	5.9	3.5	3.1	0.0	9.2	1.5	5.0	1.3	6.4	3.8	**3.7**
After every meal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.6	0.0	0.3	**0.2**
3 Material used for cleaning teeth																		
Tooth paste		98.5	70.2	41.8	64.6	89.5	64.8	82.6	73.5	92.3	74.0	35.3	66.4	88.6	64.8	84.4	74.6	**74.1**
Tooth powder		1.5	0.0	3.4	29.4	10.5	21.5	14.8	18.3	5.4	0.0	6.0	31.1	11.4	24.6	13.4	19.0	**18.7**
4 Type of toothpaste/ powder	n=	65	14	42	105	56	122	160	282	74	12	38	107	45	118	158	276	558
Flouridated		10.4	10.2	5.0	47.4	16.0	37.4	28.6	32.9	3.6	0.0	14.5	56.8	15.5	43.8	30.5	36.9	**34.9**
Non flouridated		88.8	15.1	49.6	36.9	46.0	48.4	40.3	44.2	93.3	50.6	46.6	30.9	42.0	47.6	38.4	42.8	**43.5**
5 Change of toothbrush once in	n=	65	17	55	100	52	131	158	289	73	15	51	106	40	131	154	285	574
1-3 months		38.1	91.8	78.0	27.2	59.6	35.0	52.6	43.9	56.9	65.3	91.5	41.1	48.5	50.2	48.6	49.4	**46.7**
4-6 months		44.5	0.0	1.7	52.0	37.6	45.3	33.4	39.2	30.1	7.8	2.0	46.7	46.1	37.1	40.7	38.9	**39.1**
6 + months		17.4	0.0	4.7	19.4	0.0	16.2	12.5	14.3	13.0	0.0	0.0	12.2	5.5	10.7	9.4	10.1	**12.2**
6 Rinse mouth after eating	n=	189	158	240	148	129	572	292	864	240	108	221	146	115	536	294	830	1694
Sometimes		1.5	0.0	3.4	0.7	1.5	1.3	2.5	1.7	0.0	0.0	2.6	0.7	0.0	0.7	1.5	0.9	**1.3**
Always		96.7	87.7	95.2	97.7	89.8	95.4	90.9	93.9	97.1	98.2	92.0	100.3	95.0	97.6	94.3	96.5	**95.2**

5.3.5 65-74 year olds

24 percent, across both sexes & more in urban, reported cleaning teeth with brush in the state. One third of respondents in Coastal & about 15 percent in Ganjam regions and nearly 10 percent in each of remaining regions reported cleaning teeth with brush.

About 95 percent of respondents across both sexes & places of residence in the state as well as in each region, cleaned teeth once a day.

About 67 percent, more females & more in urban, reported the use of tooth pastes other 14 percent, more males & more in rural, reported the use of tooth powder in the state. There was comparatively much more, irrespective of their sex, using tooth pastes than tooth powder in each region.

About 39 percent, more males & more in rural reported the use of fluoridated tooth pastes & about 34 percent, more males & more in rural reported the use of non-fluoridated tooth pastes.

There were comparatively more users of fluoridated than non-fluoridated tooth paste/powder in Coastal region. But there were more users of non-fluoridated than fluoridated tooth paste/powder in each of the remaining region.

As regard change of tooth brushes, 47 percent, more males & more in urban, reported changing tooth brush once in 1-3 months. While 37 percent across both sexes & more in rural had changed tooth brush once in 4-6 months. Only 12 percent of respondents, more females & more in the rural had changed brush once after 6 months in the state.

There were comparatively more except in Coastal region changing tooth brush once in (1-3) months in each of remaining regions. While there was small percent of respondents in each region, reported changing brushes once after six months.

About 90-95 percent reported rinsed mouth always after eating in each region as well as in the state. **Table 5.3.5**

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

AGE: 65-74 yrs

STATE: Orissa

Oral Hygiene Practices		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Clean teeth with	**n=**	**189**	**99**	**165**	**147**	**139**	**495**	**244**	**739**	**158**	**88**	**162**	**140**	**114**	**451**	**211**	**662**	**1401**
finger		0.4	0.6	2.3	13.1	2.6	5.5	6.6	5.9	0.9	0.0	0.4	15.8	1.3	5.1	14.8	8.1	**7.0**
brush		12.5	5.7	11.7	35.8	15.8	16.4	45.4	25.7	7.5	12.0	10.9	30.3	16.3	14.3	42.2	22.9	**24.3**
datun		86.2	93.7	85.9	50.2	79.8	77.3	47.6	67.8	91.6	88.0	86.1	53.9	80.8	79.9	42.5	68.4	**68.1**
others		0.9	0.0	0.0	0.8	1.8	0.8	0.3	0.6	0.0	0.0	2.6	0.0	1.6	0.7	0.5	0.6	**0.6**
2 Frequency of cleaning teeth	**n=**	**34**	**6**	**33**	**82**	**34**	**84**	**105**	**189**	**25**	**11**	**34**	**73**	**29**	**65**	**107**	**172**	**361**
Once a day		97.1	100.0	88.5	94.5	98.1	95.1	93.3	94.1	94.8	100.0	96.8	95.7	100.0	98.0	92.5	94.9	**94.5**
Twice a day		2.9	0.0	11.5	3.8	1.9	3.3	6.7	5.1	5.2	0.0	3.2	3.5	0.0	2.0	5.7	4.1	**4.6**
After every meal		0.0	0.0	0.0	1.7	0.0	1.7	0.0	0.8	0.0	0.0	0.0	0.8	0.0	0.0	1.8	1.0	**0.9**
3 Material used for cleaning teeth																		
Tooth paste		92.8	100.0	31.7	49.8	75.9	46.7	79.6	64.1	82.0	60.9	40.9	67.3	90.0	64.2	72.9	69.2	**66.7**
Tooth powder		2.9	0.0	0.0	24.8	22.2	21.2	13.0	16.9	7.7	0.0	1.6	12.7	7.5	10.1	10.8	10.5	**13.7**
4 Type of toothpaste/ powder	**n=**	**31**	**6**	**18**	**66**	**34**	**60**	**95**	**155**	**21**	**7**	**23**	**59**	**28**	**47**	**91**	**138**	**293**
Flouridated		1.5	0.0	0.0	56.5	13.9	39.4	41.1	40.4	0.0	18.5	17.2	55.6	14.3	57.6	18.5	34.3	**37.4**
Non flouridated		97.0	40.5	54.0	33.7	32.8	50.3	33.3	40.0	94.3	0.0	41.4	19.2	43.2	27.3	29.3	28.5	**34.3**
5 Change of toothbrush once in	**n=**	**32**	**5**	**27**	**64**	**28**	**67**	**89**	**156**	**21**	**11**	**32**	**48**	**26**	**52**	**86**	**138**	**294**
1-3 months		85.3	55.3	87.1	35.9	41.3	47.8	53.4	51.0	74.8	60.9	64.9	27.5	45.2	37.4	46.0	42.3	**46.7**
4-6 months		10.3	44.7	3.0	48.5	48.6	39.4	34.8	36.8	22.3	0.0	0.0	46.9	30.1	30.3	42.8	37.4	**37.1**
6 + months		2.9	0.0	0.0	12.2	4.4	8.9	8.2	8.5	2.9	0.0	1.7	25.6	17.8	22.6	8.7	14.8	**11.7**
6 Rinse mouth after eating	**n=**	**189**	**99**	**165**	**147**	**139**	**495**	**244**	**739**	**158**	**88**	**162**	**140**	**114**	**451**	**211**	**662**	**1401**
Sometimes		1.4	0.0	3.2	0.3	0.0	1.1	0.9	1.0	0.2	0.0	3.3	0.4	0.9	0.8	1.9	1.1	**1.1**
Always		95.8	90.1	94.8	94.4	88.1	94.3	90.8	93.2	96.5	92.0	95.1	97.9	91.3	95.8	95.8	95.8	**94.5**

ORAL HEALTH PRACTICES ACROSS AGE GROUPS (SUMMING UP)

(i) About 50 percent of respondents from each age group, except 24 percent aged 65-74, across both sexes more in urban had cleaned teeth with brush.

(ii) Almost all irrespective of age, sex & places of residence reported cleaning teeth once a day.

(iii) About 70 percent, across both sexes & more in urban & other about 20 percent, more males & more in rural irrespective of age differences, reported using tooth paste & tooth powder respectively in the state.

(iv) 36 percent, & other about 44 percent, across both sexes & more in rural irrespective of age differences had used fluoridated & non fluoridated tooth paste respectively in the state.

(v) Half of respondents, across both sexes & more in urban, irrespective of age differences, had changed tooth brushes once in 1-3 months. While the rest, across both sexes & more in rural irrespective of age differences reported changing tooth brushes once in 4 & more months.

(vi) Nearly 95 percent, irrespective of age differences, had rinsed mouth always after eating.

5.4 DENTAL PROBLEMS & TREATMENT PRACTICES

The respondents were asked whether they had any dental problem in the last one year, if so, whom consulted for treatment. They were also asked on the availability of dental care facility and time required to reach such facility places. Further they were asked whether they had hypertension, diabetes, epilepsy, jaundice or asthma. Responses on all these as obtained from 5, 12, 15, 35-44 & 65-74 years old by their sex & places of residence are presented in Tables 5.4.1 to 5.4.5 and are discussed below (The responses in case of 5 years old were collected from his/her caretaker in the household).

5.4.1 5 year olds

About 14 percent of respondents, more males & more in rural reported, had oral health problems in last one year in the state. Comparatively more had oral health problems in South-West Hills region & least in Inland region.

As regard to type of problems they had about 36 percent more males & more in rural had dental decay. Other 58 percent more females & more in urban had foul breath. The respondents in regions reported one or other of dental problem. Most of them, in most of regions reported dental decay, gum disease & foul breath.

Only 8 percent, more males & more in urban consulted trained dentists in the state. About 17 percent of respondents of this age, more females & more in urban, were aware of Govt. & Pvt. dental care facility in the state. There were comparatively more aware of Govt. & Pvt. dental care facility in Ganjam region than in other regions.

Nearly 70 percent of those who had knowledge of Govt. / Pvt. Dental care facilities, more females & more in urban told less than half hour to reach the facility places. The rest across both sexes & more in rural, reported half to more than an hour to reach the facility places.

As regard time required to reach facility places in regions there were comparatively more in each region reported less than half hour, followed by those reported half and more hour. **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: Orissa

Nature of Dental Problems and Treatmet related aspects		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Suffered from oral health	n=	186	110	185	151	132	512	252	764	148	98	162	148	130	453	233	686	1450
problems in last one year		0.4	16.1	41.8	14.0	10.5	17.1	13.7	16.0	0.2	12.8	34.9	7.0	5.6	11.9	9.4	11.1	13.6
2 Type of oral health problems	n=	2	18	79	20	12	90	41	131	1	13	59	9	6	57	31	88	219
Dental decay		0.0	0.0	11.3	100.0	81.4	41.3	39.0	40.6	100.0	0.0	14.3	88.1	66.7	34.9	22.9	31.5	36.1
Gum disease		0.0	0.0	3.4	0.0	27.8	3.7	0.0	2.7	0.0	0.0	0.0	0.0	16.7	0.9	0.0	0.6	1.7
Foul breath		0.0	90.1	83.5	0.0	0.0	53.7	53.4	53.6	0.0	89.8	84.6	0.0	0.0	58.6	72.2	62.5	58.1
Bleeding gums		0.0	0.0	1.7	0.0	0.0	1.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
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	16.7	0.9	0.0	0.6	0.3
3 Consulted (out of those suffered)																		
None		0.0	56.7	91.2	75.2	27.8	82.5	47.9	73.0	0.0	65.9	89.8	88.1	66.7	90.2	46.8	77.9	75.5
Trained dentist		0.0	30.2	3.8	10.7	12.9	8.2	18.8	11.1	0.0	10.2	4.9	0.0	16.7	5.6	0.0	4.0	7.6
4 Availaibility of dental facility	n=	186	110	185	151	132	512	252	764	148	98	162	148	130	453	233	686	1450
None		5.2	16.1	28.8	81.0	26.4	44.7	17.3	35.9	5.2	10.3	28.2	77.0	31.2	46.1	14.6	35.6	35.8
Govt. facility		1.5	0.5	7.4	11.0	18.4	4.2	27.1	11.5	1.0	4.3	10.6	14.4	17.4	6.5	30.5	14.5	13.0
Pvt. facility		0.0	2.1	1.4	4.0	7.6	1.9	7.3	3.6	0.0	2.6	3.3	3.0	5.9	2.1	5.9	3.4	3.5
Do not know		93.3	80.2	62.2	3.2	47.2	48.8	47.9	48.5	93.2	80.9	57.2	4.4	44.2	44.2	48.0	45.4	47.0
5 Time taken to reach the facility	n=	8	4	21	36	34	39	64	103	4	9	26	38	31	45	63	108	211
Less than 1/2 hr.		75.0	58.5	64.2	71.1	35.6	49.5	75.2	68.2	50.0	62.2	89.5	74.7	37.5	67.4	73.7	71.7	70.0
1/2 - 1 hr.		12.5	0.0	19.6	23.4	31.5	24.0	22.6	23.0	25.0	0.0	6.3	20.5	50.4	20.4	23.4	22.5	22.8
> 1 hr.		0.0	41.5	8.1	0.0	1.5	5.3	0.6	1.9	0.0	37.8	0.0	0.0	4.0	5.2	0.0	1.7	1.8
Cannot say		0.0	0.0	8.1	0.0	27.7	13.8	0.6	4.2	0.0	0.0	4.2	0.0	8.0	2.5	2.0	2.1	3.2
6 Ever suffered from	n=	186	110	185	151	132	512	252	764	148	98	162	148	130	453	233	686	1450
Hypertension		0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.3	0.1	0.1
Diabetes		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Epilepsy		0.7	0.0	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	0.1
Jaundice		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.2	0.0	0.1	0.1
Asthma		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.8	0.9	0.7	0.0	0.4	0.2

5.4.2 12 year olds

18 percent of respondents of this age, across both sexes and places of residence, had oral health problems in last one year in the state. 34 percent of these, more males & more in urban had dental decay. Other 58 percent, more females & more in rural had the problem of foul breath.

In regions, comparatively more reported dental decay problem in Coastal & Ganjam regions & more foul breath in North Plateau Hills & South West Hills regions.

Only 10 percent of respondents, more males & more in rural had consulted trained dentists in the state.

About 21 percent, across both sexes & more in urban, were aware of Govt. & Pvt. dental care facility in the state. There were comparatively more aware of Govt. & Pvt. dental care facility in Ganjam followed by Coastal region.

About 71 percent of those aware of the facility, across both sexes & more in urban reported less than half hour to reach the facility places. The rest of them, across both sexes & more in rural told half to more than an hour. **Table 5.4.2**

5.4.3 15 year old

About 25 percent, more females & more in urban had oral health problems in last one year in the state. 34 percent of these, across both sexes & more in urban had dental decay. Other about 22 percent more in urban had problem of gum disease including gum bleeding. While other 44 percent more males & more in rural had problem of foul breath in the state. Comparatively more of respondents had dental decay in Inland, Coastal & Ganjam regions & foul breath in North Plateau & South West Hills, regions.

Only about 16 percent of these consulted trained dentists in the state.

On asking about the availability of dental care facility, about 31 percent across both sexes more in urban told Govt. & Pvt. facility in the area. About 69 percent, across both sexes & more in urban, reported less than hour to reach the facility places. While others more in rural reported half to more than an hour to reach the facility places in the state. Comparatively more except in Inland reported less than half hour to reach facility places in rest of regions.

A negligible percent of respondents, reported ever had either of disease such as hypertension, diabetes, epilepsy, jaundice, & asthma. **Table 5.4.3**

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

AGE: 12 yrs STATE: Orissa

Nature of Dental Problems and Treatmet related aspects		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Suffered from oral health	**n=**	**168**	**111**	**177**	**156**	**144**	**501**	**255**	**756**	**168**	**103**	**199**	**148**	**131**	**502**	**247**	**749**	**1505**
problems in last one year		1.0	25.7	51.2	13.5	7.8	19.2	17.6	18.7	1.0	24.3	46.8	9.6	8.9	17.0	19.3	17.8	**18.3**
2 Type of oral health problems	**n=**	**2**	**28**	**92**	**21**	**10**	**101**	**52**	**153**	**2**	**25**	**98**	**15**	**12**	**93**	**59**	**152**	**305**
Dental decay		21.0	6.1	10.4	94.1	54.4	31.7	49.4	37.2	100.0	4.7	12.6	79.0	58.1	25.4	41.6	31.1	**34.2**
Gum disease		0.0	0.0	5.5	5.9	15.8	5.1	4.9	5.0	0.0	7.3	2.1	12.3	31.4	5.8	9.2	7.0	**6.0**
Foul breath		0.0	89.6	84.1	0.0	0.0	59.9	46.9	55.8	0.0	88.1	84.3	0.0	10.5	66.7	45.7	59.4	**57.6**
Bleeding gums		79.0	4.3	0.0	0.0	0.0	1.8	0.0	1.3	0.0	4.9	0.0	8.7	0.0	3.0	0.0	2.0	**1.7**
Others		0.0	0.0	0.0	0.0	11.4	0.5	0.0	0.3	0.0	0.0	0.0	0.0	10.5	0.6	0.0	0.4	**0.4**
3 Consulted (out of those suffered)																		
None		0.0	51.4	84.3	74.9	38.6	79.0	41.0	67.2	0.0	63.7	84.9	61.5	54.1	77.4	58.7	70.9	**69.1**
Trained dentist		21.0	36.5	7.0	11.9	15.8	14.3	9.1	12.7	79.0	19.8	5.4	8.7	10.5	10.6	3.5	8.1	**10.4**
4 Availaibility of dental facility	**n=**	**168**	**111**	**177**	**156**	**144**	**501**	**255**	**756**	**168**	**103**	**199**	**148**	**131**	**502**	**247**	**749**	**1505**
None		28.2	24.3	51.1	76.1	31.6	56.5	17.0	43.5	31.6	32.1	40.5	78.6	37.8	56.8	18.9	44.7	**44.1**
Govt. facility		3.1	4.2	10.9	15.3	28.9	6.5	41.4	18.0	3.8	3.0	13.3	11.6	22.4	5.9	36.3	15.6	**16.8**
Pvt. facility		0.0	10.9	4.5	3.1	6.5	3.7	5.6	4.3	0.0	10.7	0.8	5.4	8.3	3.5	7.5	4.8	**4.6**
Do not know		65.4	58.9	32.4	2.8	31.7	30.7	35.8	32.4	65.1	53.7	44.1	5.3	31.8	34.2	35.9	34.7	**33.6**
5 Time taken to reach the facility	**n=**	**10**	**20**	**42**	**43**	**52**	**64**	**103**	**167**	**16**	**13**	**47**	**38**	**44**	**58**	**100**	**158**	**325**
Less than 1/2 hr.		32.2	85.8	84.0	71.6	39.8	63.4	71.9	69.3	37.3	82.5	85.3	76.9	50.5	70.8	73.4	72.6	**71.0**
1/2 - 1 hr.		43.6	6.9	7.4	28.4	46.6	26.7	26.2	26.4	57.4	0.0	14.7	23.1	29.0	19.7	24.8	23.2	**24.8**
> 1 hr.		24.2	7.3	5.2	0.0	0.0	5.1	0.0	1.6	0.0	17.5	0.0	0.0	2.4	3.3	1.0	1.7	**1.7**
Cannot say		0.0	0.0	2.3	0.0	13.5	4.7	1.4	2.4	5.3	0.0	0.0	0.0	18.2	6.2	0.7	2.4	**2.4**
6 Ever suffered from	**n=**	**168**	**111**	**177**	**156**	**144**	**501**	**255**	**756**	**168**	**103**	**199**	**148**	**131**	**502**	**247**	**749**	**1505**
Hypertension		0.0	0.0	0.2	0.0	0.9	0.1	0.2	0.1	0.2	0.0	0.3	0.0	0.0	0.0	0.8	0.2	**0.2**
Diabetes		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
Epilepsy		0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.1**
Jaundice		0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.1	0.8	0.0	0.2	0.0	0.0	0.2	0.2	0.2	**0.2**
Asthma		0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.2	**0.2**

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: Orissa

Nature of Dental Problems and Treatmet related aspects		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Suffered from oral health	n=	162	121	182	143	149	490	267	757	170	96	189	150	129	500	234	734	1491
problems in last one year		2.1	48.0	52.3	13.3	9.1	22.8	24.5	23.4	0.7	47.2	62.7	17.4	8.7	24.9	29.3	26.2	24.8
2 Type of oral health problems	n=	4	56	100	20	13	121	72	193	1	47	117	28	12	132	73	205	398
Dental decay		79.0	8.7	12.8	90.8	77.4	30.5	37.1	32.9	100.0	3.7	15.8	77.8	68.9	28.5	45.2	34.3	33.6
Gum disease		21.0	17.4	7.6	15.8	37.9	12.4	17.8	14.4	0.0	17.7	20.6	10.6	15.5	16.3	22.4	18.4	16.4
Foul breath		0.0	63.1	68.8	0.0	0.0	51.2	38.2	46.5	0.0	74.8	56.7	2.0	4.3	47.1	30.8	41.5	44.0
Bleeding gums		0.0	7.6	4.9	13.1	9.5	8.2	3.5	6.5	0.0	5.2	5.2	4.8	0.0	5.5	1.6	4.2	5.4
Others		0.0	0.0	2.8	0.0	0.0	1.6	0.0	1.0	0.0	1.2	0.0	0.0	11.2	0.4	1.6	0.8	0.9
3 Consulted (out of those suffered)																		
None		39.5	47.9	87.0	56.5	41.6	72.1	44.5	62.2	100.0	52.7	75.5	66.3	26.7	70.9	47.8	62.9	62.6
Trained dentist		39.5	39.2	5.2	15.8	9.5	17.6	16.3	17.1	0.0	33.3	8.9	16.3	8.7	15.5	17.0	16.0	16.6
4 Availaibility of dental facility	n=	162	121	182	143	149	490	267	757	170	96	189	150	129	500	234	734	1491
None		63.4	61.4	66.7	79.4	38.6	74.7	26.5	58.2	71.7	64.7	72.2	78.3	38.6	78.9	18.5	60.3	59.3
Govt. facility		14.3	3.0	12.0	12.2	36.5	7.8	46.1	20.9	15.3	6.6	18.1	15.2	33.5	9.9	57.1	24.5	22.7
Pvt. facility		0.0	25.1	3.1	4.4	8.1	4.2	17.7	8.8	0.2	20.2	2.3	3.8	11.0	3.7	14.2	6.9	7.9
Do not know		20.0	8.5	17.3	2.4	15.0	12.0	6.1	10.0	13.6	6.1	6.6	2.5	18.9	7.6	8.3	7.8	8.9
5 Time taken to reach the facility	n=	43	44	49	38	68	79	163	242	48	33	66	43	60	85	165	250	492
Less than 1/2 hr.		33.8	78.0	87.9	72.4	42.5	49.9	77.5	70.1	28.1	73.1	77.8	74.2	48.4	54.5	72.5	67.0	68.6
1/2 - 1 hr.		60.1	14.4	12.1	27.6	45.2	42.4	20.3	26.2	42.5	8.6	18.5	25.8	38.2	30.4	22.8	25.1	25.7
> 1 hr.		6.1	3.8	0.0	0.0	0.7	1.3	2.2	1.9	28.1	18.3	0.0	0.0	1.7	10.3	3.9	5.8	3.9
Cannot say		0.0	3.8	0.0	0.0	9.6	5.5	0.0	1.5	1.3	0.0	0.0	0.0	9.6	2.9	0.8	1.4	1.5
6 Ever suffered from	n=	162	121	182	143	149	490	267	757	170	96	189	150	129	500	234	734	1491
Hypertension		0.2	1.1	0.9	0.0	0.0	0.3	0.5	0.4	0.0	0.0	0.3	0.0	1.0	0.1	0.5	0.2	0.3
Diabetes		0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Epilepsy		0.0	0.0	0.0	0.0	0.0	0.0	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	0.3	0.0	0.2	0.1	0.0	0.0	0.0	0.0	1.0	0.1	0.0	0.1	0.1
Asthma		0.0	0.0	0.2	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.2	0.2

5.4.4 35-44 year olds

About 33 percent, more females, more in urban, had oral health problems in last one year in the state. Approximately 40 percent of these, more females & more in urban had dental decay. Other 38 percent & 27 percent across both sexes, & places of residence had problem of gum disease including gum bleeding & foul breath respectively.

Comparatively more had problem of dental decay in Ganjam region, gum disease in Coastal & foul breath in North Plateau Hills region.

Only one fifth of those had oral health problems, across both sexes & more in urban, consulted trained dentist in the state.

On asking the availability of dental care facility. 34 percent, more females & more in urban told Govt. & Pvt. Dental care facility in the state.

As regard to time required to each the facility, 67 percent, across both sexes & more in urban told less than half hour. While the remaining respondents, across both sexes & more in rural, talked of half & more hour to reach the facility places.

A negligible percent except about 3 percent ever had hypertension and a negligible percent reported ever had either of other diseases in the state. **Table 5.4.4**

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

AGE: 35-44 yrs **STATE: Orissa**

Nature of Dental Problems and Treatmet related aspects		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Suffered from oral health	**n=**	**185**	**141**	**242**	**148**	**126**	**564**	**278**	**842**	**240**	**107**	**222**	**148**	**115**	**539**	**293**	**832**	**1674**
problems in last one year		16.7	62.4	53.0	16.4	15.8	32.3	29.8	31.5	15.9	64.0	61.6	22.4	19.1	32.3	37.8	34.1	**32.8**
2 Type of oral health problems	**n=**	**29**	**86**	**130**	**25**	**19**	**199**	**90**	**289**	**37**	**68**	**143**	**35**	**24**	**186**	**121**	**307**	**596**
Dental decay		34.8	14.3	44.4	48.0	61.3	35.2	43.9	37.8	16.6	9.8	48.8	61.7	44.7	36.7	52.1	42.3	**40.1**
Gum disease		25.0	21.0	20.1	43.9	33.8	24.5	31.6	26.7	34.6	16.9	20.9	40.6	35.7	27.2	25.9	26.7	**26.7**
Foul breath		8.9	51.7	27.5	19.4	11.1	30.0	31.8	30.5	13.1	62.6	24.6	10.5	5.8	26.4	29.6	27.6	**29.1**
Bleeding gums		32.4	13.0	7.5	15.2	12.5	14.2	6.5	11.9	37.3	14.4	6.2	12.8	0.0	14.2	8.4	12.1	**12.0**
Others		0.0	0.0	1.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0	1.3	0.0	0.0	0.5	0.5	0.5	**0.4**
3 Consulted (out of those suffered)																		
None		8.9	46.4	78.6	56.1	33.8	59.6	39.1	53.4	10.4	46.6	79.7	46.6	41.5	58.8	34.4	49.9	**51.7**
Trained dentist		27.1	38.6	8.1	10.2	7.3	17.7	26.8	20.4	9.7	32.9	5.3	38.3	6.8	18.1	24.2	20.3	**20.4**
4 Availaibility of dental facility	**n=**	**185**	**141**	**242**	**148**	**126**	**564**	**278**	**842**	**240**	**107**	**222**	**148**	**115**	**539**	**293**	**832**	**1674**
None		77.2	70.0	68.2	80.9	36.5	80.2	23.2	62.1	77.0	63.4	69.0	74.7	34.1	78.5	22.1	59.9	**61.0**
Govt. facility		22.4	5.7	13.9	9.8	42.2	9.2	51.7	22.7	20.8	3.9	17.2	16.3	36.9	11.0	57.0	26.1	**24.4**
Pvt. facility		1.1	23.9	2.8	6.4	12.0	5.3	20.0	9.9	0.0	30.9	2.6	4.6	14.5	4.4	18.0	8.9	**9.4**
Do not know		0.2	0.0	13.9	2.5	11.7	5.2	5.1	5.2	1.6	2.3	11.0	2.7	14.5	5.1	3.9	4.7	**5.0**
5 Time taken to reach the facility	**n=**	**72**	**50**	**68**	**39**	**70**	**104**	**195**	**299**	**87**	**47**	**77**	**45**	**60**	**100**	**216**	**316**	**615**
Less than 1/2 hr.		31.1	70.0	88.4	71.8	42.3	49.1	74.0	66.5	30.9	67.3	82.2	75.6	43.0	46.0	76.5	67.4	**67.0**
1/2 - 1 hr.		55.0	16.3	10.8	28.2	42.3	39.5	21.2	26.7	52.9	16.0	14.4	24.4	43.3	40.1	20.3	26.2	**26.5**
> 1 hr.		13.9	9.2	0.0	0.0	6.2	7.3	3.9	4.9	15.5	16.6	0.0	0.0	7.3	11.1	2.9	5.3	**5.1**
Cannot say		0.0	3.1	0.0	0.0	9.1	4.1	0.0	1.2	0.7	0.0	3.4	0.0	6.4	2.8	0.4	1.1	**1.2**
6 Ever suffered from	**n=**	**185**	**141**	**242**	**148**	**126**	**564**	**278**	**842**	**240**	**107**	**222**	**148**	**115**	**539**	**293**	**832**	1674
Hypertension		2.3	1.3	1.7	2.2	3.1	1.3	6.4	2.9	2.7	0.0	0.0	5.1	5.5	2.7	3.8	3.0	**3.0**
Diabetes		0.0	0.0	0.0	0.8	0.0	0.3	0.0	0.2	0.0	0.0	0.0	0.7	0.0	0.0	1.5	0.5	**0.4**
Epilepsy		0.0	0.0	0.0	0.0	1.0	0.1	0.0	0.1	0.7	0.0	0.0	0.0	0.0	0.2	0.3	0.2	**0.2**
Jaundice		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	1.1	0.1	0.2	0.1	**0.1**
Asthma		0.2	1.3	1.2	0.3	0.0	0.5	1.7	0.8	0.0	0.0	0.1	2.4	0.0	0.7	1.7	1.0	**0.9**

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

AGE: 65-74 yrs

STATE: Orissa

Nature of Dental Problems and Treatmet related aspects		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Suffered from oral health	**n=**	**189**	**88**	**167**	**150**	**138**	**494**	**238**	**732**	**157**	**86**	**165**	**142**	**111**	**451**	**210**	**661**	**1393**
problems in last one year		27.7	74.4	64.0	16.9	22.2	33.2	43.0	36.3	29.1	59.7	50.4	13.4	12.6	28.7	33.2	30.1	**33.2**
2 Type of oral health problems	**n=**	**53**	**67**	**107**	**30**	**32**	**183**	**106**	**289**	**43**	**53**	**85**	**22**	**14**	**144**	**73**	**217**	**506**
Dental decay		45.1	50.8	73.8	39.2	62.2	56.8	54.0	55.8	62.6	40.9	84.5	32.5	49.2	60.6	54.8	58.7	**57.3**
Gum disease		23.4	12.0	7.7	65.7	41.9	22.5	33.7	26.6	16.3	33.2	9.6	85.6	59.9	30.7	35.5	32.3	**29.5**
Foul breath		8.2	37.1	12.0	29.4	0.0	18.5	21.5	19.6	6.4	23.8	6.2	31.1	12.7	13.9	19.1	15.7	**17.7**
Bleeding gums		15.7	7.5	1.2	10.8	4.7	7.1	8.6	7.6	12.0	16.0	1.6	15.5	3.6	9.8	8.1	9.3	**8.5**
Others		0.0	0.0	2.5	2.0	8.1	1.7	2.1	1.8	0.0	0.0	0.0	0.0	9.1	0.4	0.0	0.2	**1.0**
3 Consulted (out of those suffered)																		
None		10.7	47.3	79.5	59.7	41.9	55.9	42.4	50.9	14.0	58.3	84.6	70.1	56.3	62.2	45.2	56.5	**53.7**
Trained dentist		14.1	37.8	5.0	8.0	12.8	11.7	28.6	18.0	17.7	21.2	3.6	18.2	3.6	10.6	27.4	16.3	**17.2**
4 Availaibility of dental facility	**n=**	**189**	**88**	**167**	**150**	**138**	**494**	**238**	**732**	**157**	**86**	**165**	**142**	**111**	**451**	**210**	**661**	**1393**
None		74.8	59.8	69.0	82.6	32.3	79.3	21.9	61.2	74.4	67.8	69.6	78.9	34.1	79.1	21.7	61.6	**61.4**
Govt. facility		21.1	4.0	15.8	11.9	39.5	10.6	53.6	24.1	21.3	4.6	13.3	12.7	39.1	9.8	55.4	23.7	**23.9**
Pvt. facility		1.1	34.8	3.2	2.5	8.8	4.3	16.6	8.2	0.2	27.6	1.6	5.7	10.1	5.2	14.2	7.9	**8.1**
Do not know		2.1	2.8	9.6	1.5	17.4	4.6	5.6	5.0	4.1	0.0	14.3	2.6	14.7	5.7	7.7	6.3	**5.7**
5 Time taken to reach the facility	**n=**	**67**	**40**	**52**	**37**	**67**	**99**	**164**	**263**	**55**	**33**	**45**	**39**	**56**	**83**	**145**	**228**	**491**
Less than 1/2 hr.		28.3	83.5	79.6	73.2	47.4	47.7	76.0	67.1	21.2	67.2	67.5	80.8	32.5	45.1	69.8	61.7	**64.4**
1/2 - 1 hr.		42.8	12.7	15.3	26.8	36.2	36.7	17.5	23.6	63.4	15.0	16.2	19.2	44.5	35.7	27.4	30.1	**26.9**
> 1 hr.		28.9	3.7	0.0	0.0	10.1	12.4	5.8	7.9	14.4	17.8	5.4	0.0	6.5	11.6	2.3	5.3	**6.6**
Cannot say		0.0	0.0	0.0	0.0	6.3	2.0	0.3	0.9	1.0	0.0	5.4	0.0	16.4	6.3	0.5	2.4	**1.7**
6 Ever suffered from	**n=**	**189**	**88**	**167**	**150**	**138**	**494**	**238**	**732**	**157**	**86**	**165**	**142**	**111**	**451**	**210**	**661**	**1393**
Hypertension		3.3	6.2	10.9	7.6	10.6	6.6	11.9	8.3	2.1	10.8	6.7	11.0	5.5	6.1	17.8	9.7	**9.0**
Diabetes		1.9	4.2	0.2	4.3	2.5	1.8	8.8	4.0	0.4	0.0	0.0	2.3	1.2	0.5	4.8	1.8	**2.9**
Epilepsy		0.4	0.0	0.0	0.0	1.8	0.2	0.6	0.3	0.4	0.0	0.0	1.7	1.2	0.9	0.7	0.8	**0.6**
Jaundice		0.0	0.0	0.0	0.0	0.9	0.1	0.0	0.1	0.0	0.0	0.0	0.0	1.2	0.1	0.0	0.1	**0.1**
Asthma		3.2	4.8	0.2	2.8	4.0	2.7	2.5	2.6	6.0	5.5	0.0	1.7	2.8	2.9	2.1	2.7	**2.7**

5.4.5 65-74 year olds

Approximately 33 percent, more males & more in urban had oral health problems in last one year in the state. About 57 percent of these across both sexes & more in rural, had dental decay. Other 38 percent, more females & more in urban, had gum disease including bleeding gums. Another 18 percent, more males & more in urban had the problem of foul breath in the state.

Comparatively more had problem of dental decay in South West Hills & Ganjam regions, Gum disease in Coastal region & foul breath in North Plateau Hills region.

Only 17 percent, of those had problems, across both sexes & more in urban, consulted trained dentists in the state.

As regard availability of dental care facility in the area. 32 percent, across both sexes & more in urban were aware of Govt. & Pvt. dental care facility in the state. About 67 percent, of these across both sexes & more in urban told less than half hour to reach the facility places. The rest of respondents, more females & more in rural reported half & more than hour of reach the facility places.

9 percent, across both sexes & more in urban reported ever suffered form hypertension. There were a few others ever had either of other diseases. **Table 5.4.5**

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

(i) The percent of respondents, more females & more in urban reported suffered from dental problems in last one year and percent of such increased with increase in their age.

(ii) One third of those had dental problem, suffered from dental decay. These were more males & more of them living in urban areas of state. The rest had foul breath & gum disease in last one year.

(iii) Less than 20 percent, across both sexes & more in urban from each age group consulted trained dentist.

(iv) 20-30 percent, from each age group of respondents, more in urban had knowledge of Govt. & Pvt. Dental care facility places in their respective areas.

(v) Nearly 70 percent from each age group of respondents, mostly living in urban areas, reported less than half hour to reach facility places.

5.5 AWARENESS OF DENTAL HEALTH PROBLEMS

Three questions were asked about awareness of dental health problems. The first about the common dental problems, the second about major factors responsible for the problems and the third how to prevent the problems. The responses that obtained from respondents belonging to ages/age groups 12, 15, 35-44 & 65-74 years, both sexes & places of residence, are presented in Tables 5.5.2 to 5.5:5 & discussed as below.

5.5.2 12 year olds

Approximately 69 percent of respondents across both sexes & more in rural, were unaware of oral health problems. Other about 13 percent & 6 percent across both sexes & more in urban, reported their awareness of problems such as dental decay & strained teeth respectively while another about 7 percent, more females & more in urban described oral health problems such as gum disease, bad smell etc, in the state.

In regions about 50 percent of respondents in North Plateau Hills and nearly 80 percent in the remaining regions had no knowledge of oral health problems. Nearly 23 percent in Coastal & Ganjam regions & a few in remaining regions were aware of problem such as tooth decay. While 10 percent in Inland & South West Hills & a few in other regions told strained teeth. A small percent of respondents told oral health problems such gum disease & bad smell in each region.

About 68 percent of respondents, more female & more in rural were unaware of factors responsible for oral health problems. About 12 percent, 8 percent & 5 percent, of those aware of causative factors were more females & more in urban, described factors such as not brushing regularly, eating of sweets/ice cream and not rinsing mouth after eating respectively in the state

About 50 percent of respondents in North Plateau Hills, & 70-75 percent across both sexes in the remaining regions were unaware of the causative factors. More of those aware reported factors responsible for oral health disease such as eating of sweets/ice creams & not brushing regularly & less number reported not rinsing mouth after eating & consuming tobacco in each region.

About 68 percent of respondents, more females & more in rural, were unaware of preventive measures. Nearly 12 percent & 7 percent, across both sexes & more in urban told measures such as regular cleaning of teeth & not consuming tobacco respectively & a small percent of respondents reported regular visit to dentists, use of fluoridated tooth pastes/powder & avoid of sweet items, measures to prevent oral health problems in the state.

About 52 percent in North Plateau Hills & 70-75 percent across both sexes in the remaining regions were unaware of preventive measures. There were comparatively more aware of preventive measures such as not consuming of tobacco & cleaning of teeth regularly & less aware of regular visit to dentist, use of fluoride paste/powder & avoid of sweet items, in each regions. **Table 5.5.2**

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

AGE: 12 yrs **STATE: Orissa**

Awareness of Oral Health Problems, Causes and Preventive Measures		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Awareness of Oral Health Problems	n=	171	184	186	158	146	570	275	845	172	177	205	150	136	571	269	840	1685
No knowledge		86.5	50.1	70.3	76.6	74.2	74.6	59.2	69.6	86.1	47.1	75.7	71.7	68.4	73.2	55.4	67.6	68.6
Tooth decay		0.0	0.6	7.5	19.1	19.8	7.5	23.4	12.6	0.0	0.6	2.7	25.1	24.9	9.1	23.5	13.7	13.2
Gum disease		0.7	0.3	4.6	3.0	6.3	2.4	3.7	2.9	0.0	0.0	1.7	10.0	8.3	4.1	6.1	4.7	3.8
Bad smell		0.0	1.3	4.6	1.6	1.2	1.7	2.2	1.8	0.4	1.7	4.8	1.8	0.4	1.5	4.6	2.5	2.2
Stained teeth		8.7	7.7	9.2	0.0	0.0	4.5	6.7	5.2	10.5	5.3	13.4	0.8	0.7	5.8	7.9	6.4	5.8
Others		0.7	0.0	1.6	0.0	0.3	0.5	0.4	0.5	1.6	0.0	1.4	0.8	0.9	0.9	1.1	1.0	0.8
2 Factors that cause Oral Health Problems																		
Eating sweets/ice cream		6.7	0.6	6.7	8.0	12.2	5.8	10.6	7.4	5.6	1.6	8.4	10.1	16.4	7.3	11.1	8.5	8.0
Not brushing regularly		18.8	1.6	9.1	7.5	8.4	7.8	16.0	10.5	17.9	2.6	8.6	14.0	14.5	9.7	23.9	14.2	12.4
Not rinsing		1.9	6.1	14.3	1.0	2.4	4.3	6.8	5.1	1.1	2.6	12.5	1.8	8.4	4.2	6.5	4.9	5.0
Consuming tobacco		0.0	0.7	1.2	0.3	1.8	0.5	1.4	0.8	0.6	0.7	2.9	1.7	0.0	1.4	1.1	1.3	1.1
Do not know		71.5	50.8	66.6	83.3	76.8	72.7	63.5	69.7	73.6	46.4	69.8	76.4	69.9	71.2	52.6	65.4	67.6
3 Reported Preventive Measures																		
Not consuming Tobacco		3.7	8.4	21.1	0.3	7.9	7.1	5.9	6.7	2.4	7.9	16.6	3.6	13.5	7.5	7.8	7.6	7.2
Cleaning teeth regularly		17.5	0.6	6.9	11.9	8.9	8.4	17.7	11.4	16.0	0.7	8.2	16.0	11.0	9.7	20.7	13.2	12.3
Visiting dentist regularly		0.8	1.3	3.8	0.8	3.0	1.5	2.5	1.8	3.1	0.0	4.8	1.2	4.8	1.9	5.4	3.0	2.4
Using flouride paste / powder		0.0	0.0	0.3	0.0	2.6	0.3	0.4	0.3	0.0	0.0	0.1	0.0	3.4	0.3	0.6	0.4	0.4
Avoid sweet items		2.2	0.3	0.9	1.4	0.7	1.0	2.5	1.5	1.5	0.3	3.7	1.7	0.0	1.8	0.8	1.5	1.5
Do not know		75.0	47.2	66.2	83.6	75.7	72.7	63.6	69.7	74.6	47.7	72.2	75.2	68.2	71.1	56.3	66.4	68.1

5.5.3 15 year old

Approximately 64 percent of respondents, across both sexes & more in rural had no knowledge of oral health problems. About 15 percent, 6 percent & 8 percent, across both sexes & more in urban described oral health problems such as tooth decay, gum disease & strained teeth etc. respectively in the state.

In regions, about 54 percent in North Plateau Hills, 70-75 percent in remaining regions were unaware of oral health problems. More in Coastal & Ganjam regions & more in Inland, North Plateau Hills regions reported problems such as tooth decay & strained teeth respectively. Besides this there were a small percent of respondents in rest of regions pointed out problems such as gum disease & bad smell.

About 64 percent of the respondents across both sexes & more in rural were unaware of the factors responsible for oral health problems 15 percent across both sexes & more in urban told not brushing regularly while 10 percent & 7 percent across both sexes & more in urban described factors such as eating sweets/ice creams & not rinsing. A small percent talked of consuming tobacco a factor, in the state.

About 47 percent in North Plateau Hills & 70-75 percent in remaining regions were unaware of causative factors.

About 64 percent of respondents, across both sexes and more in rural were unaware of the preventive measures. 15 percent & 8 percent across both sexes & more in urban, told regular cleaning of teeth regularly & not consuming tobacco the measures to prevent oral health problems. Another a small percent, across both sexes & more in urban reported regular visit to dentist, using of fluoride paste/powder & avoid sweet items, in the state.

47 percent in North Plateau Hills & 70-75 percent in remaining regions, were unaware of preventive measures. There were comparatively more reported not consuming tobacco & cleaning teeth regularly than regular visit to dentist, use fluoride paste/powder & avoid sweet items as preventive measures in each region. **Table 5.5.3**

Table 5.5.3 Percent 15 year olds by reported awareness of oral health problems, their causes & preventive measures, sex & geographical area.

AGE: 15- yrs **STATE: Orissa**

Awareness of Oral Health Problems, Causes and Preventive Measures		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Awareness of Oral Health Problems	n=	166	191	196	145	153	565	286	851	174	162	196	152	133	568	249	817	1668
No knowledge		78.4	44.7	67.3	73.4	58.7	68.5	53.5	63.6	78.7	47.2	64.2	72.4	75.0	70.8	49.7	64.5	**64.1**
Tooth decay		0.2	2.4	5.8	21.7	35.6	9.5	26.3	15.1	0.0	1.4	7.6	23.7	20.5	8.8	28.9	14.9	**15.0**
Gum disease		0.4	1.2	5.0	2.8	13.8	3.1	5.6	3.9	0.7	1.0	8.3	8.1	10.6	4.8	10.7	6.6	**5.3**
Bad smell		0.0	1.3	7.5	1.6	3.3	2.6	2.3	2.5	0.7	2.8	4.8	1.5	3.2	2.0	4.6	2.8	**2.7**
Stained teeth		17.3	9.1	7.6	0.9	0.0	6.6	8.1	7.1	14.7	4.9	17.7	0.7	0.0	7.3	9.7	8.0	**7.6**
Others		1.7	0.0	1.4	0.3	0.0	0.5	1.8	0.9	2.2	0.0	3.8	1.2	2.6	1.6	3.0	2.0	**1.5**
2 Factors that cause Oral Health Problems																		
Eating sweets/ice cream		10.1	2.1	5.9	8.6	17.9	6.8	14.3	9.3	6.9	1.4	9.4	11.4	12.1	7.2	16.2	9.9	**9.6**
Not brushing regularly		27.4	4.4	8.0	9.1	18.1	10.5	22.2	14.4	27.9	1.4	12.6	13.0	6.1	11.5	26.6	16.0	**15.2**
Not rinsing		1.8	6.8	12.4	1.4	14.4	5.3	9.5	6.7	1.8	6.0	20.0	3.3	5.4	6.6	8.2	7.1	**6.9**
Consuming tobacco		0.2	1.6	1.4	3.3	2.5	1.9	2.2	2.0	0.2	0.3	3.7	1.6	0.9	1.4	2.1	1.6	**1.8**
Do not know		63.8	44.7	66.3	79.9	61.5	67.7	54.5	63.3	66.1	49.3	61.5	77.1	78.8	69.5	51.7	64.2	**63.8**
3 Reported Preventive Measures																		
Not consuming Tobacco		4.1	10.0	19.7	2.9	10.8	8.8	7.1	8.3	1.6	8.0	25.4	2.0	5.6	7.7	8.5	7.9	**8.1**
Cleaning teeth regularly		24.8	2.2	6.6	12.2	15.0	9.8	22.9	14.1	22.1	0.0	6.9	17.1	7.2	10.3	26.4	15.2	**14.7**
Visiting dentist regularly		3.2	1.5	4.0	1.6	11.4	2.4	7.9	4.2	1.3	0.7	7.0	1.5	6.7	2.4	5.3	3.3	**3.8**
Using flouride paste / powder		0.2	0.0	0.0	0.0	2.3	0.2	0.7	0.3	0.0	0.0	0.6	1.2	4.1	0.7	2.0	1.1	**0.7**
Avoid sweet items		5.1	0.3	2.9	2.4	1.3	2.4	3.2	2.6	3.1	0.3	4.8	5.8	0.0	3.3	5.9	4.1	**3.4**
Do not know		68.6	44.7	64.6	80.7	66.2	69.1	54.9	64.4	71.1	48.6	61.9	72.2	77.0	68.5	52.4	63.6	**64.0**

5.5.4 35-44 year olds

63 percent of respondents, more males & more in rural had no knowledge of oral health problems. About 15 percent & 10 percent across both sexes & more in urban reported tooth decay & gum disease respectively. Another 14 percent, across both sexes & more in urban talked of strained teeth & bad smell, oral health problems in the state.

About 45 percent in North Plateau & 70-75 percent in other regions, across both sexes were unaware of oral health problems. There were comparatively more aware of oral health problems such as tooth decay & gum disease in South-West Hills, Coastal & Ganjam regions & more aware of strained teeth in Inland, North Plateau Hills & South-West Hills regions.

About 63 percent, more males than females & more in rural were unaware of causative factors. 16 percent & 9 percent & 8 percent across both sexes & more in urban reported factors responsible for oral health problems such as not brushing regularly, not rinsing & eating sweets/ ice creams respectively in the state.

Comparatively more reported eating sweets/ice-creams & not rinsing in Ganjam region, not brushing regularly in Inland region, the factors responsible for oral health problems.

About 63 percent, more males & more in rural were unaware of the preventive measures. Other 15 percent across both sexes & more in urban reported regular cleaning teeth. While another about 10 percent, across both sexes & places of residence told not consuming tobacco measures to prevent oral health problems in the state. Comparatively more (though in small percent) reported preventive measures such as not consuming of tobacco & regular cleaning of teeth than measures such as regular visit to dentists & avoid sweets items measures to prevent dental problems, in each region. **Table 5.5.4**

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: Orissa**

Awareness of Oral Health Problems, Causes and Preventive Measures		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Awareness of Oral Health Problems	n=	190	273	250	150	133	681	315	996	240	155	227	150	117	589	300	889	1885
No knowledge		80.4	39.3	60.3	73.5	58.8	65.5	44.6	58.9	84.7	51.7	67.3	67.7	57.0	71.1	55.8	66.3	**62.6**
Tooth decay		3.3	1.0	10.0	20.0	34.0	9.0	24.6	13.9	0.3	3.3	7.9	24.6	38.7	10.3	26.1	15.4	**14.7**
Gum disease		2.0	1.0	8.3	16.1	19.9	7.1	17.0	10.2	0.7	1.9	6.8	17.3	18.8	7.0	18.1	10.5	**10.4**
Bad smell		0.2	3.0	7.7	4.8	1.3	3.3	8.1	4.8	0.8	1.1	6.5	7.7	9.1	4.2	8.3	5.5	**5.2**
Stained teeth		12.3	6.3	15.6	1.5	0.7	7.2	10.3	8.2	10.6	8.3	14.0	0.8	0.0	6.9	8.8	7.5	**7.9**
Others		1.7	0.0	3.3	2.3	0.0	1.5	2.8	1.9	2.4	0.0	4.2	0.3	0.4	1.4	2.9	1.9	**1.9**
2 Factors that cause Oral Health Problems																		
Eating sweets/ice cream		10.7	1.0	7.3	9.3	13.0	6.1	15.0	8.9	3.6	1.4	9.3	8.5	15.6	5.8	12.6	8.0	**8.5**
Not brushing regularly		27.5	2.7	12.4	12.7	12.6	10.6	26.7	15.7	15.9	3.8	11.9	15.7	16.6	10.9	27.1	16.1	**15.9**
Not rinsing		4.9	5.7	23.2	2.0	13.6	8.6	10.7	9.3	4.4	8.6	16.0	4.4	20.2	7.5	13.8	9.5	**9.4**
Consuming tobacco		0.6	0.4	2.6	4.3	1.3	1.7	4.4	2.6	0.7	1.5	8.1	4.8	2.6	3.9	2.7	3.6	**3.1**
Do not know		66.6	39.8	57.2	79.8	66.0	64.3	47.0	58.8	80.1	51.3	65.9	74.1	63.4	72.2	55.8	67.0	**62.9**
3 Reported Preventive Measures																		
Not consuming Tobacco		3.8	7.6	28.0	5.5	9.3	10.7	12.5	11.2	3.4	12.0	25.1	2.5	13.1	9.9	6.9	9.0	**10.1**
Cleaning teeth regularly		24.7	1.2	7.1	15.7	9.1	8.8	27.4	14.7	11.1	1.5	9.8	19.6	12.1	9.8	26.1	15.0	**14.9**
Visiting dentist regularly		1.2	0.6	6.9	1.8	16.7	3.1	6.4	4.1	2.4	0.7	7.0	1.0	15.8	2.6	9.1	4.7	**4.4**
Using flouride paste / powder		0.2	0.0	0.8	0.0	4.5	0.4	1.0	0.6	0.0	0.0	0.4	0.0	4.5	0.2	1.2	0.5	**0.6**
Avoid sweet items		11.8	0.4	3.5	2.7	0.7	3.5	5.9	4.2	2.5	0.0	5.0	5.5	0.4	3.3	4.5	3.7	**4.0**
Do not know		67.5	40.4	56.7	78.8	62.3	64.0	46.2	58.4	82.8	50.2	64.7	73.6	66.7	72.5	56.4	67.4	**62.9**

5.5.5 65-74 year olds

About 70 percent, more males & more in rural had no knowledge of oral health problems. Nearly 6-9 percent across both sexes & more in urban reported oral health problems such as tooth decay, gum disease, bad small & strained teeth in the state.

Nearly 47 percent in North Plateau Hills and 60 percent in South-West Hills & 70-75 percent in remaining regions were unaware of oral health problems. There were more across both sexes, aware of dental problems in Ganjam followed by Coastal regions than in the remaining regions.

Nearly 73 percent, more males & more in rural were unaware of causative factors, 10 percent & another 7 percent, across both sexes & more in urban, reported causative factors such as not brushing regularly & not rinsing respectively. While small percent told eating sweets/ice creams & consuming tobacco, the factors that can cause dental problems, in the state.

About 48 percent in North Plateau Hills followed by 58 percent in South-West Hills, & about 75 percent in remaining regions were unaware of the causative factors. There were more respondents (though in small percents) aware of factors such as not brushing regularly & not rinsing than eating sweets/ice cream & consuming tobacco in each region.

About 75 percent of respondents, more males & more in rural, were unaware of the preventive measures. Nearly 9 percent & 7 percent more males & more in urban reported not consuming of tobacco & regular cleaning teeth, measures to prevent dental problems. The remaining a small percent told regular visit to dentists, use of fluoride pastes/powder & avoid sweet items, in the state.

In regions, about 47 percent in North Plateau Hills, & 58 percent in South-West Hills & in remaining regions, were unaware of the preventive measures. There were more (though in small percent) aware of the factors such as not consuming tobacco. regular cleaning of teeth than regular visit to dentists & use of fluoride paste/powder & avoid sweet items in each regions. **Table 5.5.5**

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

AGE: 65-74 yrs **STATE: Orissa**

Awareness of Oral Health Problems, Causes and Preventive Measures		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Awareness of Oral Health Problems	n=	190	158	180	152	141	561	260	821	158	126	173	142	115	497	217	714	1535
No knowledge		86.9	43.7	54.8	80.4	67.6	72.4	55.2	67.1	91.2	50.1	64.7	83.6	75.6	77.7	62.8	73.3	**70.2**
Tooth decay		0.4	0.0	10.2	11.0	26.8	6.5	18.0	10.1	0.0	1.3	5.2	10.3	21.6	5.8	12.2	7.7	**8.9**
Gum disease		0.6	1.5	7.1	11.6	19.4	5.9	16.2	9.1	0.0	2.7	5.8	10.3	13.6	4.9	15.6	8.1	**8.6**
Bad smell		0.9	2.3	8.0	5.4	5.8	2.8	14.5	6.4	0.0	3.1	1.9	4.9	4.7	1.8	10.6	4.4	**5.4**
Stained teeth		6.8	7.1	13.4	1.1	0.0	5.6	5.4	5.5	7.3	8.9	13.0	0.4	0.4	5.3	8.0	6.1	**5.8**
Others		3.0	0.0	4.4	0.3	0.0	1.7	1.1	1.5	1.5	0.0	1.5	1.2	0.9	0.7	3.9	1.7	**1.6**
2 Factors that cause Oral Health Problems																		
Eating sweets/ice cream		1.9	0.8	8.5	5.5	8.1	3.9	9.8	5.8	1.0	1.3	5.9	2.4	5.1	2.4	5.9	3.4	**4.6**
Not brushing regularly		8.1	3.0	12.6	7.1	11.8	6.0	20.9	10.6	12.3	4.9	8.0	4.7	9.1	5.8	17.8	9.3	**10.0**
Not rinsing		2.4	8.3	17.0	3.1	12.7	6.8	9.7	7.7	2.3	6.7	17.5	0.0	7.8	5.7	4.9	5.5	**6.6**
Consuming tobacco		0.4	0.4	6.6	1.1	0.0	1.8	1.8	1.8	0.6	1.3	3.1	2.3	3.4	1.5	5.5	2.7	**2.3**
Do not know		86.1	44.5	55.5	85.6	73.0	74.6	58.5	69.6	84.6	51.0	59.8	92.0	81.5	77.9	71.3	75.9	**72.8**
3 Reported Preventive Measures																		
Not consuming Tobacco		4.8	6.0	26.9	2.8	4.8	7.7	12.8	9.3	2.5	12.9	23.1	1.1	3.8	7.0	13.1	8.8	**9.1**
Cleaning teeth regularly		4.6	2.6	7.0	7.1	9.7	4.0	18.4	8.5	3.1	1.3	7.3	4.5	2.0	3.5	8.2	4.9	**6.7**
Visiting dentist regularly		1.6	0.0	4.3	1.9	13.6	2.8	4.4	3.3	0.9	0.4	6.0	0.0	7.8	1.7	4.2	2.5	**2.9**
Using flouride paste / powder		0.0	0.0	0.7	0.0	3.3	0.4	0.4	0.4	0.0	0.0	0.8	0.9	4.9	0.9	0.3	0.7	**0.6**
Avoid sweet items		1.8	0.0	3.8	1.8	0.3	1.5	3.5	2.1	2.1	0.4	1.5	0.0	0.0	0.7	1.2	0.9	**1.5**
Do not know		88.7	44.5	57.7	85.2	74.6	75.6	59.4	70.5	91.1	50.2	57.3	93.5	82.4	79.1	73.5	77.4	**74.0**

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

About 70 percent of respondents irrespective of their age differences, mostly in rural, reported no knowledge of oral health problems, its causative factors and its preventive measures.

Those aware, told

(i) Oral Health problems such as tooth decay, gum disease & strained teeth.

(ii) its causative factors such as not brushing regularly, eating sweet items/ice cream & not rinsing and

(iii) its preventive measures such as regular cleaning of teeth, not consuming tobacco etc.

5.6 TOBACCO SMOKING AND CHEWING HABITS

Smoking and chewing tobacco have great effects on oral health. Therefore, questions related to habits such as smoking chewing pan with tobacco and drinking of alcohol, were asked from respondents belonging to age groups 35-44 & 65-74 years (assuming that negligible fraction of people in younger ages of 5, 12, 15 years have such habits). The responses thus obtained are presented in Tables 5.6.4 & 5.6.5 and discussed as below.

5.6.4 35-44 year olds

About 27 percent of respondents, of this age group, more males & more in rural had the habit of smoking tobacco in the state. There were comparatively more male smokers (60.6 percent) in South West Hills region & more female smokers (34.8 percent) in North Plateau Hills region.

Nearly 45 percent of smokers, more males & more in rural, had the habit of smoking Bidis. Other 16 percent across both sexes more in rural reported smoking Chillum & Hookah. Surprisingly 16.7 percent males, more in urban & 36.8 percent females more in rural, reported smoking cigars. Other 8 percent more males & more in urban reported smoking cigarettes in the states.

Almost all smokers across both sexes & places of residence, reported smoking less than 10 times in a day in the state as well as in each region.

About 46 percent, more males & more in rural reported chewing pan or pan masala with tobacco in the state. There were comparatively more males as well as females chewing pan or pan masala with tobacco in South West Hills region than in any other regions.

The respondents when asked since how long they were chewing pan or pan masala with tobacco about 94 percent irrespective of their sex & place of residence had this habit for the last ten years & below and were chewing tobacco ten times & below in a day.

25 percent of respondents more males & more in rural had the habit of consuming alcohol. 53 percent of these, more females & more in rural were consuming alcohol daily. Other 42 percent, more males & more in urban reported consuming occasionally. The remaining (about 4 percent) across both sexes & more in rural reported consuming alcohol three times a week. There were more consuming alcohol occasionally in each region. **Table 5.6.4**

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: Orissa

Tobacco Smoking or Chewing with Pan Masala and Alcohol taking habits		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Smoking Habits	n=	**186**	**211**	**240**	**146**	**130**	**616**	**297**	**913**	**238**	**135**	**220**	**145**	**114**	**556**	**296**	**852**	**1765**
Subjects smoking tobacco		44	50.7	60.6	15.7	16.1	39.6	31.1	36.9	12.9	34.8	39	0.9	10.2	17.2	17.5	17.3	**27.1**
2 Nature of Smoking	n=	**74**	**107**	**132**	**24**	**20**	**262**	**95**	**357**	**35**	**51**	**74**	**1**	**11**	**112**	**60**	**172**	**529**
Chillum		14	16.1	0.0	5.4	0.0	7.7	9.5	8.2	19.5	16.5	0.0	0.0	0.0	8.2	9.8	8.7	**8.5**
Hookah		0.0	12.9	15.2	0.0	0.0	9.6	3.7	8	0.0	11.5	13.3	0.0	0.0	10.7	2.3	7.8	**7.9**
Cigars		1.7	12.8	39.1	0.0	2.3	19	10.5	16.7	0.0	20	67.8	0.0	15.2	38.8	32.7	36.8	**26.8**
Cigarettes		1.3	6.6	4	47.4	25.9	8.2	25.9	13	1.1	1.2	1.7	100	21.8	3.8	3.8	3.8	**8.4**
Bidis		83	49.5	41.7	47.2	71.8	55.2	47.9	53.2	79.4	35.8	17.2	0.0	63	36	38	36.7	**45.0**
3 Number of times Smoking in a day																		
< 10 times		100	98.9	99.1	81.7	82.3	96.4	97.6	96.7	100	100	100	100	95.8	100	98.9	99.6	**98.2**
10-20 times		0.0	1.1	0.9	12.9	17.7	2.8	2.4	2.7	0.0	0.0	0.0	0.0	4.2	0.0	1.1	0.4	**1.6**
20 + times		0.0	0.0	0.0	5.4	0.0	0.8	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.3**
4 Chewing pan/pan masala habits	n=	**180**	**211**	**238**	**25**	**105**	**513**	**246**	**759**	**233**	**134**	**217**	**7**	**92**	**444**	**239**	**683**	**1442**
Chew pan or pan masala with tobacco		40	53.8	72.2	78.2	7.4	54.9	48.2	52.9	30.2	54.7	54.2	21.6	8.7	41.1	37.2	39.8	**46.4**
5 Number of years of chewing pan or pan masala with Tobacco	n=	**68**	**115**	**161**	**20**	**7**	**264**	**107**	**371**	**69**	**77**	**104**	**1**	**7**	**177**	**81**	**258**	**629**
Less than 5 years		19	19.5	6.6	17.8	15.7	14	11.9	13.4	44.8	8.2	5	0.0	31.3	19.6	7.5	16	**14.7**
5 - 10 years		73	77.9	88.7	51.9	21.7	77.7	82	78.9	51.5	91.8	89.9	100	47	76.6	90.8	80.8	**79.9**
> 10 years		1.9	2.1	0.8	30.4	78.3	5.5	4.4	5.2	1.9	0.0	2.4	0.0	21.7	2.1	0.8	1.7	**3.5**
6 Number of times of chewing tobacco in a day																		
Less than 5 times		19	22.1	8.1	54.4	68.7	19.8	18	19.3	14.9	12.3	6.2	0	15.7	11.2	5.9	9.6	**14.5**
5 - 10 times		69	74.8	84.7	30.4	31.3	72	78.6	73.8	57.1	86	93.3	100	78.3	78.8	91.6	82.6	**78.2**
> 10 times		0.0	0.0	0.0	15.2	0.0	1.5	2.2	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.9**
7 Alcohol consumption habits	n=	**186**	**210**	**241**	**140**	**127**	**607**	**297**	**904**	**236**	**133**	**219**	**139**	**115**	**547**	**295**	**842**	**1746**
Consuming alcohol		17	47.6	70.2	7.3	8	33.2	25.9	30.8	7.6	40.3	53.7	0.0	5.3	19.2	19.1	19.2	**25.0**
8 Frequency of alcohol consumption	n=	**34**	**100**	**156**	**10**	**10**	**222**	**88**	**310**	**24**	**58**	**100**	**0**	**6**	**123**	**65**	**188**	**498**
Daily		4.4	79.5	46.7	5	0.0	49.7	38.7	46.7	1.9	80.3	65.5	0.0	0	63	52.4	59.5	**53.1**
3 times a week		14	1.8	4.8	0.0	4.8	4.6	4	4.5	0.0	0.0	8.5	0.0	20.9	6.4	0.0	4.3	**4.4**
Occasionally		81	17.6	47.7	82.9	95.2	43.9	57.3	47.5	98.1	19.7	24.8	0.0	79.1	29.7	47.6	35.6	**41.6**

5.6.5 65-74 year olds

31 percent of respondents of this age group, more males & more in rural, had the habit of smoking tobacco in the state. There were comparatively more smokers in South West Hills region than in any other regions.

As regard nature of their smoking, about 44 percent more males, irrespective of their places of residence reported smoking Bidis. Other 14 percent, more females & more in urban had the habit of smoking Chillum. Another 8 percent, more females & more in rural, reported smoking Hookah. Surprisingly like in the previous age group, 35 percent females & 21 percent males, more in rural areas, had the habit of smoking cigars.

As regard number of times smoking in a day approximately 96 percent across both sexes & place of residence, reported smoking less than ten times in a day in the state as well as in regions.

48 percent of respondents of this age group, more males & more in rural reported chewing pan or pan masala with tobacco, in the state.

81 percent, more females & more in urban reported chewing pan or pan masala with tobacco for the last 5-10 years. Other 9 percent, across both sexes & more in rural had this habit for the last less than five years.

More than 80 percent of these, across both sexes & more in urban, reported chewing pan or pan masala with tobacco 5-10 times in a day. Other 11 percent, across both sexes & more in rural, were chewing pan or pan masala with tobacco less than five times in a day.

22 percent of respondents, more males & more in rural had the habit of consuming alcohol. 54 percent of these more female & more in rural were consuming alcohol daily. Other about 40 percent, more males & more in urban were consuming alcohol occasionally in the state.

There were comparatively more males as well as females consuming alcohol in North Plateau Hills than in any other regions. **Table 5.6.5**

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

AGE: 65-74 yrs STATE: Orissa

Tobacco Smoking or Chewing with Pan Masala and Alcohol taking habits		MALES								FEMALES								STATE TOTAL
		REGIONS					STATE			REGIONS					STATE			
		1	2	3	4	5	R	U	T	1	2	3	4	5	R	U	T	
1 Smoking Habits	n=	**186**	**127**	**165**	**149**	**137**	**516**	**248**	**764**	**158**	**107**	**165**	**141**	**113**	**471**	**213**	**684**	**1448**
Subjects smoking tobacco		55.4	58.1	71.2	21	11.9	43.8	33.2	40.4	30	42.6	47.9	1.7	4	23.2	17.9	21.6	**31.0**
2 Nature of Smoking	n=	**98**	**75**	**111**	**29**	**15**	**235**	**93**	**328**	**48**	**48**	**67**	**2**	**6**	**125**	**46**	**171**	**499**
Chillum		16.5	27.4	2.2	3.9	7.6	11.4	13.1	11.9	32.8	22.9	0.0	0.0	0.0	14.4	21.8	16.2	**14.1**
Hookah		0.0	10.8	14.4	0.0	3	6.8	4.7	6.2	0.0	19.2	15.2	0.0	0.0	12	2.9	9.8	**8.0**
Cigars		0.3	14.8	59.3	0.0	15.2	22	17.7	20.9	2.7	21.6	75.6	0.0	10.9	39.8	21.9	35.4	**28.2**
Cigarettes		2	2.5	3	13.4	3	4	8.4	5.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**2.6**
Bidis		81.3	38	21	82.7	56.1	54.8	50.6	53.7	61.8	29.1	9.2	100	89.1	32.9	35.9	33.6	**43.7**
3 Number of times Smoking in a day																		
< 10 times		95.5	97.5	100	80.4	74.3	93.7	96.1	94.3	96.6	100	100	100	100	99.1	98	98.8	**96.6**
10-20 times		4.5	2.5	0.0	11.8	10.5	4.3	3.9	4.2	3.4	0.0	0.0	0.0	0.0	0.9	2	1.2	**2.7**
20 + times		0.0	0.0	0.0	7.9	15.2	2	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.8**
4 Chewing pan/pan masala habits	n=	**184**	**127**	**162**	**31**	**115**	**418**	**201**	**619**	**151**	**106**	**161**	8	**94**	**358**	**162**	**520**	**1139**
Chew pan or pan masala with tobacco		61	58.5	66.3	56.7	8.4	57	47.4	54.1	40.3	55.1	51.5	45.2	1.1	43.1	41.4	42.6	**48.4**
5 Number of years of chewing pan or pan masala with Tobacco	n=	**100**	**77**	**106**	**17**	**9**	**220**	**89**	**309**	**59**	**60**	**78**	**4**	**2**	**144**	**59**	**203**	512
Less than 5 years		13.2	11.6	4	9.3	17.9	9.8	8.2	9.4	16.9	6.9	4.3	0.0	0.0	9.3	5.6	8.3	**8.9**
5 - 10 years		75.6	85.1	97.3	26.3	25.7	76.8	83.5	78.6	76.2	81	92.5	71	50	83.4	83.2	83.4	**81.0**
> 10 years		11.2	3.3	0.0	64.5	56.4	13.8	8.3	12.4	4.8	12	3.2	29	100	6.5	12.3	8.1	**10.3**
6 Number of times of chewing tobacco in a day																		
Less than 5 times		4.7	11.6	5.2	52.5	69.3	14	4.4	11.5	4.8	19	3.9	71	50	11.2	7.1	10.1	**10.8**
5 - 10 times		76.6	85.1	96	27.8	12.9	75.3	94.9	80.4	69.8	79	94.5	14.5	50	78.4	88.6	81.2	**80.8**
> 10 times		2.3	0.0	0.0	19.7	17.9	3.8	0.7	3	0.0	0.0	0.0	14.5	50	0.0	5.4	1.5	**2.3**
7 Alcohol consumption habits	n=	**188**	**126**	**162**	**144**	**137**	**510**	**247**	**757**	**154**	**107**	**162**	**137**	**110**	**462**	**208**	**670**	**1427**
Consuming alcohol		16.1	56.4	74.4	3.6	0.9	26.5	23.9	25.7	9.9	48.1	49.1	0.4	0.0	18.8	17.4	18.4	**22.1**
8 Frequency of alcohol consumption	n=	**34**	**69**	**113**	**6**	**1**	**154**	**69**	**223**	**20**	**52**	**74**	**1**	**0**	**103**	**44**	**147**	**370**
Daily		13.1	81.5	53.4	19.3	0.0	56.3	36.8	50.6	0.0	81.3	64.9	0.0	0.0	66.4	34.9	57.4	**54.0**
3 times a week		12.2	0.0	5.5	33.3	0.0	6	7.5	6.5	8.4	0.0	6.6	0.0	0.0	5.1	0.0	3.6	**5.1**
Occasionally		74.8	18.5	39.9	47.3	100	37	55.6	42.5	91.6	17.6	26.9	100	0.0	27.5	62	37.4	**40.0**

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

About one third of respondents from age group 35-44 & 65-74, more males & more in rural, had the habit of smoking tobacco. 45 percent of smokers, more males & more in rural reported smoking Bidis.

Other about 20 percent, across both sexes & places of residence, reported smoking Chillum & Hookah. About 90 percent across both sexes & places of residence were smoking less than 10 times in a day.

About 46 percent of respondents, more males & more in rural, reported chewing pan or pan masala with tobacco. Approximately 95 percent had this habit for the last ten years & below & were chewing ten times in a day.

Nearly 22 percent, more males & more in rural reported taking alcohol. About 45 percent of these were consuming alcohol occasionally.

CHAPTER VI
ORAL HEALTH STATUS

6.0 CLINICAL FINDINGS

The clinical findings are presented under the following broad heads:

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

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

Tables (tabulated data) and Figures (charts or 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.

Fig 6.01. Percent subjects with caries experience in Orissa

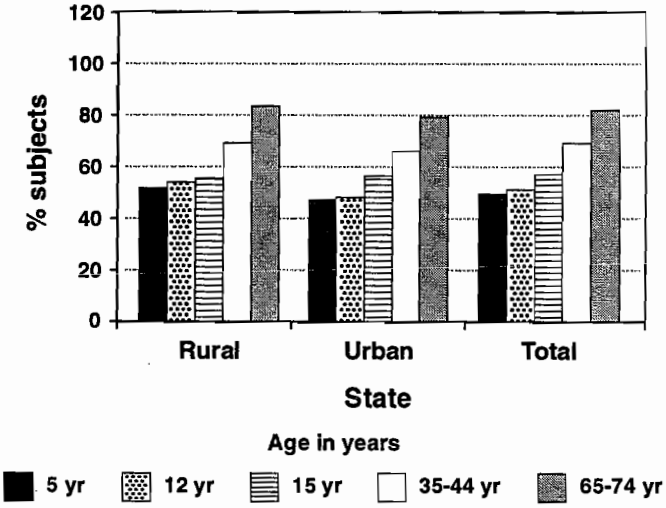


Table 6.01. Percent subjects (with permanent teeth) with caries and with dmft/ DMFT values by age, sex and geographical area. State: Orissa

Decayed, Missing, Filled Teeth		5 years			Decayed, Missing, Filled Teeth		12 years			15 years			35-44 years			65-74 years		
		M	F	T			M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	187	150	*337*	**Region 1**	n=	171	173	*344*	166	174	*340*	190	240	*430*	190	159	*349*
With caries experience		61.2	48.0	*54.6*	With caries experience		64.3	56.1	*60.2*	70.5	65.5	*68.0*	79.5	82.1	*80.8*	90.5	93.1	*91.8*
dmft value 1-3		25.5	18.7	*22.1*	DMFT value 1-3		43.9	39.9	*41.9*	33.1	31.6	*32.4*	26.8	30.4	*28.6*	8.9	13.8	*11.4*
dmft value 4-5		15.4	14.0	*14.7*	DMFT value 4-7; 4-8		18.7	15.0	*16.9*	30.1	29.9	*30.0*	35.8	37.9	*36.9*	20.0	20.8	*20.4*
dmft value 6-10		14.9	12.7	*13.8*	DMFT value 8-14; 9-16		1.2	1.2	*1.2*	6.6	4.0	*5.3*	14.7	11.7	*13.2*	32.6	32.1	*32.4*
dmft value 11-15		3.7	0.7	*2.2*	DMFT value 15-21; 17-24		0.0	0.0	*0.0*	0.0	0.0	*0.0*	1.6	2.1	*1.9*	18.9	18.2	*18.6*
dmft value 16 or more		1.6	2.0	*1.8*	DMFT value 22-28; 25-28		0.6	0.0	*0.3*	0.6	0.0	*0.3*	0.5	0.0	*0.3*	2.1	1.9	*2.0*
					DMFT value 29 or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	7.9	6.3	*7.1*
Region 2	n=	182	148	*330*	**Region 2**	n=	184	177	*361*	191	162	*353*	273	155	*428*	158	126	*284*
With caries experience		48.1	47.4	*47.8*	With caries experience		52.2	40.1	*46.2*	50.8	50.0	*50.4*	68.1	75.5	*71.8*	79.1	79.4	*79.3*
dmft value 1-3		19.5	20.4	*20.0*	DMFT value 1-3		34.2	31.1	*32.7*	33.0	32.7	*32.9*	25.3	31.6	*28.5*	5.7	8.7	*7.2*
dmft value 4-5		10.3	9.2	*9.8*	DMFT value 4-7; 4-8		17.4	7.9	*12.7*	17.8	15.4	*16.6*	39.9	40.6	*40.3*	20.9	12.7	*16.8*
dmft value 6-10		17.3	13.2	*15.3*	DMFT value 8-14; 9-16		0.5	0.6	*0.6*	0.0	1.9	*1.0*	2.9	3.2	*3.1*	25.3	32.5	*28.9*
dmft value 11-15		1.1	4.6	*2.9*	DMFT value 15-21; 17-24		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	7.6	8.7	*8.2*
dmft value 16 or more		0.0	0.0	*0.0*	DMFT value 22-28; 25-28		0.0	0.6	*0.3*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.6	2.4	*1.5*
					DMFT value 29 or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	19.0	14.3	*16.7*
Region 3	n=	158	141	*299*	**Region 3**	n=	186	205	*391*	196	196	*392*	250	227	*477*	180	173	*353*
With caries experience		61.7	64.8	*63.3*	With caries experience		57.0	52.7	*54.9*	60.7	53.6	*57.2*	64.8	63.9	*64.4*	68.9	73.4	*71.2*
dmft value 1-3		14.0	10.9	*12.5*	DMFT value 1-3		39.8	40.0	*39.9*	28.1	27.6	*27.9*	10.0	12.8	*11.4*	1.7	1.2	*1.5*
dmft value 4-5		11.4	6.7	*9.1*	DMFT value 4-7; 4-8		16.1	10.7	*13.4*	29.6	26.0	*27.8*	49.6	46.3	*48.0*	6.1	8.7	*7.4*
dmft value 6-10		32.1	44.2	*38.2*	DMFT value 8-14; 9-16		1.1	2.0	*1.6*	1.5	0.0	*0.8*	3.6	4.4	*4.0*	32.2	31.2	*31.7*
dmft value 11-15		3.6	3.0	*3.3*	DMFT value 15-21; 17-24		0.0	0.0	*0.0*	1.5	0.0	*0.8*	0.8	0.4	*0.6*	6.1	8.1	*7.1*
dmft value 16 or more		0.5	0.0	*0.3*	DMFT value 22-28; 25-28		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.8	0.0	*0.4*	1.7	1.7	*1.7*
					DMFT value 29 or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	21.1	22.5	*21.8*
Region 4	n=	149	152	*301*	**Region 4**	n=	158	150	*308*	145	152	*297*	150	150	*300*	152	142	*294*
With caries experience		36.8	36.8	*36.8*	With caries experience		44.9	42.0	*43.5*	42.8	49.3	*46.1*	49.3	64.0	*56.7*	82.9	83.1	*83.0*
dmft value 1-3		19.7	21.1	*20.4*	DMFT value 1-3		40.5	33.3	*36.9*	35.9	33.6	*34.8*	38.7	31.3	*35.0*	13.2	14.1	*13.7*
dmft value 4-5		7.9	5.9	*6.9*	DMFT value 4-7; 4-8		3.8	8.7	*6.3*	6.2	13.8	*10.0*	9.3	26.0	*17.7*	19.1	23.9	*21.5*
dmft value 6-10		7.9	5.9	*6.9*	DMFT value 8-14; 9-16		0.0	0.0	*0.0*	0.0	1.3	*0.7*	1.3	6.0	*3.7*	21.1	21.1	*21.1*
dmft value 11-15		0.7	3.3	*2.0*	DMFT value 15-21; 17-24		0.6	0.0	*0.3*	0.0	0.7	*0.4*	0.0	0.7	*0.4*	10.5	7.7	*9.1*
dmft value 16 or more		0.7	0.7	*0.7*	DMFT value 22-28; 25-28		0.0	0.0	*0.0*	0.7	0.0	*0.4*	0.0	0.0	*0.0*	5.9	3.5	*4.7*
					DMFT value 29 or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	13.2	12.7	*13.0*
Region 5	n=	128	128	*256*	**Region 5**	n=	146	136	*282*	153	133	*286*	133	117	*250*	141	114	*255*
With caries experience		55.6	46.6	*51.1*	With caries experience		61.0	52.2	*56.6*	58.8	59.4	*59.1*	64.7	73.5	*69.1*	80.1	81.6	*80.9*
dmft value 1-3		27.8	18.8	*23.3*	DMFT value 1-3		43.8	33.1	*38.5*	34.0	36.1	*35.1*	25.6	32.5	*29.1*	12.1	14.9	*13.5*
dmft value 4-5		16.5	16.5	*16.5*	DMFT value 4-7; 4-8		15.8	15.4	*15.6*	22.2	21.8	*22.0*	26.3	29.9	*28.1*	22.0	20.2	*21.1*
dmft value 6-10		9.0	9.8	*9.4*	DMFT value 8-14; 9-16		1.4	3.7	*2.6*	2.6	1.5	*2.1*	11.3	10.3	*10.8*	31.2	29.8	*30.5*
dmft value 11-15		2.3	1.5	*1.9*	DMFT value 15-21; 17-24		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	7.8	7.9	*7.9*
dmft value 16 or more		0.0	0.0	*0.0*	DMFT value 22-28; 25-28		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	2.8	2.6	*2.7*
DMFT value 29 or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	1.5	0.9	*1.2*	4.3	6.1	*5.2*					
State Rural	n=	555	476	*1031*	**State Rural**	n=	570	572	*1142*	565	568	*1133*	681	589	*1270*	561	497	*1058*
With caries experience		53.1	51.3	*52.2*	With caries experience		55.8	51.4	*53.6*	56.8	55.1	*56.0*	67.5	74.5	*71.0*	81.1	82.7	*81.9*
dmft value 1-3		20.1	18.4	*19.3*	DMFT value 1-3		39.8	37.9	*38.9*	32.9	31.0	*32.0*	23.3	27.2	*25.3*	7.5	10.1	*8.8*
dmft value 4-5		13.8	10.8	*12.3*	DMFT value 4-7; 4-8		14.7	11.9	*13.3*	20.9	22.0	*21.5*	37.0	39.6	*38.3*	18.0	16.3	*17.2*
dmft value 6-10		16.4	18.8	*17.6*	DMFT value 8-14; 9-16		0.9	1.6	*1.3*	2.3	1.9	*2.1*	6.0	7.0	*6.5*	28.9	29.6	*29.3*
dmft value 11-15		2.0	2.8	*2.4*	DMFT value 15-21; 17-24		0.2	0.0	*0.1*	0.5	0.2	*0.4*	0.6	0.8	*0.7*	11.4	10.7	*11.1*
dmft value 16 or more		0.7	0.4	*0.6*	DMFT value 22-28; 25-28		0.2	0.0	*0.1*	0.2	0.0	*0.1*	0.3	0.0	*0.2*	3.0	2.2	*2.6*
					DMFT value 29 or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.3	0.0	*0.2*	12.3	13.9	*13.1*
State Urban	n=	249	243	*492*	**State Urban**	n=	275	269	*544*	286	249	*535*	315	300	*615*	260	217	*477*
With caries experience		53.6	44.7	*49.2*	With caries experience		56.0	43.1	*49.6*	57.3	56.6	*57.0*	63.2	67.3	*65.3*	78.8	80.6	*79.7*
dmft value 1-3		22.6	16.6	*19.6*	DMFT value 1-3		41.1	31.2	*36.2*	31.8	34.1	*33.0*	24.8	25.3	*25.1*	9.2	10.1	*9.7*
dmft value 4-5		8.7	9.1	*8.9*	DMFT value 4-7; 4-8		14.2	10.4	*12.3*	23.4	21.3	*22.4*	31.1	33.3	*32.2*	15.8	18.4	*17.1*
dmft value 6-10		18.9	15.8	*17.4*	DMFT value 8-14; 9-16		0.7	1.1	*0.9*	1.7	1.2	*1.5*	6.7	7.7	*7.2*	28.5	29.0	*28.8*
dmft value 11-15		3.0	2.4	*2.7*	DMFT value 15-21; 17-24		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.3	0.7	*0.5*	8.5	9.7	*9.1*
dmft value 16 or more		0.4	0.8	*0.6*	DMFT value 22-28; 25-28		0.0	0.4	*0.2*	0.3	0.0	*0.2*	0.3	0.0	*0.2*	1.5	2.8	*2.2*
					DMFT value 29 or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.3	*0.2*	15.4	10.6	*13.0*
State Total	n=	804	719	*1523*	**State Total**	n=	845	841	*1686*	851	817	*1668*	996	889	*1885*	821	714	*1535*
With caries experience		53.2	49.1	*51.2*	With caries experience		55.9	48.8	*52.4*	57.0	55.6	*56.3*	66.2	72.1	*69.2*	80.4	82.1	*81.3*
dmft value 1-3		20.9	17.8	*19.4*	DMFT value 1-3		40.2	35.8	*38.0*	32.5	31.9	*32.2*	23.8	26.5	*25.2*	8.0	10.1	*9.1*
dmft value 4-5		12.2	10.2	*11.2*	DMFT value 4-7; 4-8		14.6	11.4	*13.0*	21.7	21.8	*21.8*	35.1	37.5	*36.3*	17.3	16.9	*17.1*
dmft value 6-10		17.2	17.8	*17.5*	DMFT value 8-14; 9-16		0.8	1.4	*1.1*	2.1	1.7	*1.9*	6.2	7.2	*6.7*	28.7	29.4	*29.1*
dmft value 11-15		2.4	2.7	*2.6*	DMFT value 15-21; 17-24		0.1	0.0	*0.1*	0.4	0.1	*0.3*	0.5	0.8	*0.7*	10.5	10.4	*10.5*
dmft value 16 or more		0.6	0.5	*0.6*	DMFT value 22-28; 25-28		0.1	0.1	*0.1*	0.2	0.0	*0.1*	0.3	0.0	*0.2*	2.6	2.4	*2.5*
					DMFT value 29 or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.2	0.1	*0.2*	13.3	12.9	*13.1*

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.**

6.1.1 Coronal caries

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

Table 6.02 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 per cent subjects who were edentulous.

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

The prevalence of caries experience (Fig 6.01) was generally high (over 50 per cent) in the state in both primary and permanent teeth. In 5 year olds, 51.2 per cent subjects had experienced caries in the primary teeth with a mean dmft value of 2.6. In those affected, the dmft value of 1-3 was most prevalent (19.4%) followed by dmft value 6-10 (17.5%). The decayed teeth (dt) component contributed almost completely to the mean dmft value.

The prevalence of caries experience was marginally higher in rural (52.2 per cent) compared with urban residents (49.2 per cent) although the difference may not be statistically significant. There were no marked gender related differentials in the state and there were no marked regional differentials, except that Region 4 had the lowest caries prevalence (36.8%).

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 52.4; at 15 years it was 56.3; at 35-44 years it was 69.2; and at 65-74 years, it peaked at about 81.3 per cent. The majority of the affected subjects in 12, 15 and 35-44 years had experienced caries in upto one half (50 per cent) of their teeth but in 65-74 years, 26.1 per cent subjects had experienced caries in more than 16 teeth (over one half of teeth normally present). The DMFT value of 1-3 teeth was most prevalent in subjects aged 12 and 15 years (38 and 32.2 per cent respectively); the DMFT value of 4-8 teeth in 35-44 years (36.3 per cent); and DMFT value 9-16 in subjects aged 65-74 years (29.1 per cent).

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

State: Orissa

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=	187	150	337	170	173	343	166	174	340	189	240	429	188	158	346
Mean no. of teeth present (mnt/MNT)		19.9	20.0	20.0	26.5	26.5	26.5	27.9	27.9	27.9	31.3	30.9	31.1	23.8	23.9	23.9
Mean dmft and Mean DMFT		3.1	2.4	2.8	2.0	1.6	1.8	2.9	2.4	2.7	4.7	4.5	4.6	12.4	11.6	12.0
Mean no. of Decayed teeth (dt/DT)		3.0	2.4	2.7	1.8	1.4	1.6	2.7	2.4	2.6	4.0	3.4	3.7	4.2	3.4	3.8
Mean no. of Missing teeth (mt/MT)		0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.7	1.1	0.9	8.2	8.1	8.2
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	0.0	0.0	0.0	0.0	0.0	0.0
SIC Index		7.3	6.7	7.0	4.5	3.6	4.1	6.3	5.4	5.9	9.9	9.3	9.6	22.6	21.4	22.0
No. of subjects edentulous		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	2.0	3.0
Region 2	n=	182	148	330	183	176	359	188	160	348	266	154	420	150	125	275
Mean no. of teeth present (mnt/MNT)		19.8	19.8	19.8	27.6	27.4	27.5	27.9	28.0	28.0	31.6	31.5	31.6	21.2	21.2	21.2
Mean dmft and Mean DMFT		2.4	2.5	2.5	1.5	1.2	1.4	1.5	1.6	1.6	3.1	3.3	3.2	12.1	12.0	12.1
Mean no. of Decayed teeth (dt/DT)		2.3	2.3	2.3	1.5	1.2	1.4	1.4	1.6	1.5	2.8	2.8	2.8	1.3	1.1	1.2
Mean no. of Missing teeth (mt/MT)		0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.5	0.5	10.8	10.8	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	0.0	0.0	0.0	0.0	0.0	0.0
SIC Index		6.2	6.4	6.3	3.5	3.3	3.4	3.7	4.0	3.9	6.5	6.4	6.5	25.9	24.5	25.2
No. of subjects edentulous		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.0	18.0	22.0
Region 3	n=	158	141	299	157	173	330	159	160	319	214	191	405	143	149	292
Mean no. of teeth present (mnt/MNT)		19.9	19.9	19.9	27.9	28.0	28.0	28.0	28.0	28.0	31.2	31.3	31.3	21.1	20.1	20.6
Mean dmft and Mean DMFT		4.6	5.1	4.9	1.7	1.5	1.6	2.4	1.9	2.2	3.8	3.6	3.7	12.5	13.6	13.1
Mean no. of Decayed teeth (dt/DT)		4.4	5.1	4.8	1.7	1.5	1.6	2.4	1.8	2.1	3.0	2.9	3.0	1.5	1.5	1.5
Mean no. of Missing teeth (mt/MT)		0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.7	0.8	10.9	11.9	11.4
Mean no. of Filled teeth (ft/FT)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
SIC Index		8.4	8.7	8.6	3.8	3.4	3.6	5.3	4.2	4.8	7.5	7.1	7.3	27.1	27.9	27.5
No. of subjects edentulous		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	34.0	33.0	33.5
Region 4	n=	149	152	301	157	150	307	144	151	295	145	147	292	149	141	290
Mean no. of teeth present (mnt/MNT)		20.0	19.7	19.9	27.8	27.9	27.9	27.9	27.9	27.9	31.6	31.1	31.4	20.9	22.2	21.6
Mean dmft and Mean DMFT		1.5	1.7	1.6	0.9	1.0	1.0	1.0	1.5	1.3	1.4	2.7	2.1	11.8	10.8	11.3
Mean no. of Decayed teeth (dt/DT)		1.5	1.6	1.6	0.9	1.0	1.0	1.0	1.4	1.2	1.0	1.8	1.4	0.7	1.0	0.9
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	0.4	0.9	0.7	11.1	9.8	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	0.0	0.0	0.0	0.0	0.1	0.1
SIC Index		4.3	4.9	4.6	2.3	2.7	2.5	2.9	3.8	3.4	3.7	6.5	5.1	25.3	23.8	24.6
No. of subjects edentulous		0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	0.0	0.0	0	15.0	16.0	16
Region 5	n=	128	128	256	142	133	275	149	131	280	124	116	240	138	110	248
Mean no. of teeth present (mnt/MNT)		20.0	20.0	20.0	27.1	27.2	27.2	27.9	28.0	28.0	31.1	31.4	31.3	25.7	25.4	25.6
Mean dmft and Mean DMFT		2.2	2.0	2.1	1.7	1.6	1.7	2.0	2.1	2.1	3.6	3.6	3.6	9.0	9.4	9.2
Mean no. of Decayed teeth (dt/DT)		2.2	2.0	2.1	1.7	1.6	1.7	1.9	2.0	2.0	2.7	3.0	2.9	2.7	2.8	2.8
Mean no. of Missing teeth (mt/MT)		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.9	0.6	0.8	6.3	6.6	6.5
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	0.0	0.0	0.0	0.0	0.0	0.0
SIC Index		5.2	5.3	5.3	3.9	4.2	4.1	4.6	4.8	4.7	8.7	8.1	8.4	18.4	19.8	19.1
No. of subjects edentulous		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	5.0	4.5
State Rural	n=	555	476	1031	552	551	1103	539	542	1081	646	569	1215	531	476	1007
Mean no. of teeth present (mnt/MNT)		19.9	19.9	19.9	27.6	27.5	27.6	27.9	27.9	27.9	31.4	31.2	31.3	22.2	21.7	22.0
Mean dmft and Mean DMFT		2.6	2.6	2.6	1.4	1.3	1.4	1.8	1.9	1.9	3.2	3.6	3.4	11.8	12.0	11.9
Mean no. of Decayed teeth (dt/DT)		2.5	2.5	2.5	1.4	1.2	1.3	1.8	1.8	1.8	2.6	2.8	2.7	2.0	1.7	1.9
Mean no. of Missing teeth (mt/MT)		0.1	0.1	0.1	0.0	0.1	0,1	0.1	0.0	0.1	0.6	0.8	0.7	9.8	10.3	10.1
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		6.6	7.0	6.8	3.8	3.4	3.6	4.8	4.6	4.7	7.7	7.7	7.7	24.0	24.4	24.2
No. of subjects edentulous		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	52.0	57.0	54.5
State Urban	n=	249	243	492	257	254	511	267	234	501	292	279	571	237	207	444
Mean no. of teeth present (mnt/MNT)		19.9	19.8	19.9	27.4	27.5	27.5	28.0	27.9	28.0	31.6	31.3	31.5	21.7	23.5	22.6
Mean dmft and Mean DMFT		2.5	2.2	2.4	1.4	1.2	1.3	1.7	1.7	1.7	2.8	3.2	3.0	11.9	10.4	11.2
Mean no. of Decayed teeth (dt/DT)		2.4	2.2	2.3	1.4	1.2	1.3	1.7	1.6	1.7	2.4	2.4	2.4	1.6	1.8	1.7
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	0.4	0.7	0.6	10.3	8.5	9.4
Mean no. of Filled teeth (ft/FT)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1
SIC Index		7.0	6.7	6.9	3.5	3.4	3.5	4.9	4.3	4.6	7.2	7.6	7.4	24.4	22.8	23.6
No. of subjects edentulous		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.0	17.0	24.0
State Total	n=	804	719	1523	809	805	1614	806	776	1582	938	848	1786	768	683	1451
Mean no. of teeth present (mnt/MNT)		19.9	19.8	19.9	27.5	27.5	27.5	27.9	27.9	27.9	31.4	31.2	31.3	22.2	22.0	22.1
Mean dmft and Mean DMFT		2.6	2.6	2.6	1.5	1.3	1.4	1.8	1.8	1.8	3.2	3.5	3.4	11.8	11.8	11.8
Mean no. of Decayed teeth (dt/DT)		2.6	2.5	2.5	1.4	1.3	1.4	1.8	1.8	1.8	2.6	2.7	2.7	2.0	1.8	1.9
Mean no. of Missing teeth (mt/MT)		0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.1	0.6	0.8	0.7	9.8	10.0	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		6.7	6.9	6.8	3.7	3.4	3.6	4.8	4.5	4.7	7.6	7.7	7.7	24.1	23.9	24.0
No. of subjects edentulous		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.0	74.0	78.5

The mean DMFT was lowest in the subjects aged 12 years (1.4); it was 1.8 in subjects aged 15 years; 3.4 in subjects aged 35-44 years and highest (11.8) in 65-74 years. While the decayed teeth (DT) component contributed mainly to the DMFT value in the age groups of 12, 15 and 35-44 years, it was the missing teeth component (MT) which contributed most to the DMFT value in subjects aged 65-74 years. Except in the age group of 65-74 years, where almost all teeth missing were due to reasons other than caries, it was nearly always that caries was responsible for missing teeth (Table 6.03). Filled teeth were virtually absent.

The SIC Index was 6.8 in 5 year olds and 3.6 in 12 year olds. It was 4.7 in 15 year olds; 7.7 in 35-44 year olds; and peaked at 24 in the highest age group of 65-74 years. thus, it can be seen that SiC index was two to two-and-one-half times higher than dmft/DMFT (Table 6.02).

Overall, there was marginally higher caries prevalence in rural, rather than urban areas. However, the pattern of distribution of caries by DMFT was similar in rural and urban areas and in between regions. The male subjects in age groups 5, 12 and 15 years had marginally higher caries prevalence in contrast to subjects in the higher age groups of 35-44 and 65-74 years where females were more affected.

Overall, the number of teeth present in the mouth of individuals surveyed decreased as age advanced (Table 6.02). About 11.8 per cent subjects, more females than males, and more in rural than urban areas, in the age group of 65-74 years were edentulous (without natural teeth).

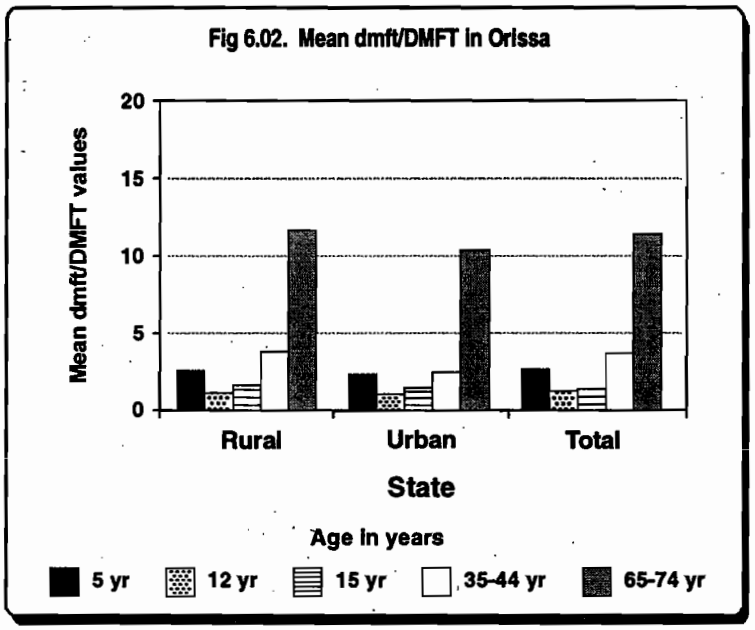


Table 6.03. Mean number of teeth missng due to caries or other reasons by age, sex and geographical area. **State: Orissa**

Malocclusion (DAI Score)		5 years			12 years			15 years			35-44 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	170	173	*343*	166	174	*340*	189	240	*429*	188	158	*346*
Mean no. of teeth missing due to caries		0.1	0.2	***0.2***	0.1	0.1	***0.1***	0.5	0.7	***0.6***	3.2	2.4	***2.8***
Mean no. of teeth missing due to other reasons		0.0	0.1	***0.1***	0.0	0.0	***0.0***	0.2	0.4	***0.3***	5.0	5.7	***5.4***
Region 2	n=	183	176	*359*	188	160	*348*	266	154	*420*	150	125	*275*
Mean no. of teeth missing due to caries		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.3	***0.3***	0.6	0.8	***0.7***
Mean no. of teeth missing due to other reasons		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.2	***0.2***	10.2	10.0	***10.1***
Region 3	n=	157	173	*330*	159	160	*319*	214	191	*405*	143	149	*292*
Mean no. of teeth missing due to caries		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.5	0.5	***0.5***	1.3	1.3	***1.3***
Mean no. of teeth missing due to other reasons		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.2	***0.3***	9.6	10.6	***10.1***
Region 4	n=	157	150	*307*	144	151	*295*	145	147	*292*	149	141	*290*
Mean no. of teeth missing due to caries		0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.1	0.6	***0.4***	0.2	0.3	***0.3***
Mean no. of teeth missing due to other reasons		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.3	***0.3***	10.8	9.5	***10.2***
Region 5	n=	142	133	*275*	149	131	*280*	124	116	*240*	138	110	*248*
Mean no. of teeth missing due to caries		0.0	0.1	***0.1***	0.1	0.0	***0.1***	0.1	0.2	***0.2***	0.7	0.6	***0.7***
Mean no. of teeth missing due to other reasons		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	0.4	***0.6***	5.6	6.0	***5.8***
State Rural	n=	552	551	*1103*	539	542	*1081*	646	569	*1215*	531	476	*1007*
Mean no. of teeth missing due to caries		0.0	0.1	***0.1***	0.1	0.0	***0.1***	0.3	0.5	***0.4***	1.1	0.9	***1.0***
Mean no. of teeth missing due to other reasons		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.3	***0.3***	8.7	9.3	***9.0***
State Urban	n=	257	254	*511*	267	234	*501*	292	279	*571*	237	207	*444*
Mean no. of teeth missing due to caries		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.3	0.6	***0.5***	1.2	1.2	***1.2***
Mean no. of teeth missing due to other reasons		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.2	***0.2***	9.1	7.4	***8.3***
State Total	n=	809	805	*1614*	806	776	*1582*	938	848	*1786*	768	683	*1451*
Mean no. of teeth missing due to caries		0.0	0.1	***0.1***	0.1	0.0	***0.1***	0.3	0.5	***0.4***	1.2	1.0	***1.1***
Mean no. of teeth missing due to other reasons		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.3	***0.3***	8.7	9.1	***8.9***

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

6.1.2 Root caries

Table 6.04 presents the per cent 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 and 65-74 years.

The percentage of subjects with root caries was approximately one per cent and 3.9 per cent respectively in the age groups 35-44 and 65-74 years. The mean number of teeth with root caries in these age groups was 0.1 and 0.2, meaning that on average, fewer than one tooth per affected mouth had root caries in the subjects examined.

Root caries was more prevalent in urban residents compared to rural residents and more male subjects than female subjects had root caries in 65-74 years. The prevalence was uneven when compared in between regions: the prevalence was lowest in Region 2 (1.9 per cent) and highest in Region 4 (8.7 per cent).

A very small percentage of subjects aged 35-44 and 65-74 years (0.1 and 0.2 per cent respectively) had root fillings in the state amongst rural and urban residents and in both male and female subjects.

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

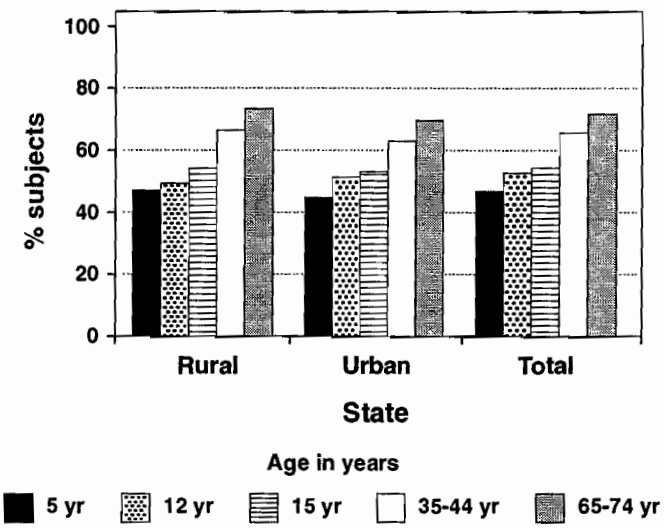
Root Caries		35-44 years			65-74 years		
		M	F	T	M	F	T
Region 1	n=	190	240	*430*	190	159	*349*
% Subjects with Root caries		1.4	1.8	*1.6*	4.2	2.9	*3.6*
Mean nos of teeth with Root Caries		0.0	0.1	*0.1*	0.1	0.0	*0.1*
% Subjects with Root fillings		0.0	0.0	*0.0*	0.0	0.8	*0.4*
Mean nos of teeth with Root fillings		0.0	0.0	*0.0*	0.0	0.0	*0.0*
Region 2	n=	273	155	*428*	158	126	*284*
% Subjects with Root caries		0.4	0.0	*0.2*	1.5	2.2	*1.9*
Mean nos of teeth with Root Caries		0.0	0.0	*0.0*	0.0	0.0	*0.0*
% Subjects with Root fillings		0.0	0.0	*0.0*	0.4	0.0	*0.2*
Mean nos of teeth with Root fillings		0.0	0.0	*0.0*	0.0	0.0	*0.0*
Region 3	n=	250	227	*477*	180	173	*353*
% Subjects with Root caries		0.5	1.3	*0.9*	4.1	1.5	*2.8*
Mean nos of teeth with Root Caries		0.0	0.0	*0.0*	0.1	0.2	*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=	150	150	*300*	152	142	*294*
% Subjects with Root caries		0.0	2.7	*1.4*	10.9	6.5	*8.7*
Mean nos of teeth with Root Caries		0.0	0.1	*0.1*	0.4	0.3	*0.4*
% Subjects with Root fillings		0.0	0.0	*0.0*	0.0	0.0	*0.0*
Mean nos of teeth with Root fillings		0.0	0.0	*0.0*	0.0	0.0	*0.0*
Region 5	n=	133	117	*250*	141	114	*255*
% Subjects with Root caries		0.7	0.0	*0.4*	3.0	2.0	*2.5*
Mean nos of teeth with Root Caries		0.0	0.0	*0.0*	0.1	0.1	*0.1*
% Subjects with Root fillings		0.0	0.4	*0.2*	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=	681	589	*1270*	561	497	*1058*
% Subjects with Root caries		0.6	1.2	*0.9*	4.6	2.6	*3.6*
Mean nos of teeth with Root Caries		0.0	0.0	*0.0*	0.1	0.1	*0.1*
% Subjects with Root fillings		0.0	0.0	*0.0*	0.0	0.2	*0.1*
Mean nos of teeth with Root fillings		0.0	0.0	*0.0*	0.0	0.0	*0.0*
State Urban	n=	315	300	*615*	260	217	*477*
% Subjects with Root caries		0.7	1.5	*1.1*	5.2	5.7	*5.5*
Mean nos of teeth with Root Caries		0.0	0.0	*0.0*	0.1	0.3	*0.2*
% Subjects with Root fillings		0.0	0.4	*0.2*	0.5	0.0	*0.3*
Mean nos of teeth with Root fillings		0.0	0.0	*0.0*	0.0	0.0	*0.0*
State Total	n=	996	889	*1885*	821	714	*1535*
% Subjects with Root caries		0.6	1.3	*1.0*	4.7	3.0	*3.9*
Mean nos of teeth with Root Caries		0.0	0.0	*0.0*	0.1	0.2	*0.2*
% Subjects with Root fillings		0.0	0.1	*0.1*	0.1	0.2	*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 per cent 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.

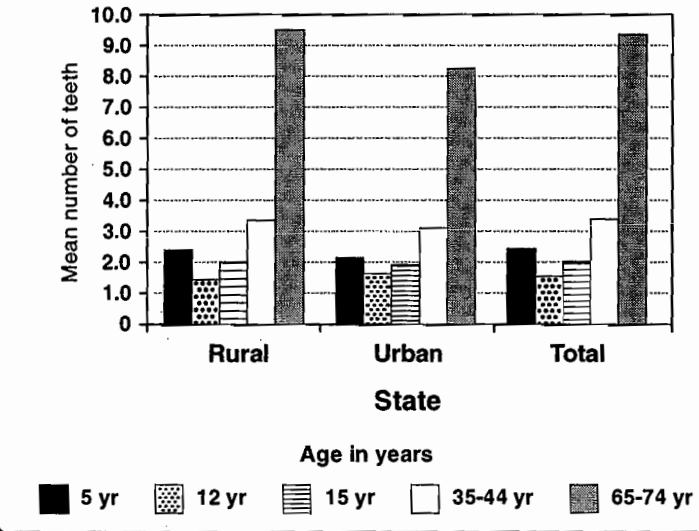
Fig 6.05. Percent subjects with treatment need in Orissa



The per cent subjects requiring treatment was consistently high in all age groups in the state and ranged from 47.8 per cent subjects needing treatment in the 5 year age group to a maximum of about 73.3 per cent in 65-74 years. The predominant treatment need was for one or more surface fillings, followed by pulp care and extractions, except in the age group of 65-74 years where the need for extractions was the highest. Preventive treatment was indicated in 1.2, 1.1 and 0.6 per cent subjects in the age groups of 5, 12 and 15 years. There was a significantly high need for other but unspecified care, especially in the higher age groups.

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 rural areas of residence. The pattern of need by type of need was similar in between regions.

Fig. 6.06. Mean number of teeth with treatment need in Orissa



The mean number of teeth requiring treatment was the lowest (1.6) in 12 year olds and the highest (9.4) in the age group of 65-74 years. The mean number of teeth requiring fillings (one or more surface) was higher than for other treatment requirements across age groups except in 65-74 years where mean number of teeth needing extraction was higher. The mean number of teeth needing treatment was marginally higher in rural residents but gender based difefrentals were not marked. There were wide disparities between regions.

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

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=	188	150	338	171	173	344	166	174	340	190	240	430	190	159	349
Treatment needed		55.8	45.6	50.7	62.4	54.8	58.6	64.0	61.6	62.8	75.8	73.3	74.6	70.4	67.9	69.2
Preventive care & fissure sealant		0.0	0.0	0.0	1.2	0.4	0.8	1.4	0.4	0.9	1.0	1.0	1.0	0.2	0.4	0.3
Filling one or more surfaces		55.4	44.2	49.8	51.5	43.0	47.3	59.5	59.5	59.5	71.9	66.2	69.1	46.9	41.8	44.4
Crown & Veneer		0.0	0.0	0.0	0.7	0.0	0.4	0.2	0.0	0.1	1.4	1.1	1.3	3.5	0.8	2.2
Pulp care		0.0	0.0	0.0	0.7	0.0	0.4	2.0	0.9	1.5	11.3	12.5	11.9	16.6	11.8	14.2
Extraction		14.7	10.2	12.5	21.3	22.8	22.1	4.2	4.0	4.1	31.7	27.6	29.7	45.9	43.3	44.6
Need for other care		0.0	0.0	0.0	0.7	0.6	0.7	1.8	0.2	1.0	10.0	10.3	10.2	23.4	34.3	28.9
Region 2	n=	185	152	337	184	177	361	191	162	353	273	155	428	158	126	284
Treatment needed		43.1	45.7	44.4	52.1	45.9	49.0	51.5	48.4	50.0	69.0	78.7	73.9	65.1	67.8	66.5
Preventive care & fissure sealant		5.9	4.9	5.4	0.0	1.3	0.7	2.2	1.4	1.8	2.4	2.3	2.4	0.8	0.0	0.4
Filling one or more surfaces		35.7	37.2	36.5	43.7	36.5	40.1	49.3	44.6	47.0	57.7	66.3	62.0	30.1	20.6	25.4
Crown & Veneer		0.0	0.0	0.0	0.3	0.3	0.3	0.0	1.4	0.7	1.7	2.2	2.0	0.4	0.0	0.2
Pulp care		0.6	0.0	0.3	2.9	3.0	3.0	3.1	5.3	4.2	8.5	13.9	11.2	4.9	1.8	3.4
Extraction		21.9	17.7	19.8	12.2	16.9	14.6	7.8	6.3	7.1	29.1	42.2	35.7	30.8	32.4	31.6
Need for other care		0.0	1.2	0.6	3.6	2.7	3.2	6.9	9.4	8.2	16.8	25.1	21.0	33.6	42.6	38.1
Region 3	n=	193	165	358	186	205	391	196	196	392	250	227	477	180	173	353
Treatment needed		63.3	69.8	66.6	61.7	59.5	60.6	65.7	56.5	61.1	72.1	69.5	70.8	73.0	78.6	75.8
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		46.0	55.9	51.0	60.2	55.6	57.9	61.0	52.5	56.8	61.6	61.2	61.4	12.2	13.8	13.0
Crown & Veneer		3.4	5.2	4.3	0.7	1.6	1.2	0.0	0.0	0.0	0.6	0.8	0.7	0.7	2.3	1.5
Pulp care		0.0	0.0	0.0	2.9	1.5	2.2	4.7	4.0	4.4	2.7	12.3	7.5	1.1	3.2	2.2
Extraction		49.1	55.6	52.4	11.6	9.8	10.7	23.6	25.1	24.4	42.1	42.5	42.3	42.8	41.1	42.0
Need for other care		0.7	0.0	0.4	5.7	6.1	5.9	8.2	7.7	8.0	32.4	32.8	32.6	68.5	67.8	68.2
Region 4	n=	152	152	304	158	150	308	145	152	297	150	150	300	152	142	294
Treatment needed		39.0	33.5	36.3	43.3	41.1	42.2	41.1	50.6	45.9	43.0	62.2	52.6	75.5	80.5	78.0
Preventive care & fissure sealant		0.0	0.0	0.0	2.7	0.3	1.5	0.0	0.0	0.0	0.8	1.2	1.0	2.9	1.8	2.4
Filling one or more surfaces		32.9	24.9	28.9	37.6	33.8	35.7	32.2	40.6	36.4	27.9	43.0	35.5	8.8	12.5	10.7
Crown & Veneer		0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.3	0.2	0.0	1.5	0.8	0.3	0.0	0.2
Pulp care		0.0	0.8	0.4	0.0	0.0	0.0	1.2	0.0	0.6	0.8	0.0	0.4	0.8	0.7	0.8
Extraction		20.8	16.8	18.8	11.1	12.6	11.9	13.5	18.2	15.9	16.1	30.7	23.4	22.6	24.4	23.5
Need for other care		0.0	1.5	0.8	1.6	2.0	1.8	5.0	5.6	5.3	12.9	29.0	21.0	65.0	68.1	66.6
Region 5	n=	133	133	266	146	136	282	153	133	286	133	117	250	141	114	255
Treatment needed		53.4	46.6	50.0	61.1	50.4	55.8	56.2	56.3	56.3	58.2	67.6	62.9	71.0	69.4	70.2
Preventive care & fissure sealant		3.9	2.7	3.3	3.5	3.6	3.6	1.7	0.9	1.3	1.9	2.2	2.1	0.0	1.1	0.6
Filling one or more surfaces		51.1	44.7	47.9	56.6	47.9	52.3	56.2	55.3	55.8	54.7	64.3	59.5	51.4	51.3	51.4
Crown & Veneer		0.0	0.0	0.0	2.6	0.9	1.8	1.0	0.0	0.5	1.9	1.5	1.7	3.9	4.5	4.2
Pulp care		0.0	0.9	0.5	0.0	0.9	0.5	0.0	0.0	0.0	4.6	2.6	3.6	8.3	12.3	10.3
Extraction		7.7	9.0	8.4	6.8	5.6	6.2	0.0	3.2	1.6	14.8	20.4	17.6	31.1	24.4	27.8
Need for other care		0.0	0.0	0.0	2.1	1.8	2.0	1.7	1.9	1.8	9.1	5.2	7.2	32.0	32.5	32.3
State Rural	n=	586	499	1085	570	572	1142	565	568	1133	681	589	1270	561	497	1058
Treatment needed		49.4	46.2	47.8	53.0	49.7	51.4	53.9	54.4	54.2	63.1	70.0	66.6	72.2	75.5	73.9
Preventive care & fissure sealant		1.4	1.1	1.3	1.3	0.5	0.9	0.8	0.4	0.6	1.0	0.9	1.0	0.8	0.1	0.5
Filling one or more surfaces		42.6	39.4	41.0	47.2	42.1	44.7	49.2	48.9	49.1	53.1	58.7	55.9	25.3	23.6	24.5
Crown & Veneer		0.8	1.1	1.0	0.6	0.4	0.5	0.0	0.3	0.2	1.1	1.1	1.1	1.4	1.1	1.3
Pulp care		0.1	0.5	0.3	1.2	1.0	1.1	2.2	1.8	2.0	5.0	7.6	6.3	5.5	4.4	5.0
Extraction		24.6	22.1	23.4	12.1	14.5	13.3	11.8	14.0	12.9	27.7	33.4	30.6	33.8	32.8	33.3
Need for other care		0.2	0.5	0.4	2.8	2.5	2.7	4.9	4.9	4.9	18.0	23.4	20.7	50.1	56.2	53.2
State Urban	n=	265	253	518	275	269	544	286	249	535	315	300	615	260	217	477
Treatment needed		47.4	40.9	44.2	57.7	45.7	51.7	52.2	52.7	52.5	59.9	65.6	62.8	69.5	69.5	69.5
Preventive care & fissure sealant		1.3	0.9	1.1	2.4	2.2	2.3	1.2	0.6	0.9	1.6	2.6	2.1	3.6	5.6	4.6
Filling one or more surfaces		38.6	29.4	34.0	47.6	39.4	43.5	44.8	48.1	46.5	47.2	51.2	49.2	22.1	19.6	20.9
Crown & Veneer		0.8	0.2	0.5	0.4	0.8	0.6	0.9	0.9	0.9	0.2	2.7	1.5	1.5	0.0	0.8
Pulp care		0.0	0.0	0.0	1.2	0.6	0.9	2.9	2.3	2.6	6.4	10.8	8.6	6.4	5.6	6.0
Extraction		21.8	21.3	21.6	18.7	13.1	15.9	9.6	8.8	9.2	27.9	33.0	30.5	31.6	33.9	32.8
Need for other care		0.0	2.1	1.1	1.4	3.7	2.6	6.0	7.2	6.6	13.6	19.2	16.4	39.7	41.9	40.8
State Total	n=	851	752	1603	845	841	1686	851	817	1668	996	889	1885	821	714	1535
Treatment needed		49.6	45.9	47.8	54.0	49.5	51.8	54.0	54.4	54.2	63.1	69.5	66.3	71.9	74.7	73.3
Preventive care & fissure sealant		1.3	1.0	1.2	1.4	0.7	1.1	0.8	0.4	0.6	1.0	1.0	1.0	1.2	0.8	1.0
Filling one or more surfaces		42.3	38.2	40.3	47.8	42.1	45.0	48.9	49.1	49.0	52.8	57.9	55.4	24.8	23.3	24.1
Crown & Veneer		0.8	1.0	0.9	0.6	0.5	0.6	0.1	0.3	0.2	0.9	1.4	1.2	1.5	1.0	1.3
Pulp care		0.1	0.4	0.3	1.3	0.9	1.1	2.3	1.9	2.1	5.2	8.0	6.6	5.6	4.7	5.2
Extraction		24.7	22.7	23.7	13.2	14.2	13.7	11.8	13.4	12.6	28.1	33.3	30.7	33.8	33.2	33.5
Need for other care		0.1	0.8	0.5	2.6	2.6	2.6	5.1	5.2	5.2	17.6	22.8	20.2	48.8	54.4	51.6

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

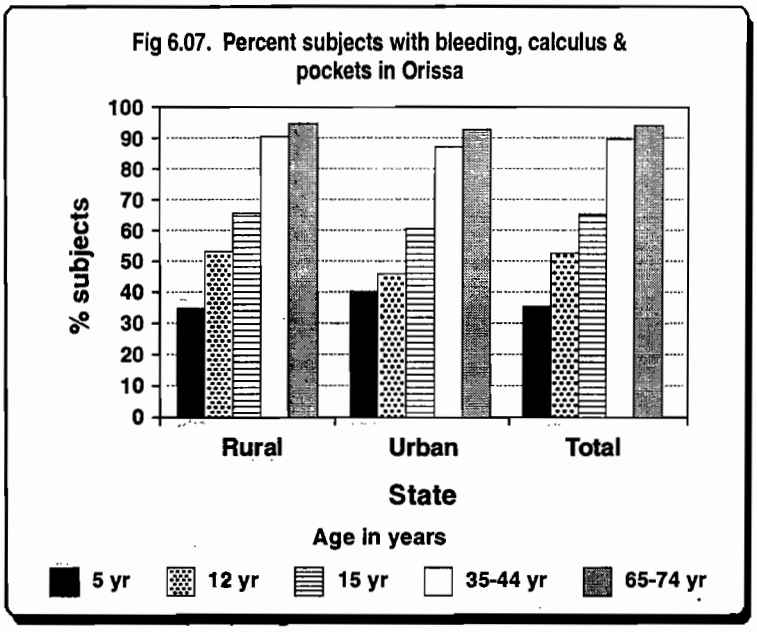
Treatment Need		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	180	145	325	162	164	326	159	166	325	183	226	409	179	151	330
Treatment needed		2.8	2.2	2.5	1.3	1.2	1.3	1.7	1.2	1.5	4.3	3.5	3.9	6.1	5.7	5.9
Preventive care/ fissure sealant		0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		2.4	1.9	2.2	0.9	0.7	0.8	1.5	1.1	1.3	3.0	2.4	2.7	2.2	1.7	2.0
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	0.0	0.0	0.0
Pulp care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.4	0.2	0.3
Extraction		0.4	0.3	0.4	0.3	0.4	0.4	0.1	0.1	0.1	0.7	0.6	0.7	1.5	1.3	1.4
Need for other care		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.4	0.2	0.3	2.0	2.3	2.2
Region 2	n=	182	147	329	182	175	357	188	160	348	266	154	420	151	125	276
Treatment needed		2.0	2.0	2.0	0.8	0.8	0.8	0.8	1.0	0.9	3.2	3.6	3.4	8.5	8.8	8.7
Preventive care/ fissure sealant		0.2	0.1	0.2	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		1.1	1.1	1.1	0.7	0.7	0.7	0.7	0.8	0.8	1.8	1.7	1.8	0.6	0.4	0.5
Crown/ Veneer		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
Pulp care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.1
Extraction		0.8	0.7	0.8	0.1	0.1	0.1	0.1	0.1	0.1	0.7	0.8	0.8	1.0	0.9	1.0
Need for other care		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.8	0.6	6.8	7.4	7.1
Region 3	n=	158	141	299	154	170	324	159	160	319	209	191	400	144	148	292
Treatment needed		3.7	4.5	4.1	1.4	1.0	1.2	1.6	1.1	1.4	4.5	3.7	4.1	13.5	14.8	14.2
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		1.3	1.6	1.5	1.1	0.9	1.0	1.3	0.8	1.1	2.2	1.6	1.9	0.2	0.2	0.2
Crown/ Veneer		0.2	0.3	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
Pulp care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.1
Extraction		2.2	2.6	2.4	0.0	0.1	0.1	0.1	0.2	0.2	1.2	1.0	1.1	2.5	2.8	2.7
Need for other care		0.1	0.0	0.1	0.2	0.0	0.1	0.2	0.1	0.2	1.0	0.8	0.9	10.7	11.6	11.2
Region 4	n=	126	124	250	155	148	303	142	149	291	141	147	288	144	138	282
Treatment needed		1.7	1.5	1.6	0.7	0.8	0.8	0.8	1.5	1.2	1.3	2.8	2.1	10.1	9.6	9.9
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	0.1	0.2	0.2
Filling one or more surfaces		1.1	0.8	1.0	0.5	0.6	0.6	0.5	0.9	0.7	0.7	1.2	1.0	0.3	0.4	0.4
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	0.0	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	0.0	0.0
Extraction		0.6	0.6	0.6	0.2	0.1	0.2	0.1	0.2	0.2	0.3	0.7	0.5	0.6	0.9	0.8
Need for other care		0.0	0.1	0.1	0.0	0.1	0.1	0.0	0.3	0.2	0.3	0.9	0.6	8.9	8.1	8.5
Region 5	n=	124	127	251	141	127	268	148	127	275	121	114	235	139	107	246
Treatment needed		2.1	2.1	2.1	1.0	0.9	1.0	1.0	0.9	1.0	3.4	3.4	3.4	6.3	5.7	6.0
Preventive care/ fissure sealant		0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Filling one or more surfaces		1.8	1.8	1.8	0.9	0.7	0.8	1.0	0.9	1.0	2.5	2.8	2.7	2.4	2.3	2.4
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		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2
Extraction		0.2	0.3	0.3	0.0	0.1	0.1	0.0	0.0	0.0	0.4	0.3	0.4	0.9	0.6	0.8
Need for other care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.3	2.8	2.6	2.7
State Rural	n=	530	450	980	539	533	1072	529	530	1059	632	553	1185	520	466	986
Treatment needed		2.5	2.3	2.4	1.5	1.5	1.5	1.9	2.0	2.0	3.2	3.4	3.3	9.4	9.6	9.5
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		1.5	1.4	1.5	1.2	1.1	1.2	1.6	1.6	1.6	1.9	1.9	1.9	0.9	0.8	0.9
Crown/ Veneer		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pulp care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Extraction		0.9	0.9	0.9	0.2	0.3	0.3	0.2	0.2	0.2	0.7	0.7	0.7	1.3	1.3	1.3
Need for other care		0.0	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.5	0.6	0.6	7.0	7.4	7.2
State Urban	n=	240	234	474	255	251	506	267	232	499	288	279	567	237	203	440
Treatment needed		2.1	2.1	2.1	1.7	1.7	1.7	1.8	1.9	1.9	3.1	3.1	3.1	8.3	8.1	8.2
Preventive care/ fissure sealant		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.7	0.5
Filling one or more surfaces		1.2	1.0	1.1	1.1	1.2	1.2	1.5	1.4	1.5	1.5	1.4	1.5	0.8	0.6	0.7
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	0.0	0.0	0.0
Pulp care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.2	0.2	0.1	0.2
Extraction		0.8	0.9	0.9	0.5	0.3	0.4	0.1	0.1	0.1	0.7	0.7	0.7	1.1	1.7	1.4
Need for other care		0.0	0.2	0.1	0.0	0.1	0.1	0.1	0.3	0.2	0.7	0.7	0.7	5.9	5.1	5.5
State Total	n=	770	684	1454	794	784	1578	796	762	1558	920	832	1752	757	669	1426
Treatment needed		2.5	2.4	2.5	1.6	1.5	1.6	1.9	2.0	2.0	3.2	3.3	3.3	9.3	9.4	9.4
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	0.1	0.1	0.1
Filling one or more surfaces		1.4	1.3	1.4	1.2	1.2	1.2	1.6	1.5	1.6	1.9	1.8	1.9	0.9	0.8	0.9
Crown/ Veneer		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pulp care		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
Extraction		0.9	0.9	0.9	0.2	0.3	0.3	0.2	0.2	0.2	0.7	0.7	0.7	1.3	1.4	1.4
Need for other care		0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.5	0.6	0.6	6.9	7.1	7.0

6.2 PERIODONTAL STATUS

6.2.1 Bleeding, calculus and pockets

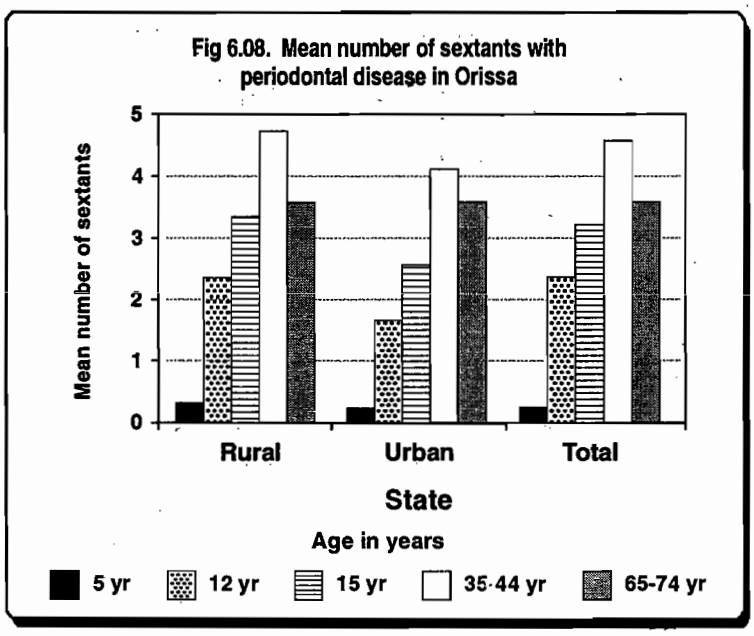
The periodontal status was assessed using the Community Periodontal Index (CPI) with its three indicators of gingival bleeding, calculus and periodontal pockets.

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



In subjects aged 12 years and above, the prevalence of periodontal disease increased as age advanced (Table 6.07). The percentage of subjects with bleeding, calculus and/ or pockets was 53.2 in 12 year olds (bleeding and calculus only); 65.8 in 15 year olds; 89.9 in 35-44 year olds; and 93.9 in 65-4 year olds. Bleeding was more prevalent than calculus in 12 year olds while the opposite was true in 15, 35-44 and 65-74 year old subjects. Shallow pockets (4-5 mm) were prevalent in 7.1 per cent subjects in the age group of 65-74 years but were rarely present in other age groups. Deep pockets (higher than 4-5 mm) were virtually absent.

Overall, prevalence of periodontal disease was higher in rural residents and was uniformly distributed in the regions surveyed. There were no marked gender related differentials. The pattern of distribution of periodontal disease, by type of condition 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 (4.6) followed by the 65-74 year old subjects (3.6). The mean number of teeth with pockets was less than one tooth (0.7) in the 65-74 year olds and less than half a tooth (0.2) for 35-44 year olds. The mean number of teeth with calculus was higher than that with bleeding or with pockets.

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

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

Periodontal disease		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	63	47	*110*	146	152	*298*	166	173	*339*	188	239	*427*	181	152	*333*
With bleeding,calculus, or pockets		38.0	23.5	*30.8*	67.6	63.0	*65.3*	84.1	79.6	*81.9*	97.8	92.8	*95.3*	96.5	93.8	*95.2*
with bleeding		22.2	11.8	*17.0*	12.5	12.5	*12.5*	12.0	12.0	*12.0*	7.6	8.8	*8.2*	4.6	0.0	*2.3*
with calculus		10.7	9.5	*10.1*	33.9	37.6	*35.8*	51.9	42.0	*47.0*	54.3	58.5	*56.4*	61.8	59.1	*60.5*
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.8	2.9	*1.9*	7.7	2.5	*5.1*	9.3	8.0	*8.7*
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.7	0.0	*0.4*	0.0	0.9	*0.5*
with bleeding or higher		27.3	14.0	*20.7*	31.2	22.7	*27.0*	30.6	33.3	*32.0*	29.6	27.1	*28.4*	15.9	10.9	*13.4*
with calculus		10.7	9.5	*10.1*	34.7	37.6	*36.2*	52.7	43.5	*48.1*	59.8	63.2	*61.5*	71.1	74.1	*72.6*
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.8	2.9	*1.9*	7.7	2.5	*5.1*	9.5	8.0	*8.8*
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.7	0.0	*0.4*	0.0	0.9	*0.5*
Region 2	n=	50	35	*85*	159	151	*310*	186	157	*343*	261	150	*411*	125	104	*229*
With bleeding,calculus, or pockets		40.1	52.9	*46.5*	75.4	70.2	*72.8*	74.9	76.1	*75.5*	89.2	83.7	*86.5*	91.2	90.8	*91.0*
with bleeding		16.1	23.0	*19.6*	26.4	23.9	*25.2*	4.2	8.8	*6.5*	5.4	3.9	*4.7*	1.9	3.9	*2.9*
with calculus		24.0	29.9	*27.0*	32.5	32.2	*32.4*	45.2	46.2	*45.7*	65.2	65.2	*65.2*	66.5	55.3	*60.9*
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.0	0.0	*0.0*	10.3	12.2	*11.3*
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.9	0.0	*0.5*
with bleeding or higher		16.1	23.0	*19.6*	42.9	38.0	*40.5*	29.8	29.9	*29.9*	23.5	18.4	*21.0*	11.5	20.0	*15.8*
with calculus		24.0	29.9	*27.0*	32.5	32.2	*32.4*	45.2	46.2	*45.7*	65.6	65.2	*65.4*	68.3	58.6	*63.5*
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.0	0.0	*0.0*	10.3	12.2	*11.3*
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.9	0.0	*0.5*
Region 3	n=	12	12	*24*	145	156	*301*	160	162	*322*	213	191	*404*	107	107	*214*
With bleeding,calculus, or pockets		60.2	44.0	*52.1*	81.7	72.8	*77.3*	87.5	81.6	*84.6*	91.6	89.0	*90.3*	89.7	87.7	*89*
with bleeding		52.1	30.6	*41.4*	19.7	16.6	*18.2*	5.3	7.9	*6.6*	2.0	2.5	*2.3*	1.4	2.4	*1.9*
with calculus		8.1	6.7	*7.4*	62.0	55.1	*58.6*	81.4	71.7	*76.6*	85.0	84.2	*84.6*	80.0	70.6	*75.3*
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	2.4	0.0	*1.2*	4.7	8.6	*6.7*
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.0	0.0	*0.0*	1.2	2.4	*1.8*
with bleeding or higher		52.1	30.6	*41.4*	19.7	16.6	*18.2*	5.3	8.7	*7.0*	2.0	4.1	*3.1*	1.4	2.4	*1.9*
with calculus		8.1	13.4	*10.8*	62.0	56.2	*59.1*	82.2	72.9	*77.6*	87.3	84.9	*86.1*	82.4	73.0	*77.7*
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	2.4	0.0	*1.2*	4.7	9.8	*7.3*
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.0	0.0	*0.0*	1.2	2.4	*1.8*
Region 4	n=	5	7	*12*	154	141	*295*	142	150	*292*	143	145	*288*	124	118	*242*
With bleeding,calculus, or pockets		20.0	0.0	*10.0*	23.3	22.8	*23.1*	35.7	41.4	*38.6*	91.7	85.0	*88.4*	94.2	98.9	*96.6*
with bleeding		20.0	0.0	*10.0*	17.4	16.4	*16.9*	24.1	20.2	*22.2*	25.0	14.0	*19.5*	2.0	2.6	*2.3*
with calculus		0.0	0.0	*0.0*	2.5	3.6	*3.1*	5.8	11.5	*8.7*	40.7	51.3	*46.0*	67.4	59.1	*63.3*
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.4	0.0	*0.2*	2.8	4.7	*3.8*
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	1.1	*0.6*
with bleeding or higher		20.0	0.0	*10.0*	20.9	18.9	*19.9*	29.9	29.8	*29.9*	46.1	29.1	*37.6*	5.4	11.1	*8.3*
with calculus		0.0	0.0	*0.0*	2.5	3.6	*3.1*	5.8	11.5	*8.7*	45.3	55.9	*50.6*	85.1	81.7	*83.4*
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.4	0.0	*0.2*	3.8	5.1	*4.5*
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	1.1	*0.6*

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 5	**n=**	**4**	**2**	***6***	**135**	**129**	***264***	**149**	**129**	***278***	**122**	**113**	***235***	**133**	**103**	***236***
With bleeding,calculus, or pockets		29.5	100.0	***64.8***	60.0	59.7	***59.9***	76.0	68.5	***72.3***	86.4	90.4	***88.4***	95.8	93.6	***94.7***
with bleeding		29.5	72.0	***50.8***	41.5	40.1	***40.8***	45.8	33.7	***39.8***	21.8	21.6	***21.7***	7.4	5.7	***6.6***
with calculus		0.0	28.0	***14.0***	6.4	5.9	***6.2***	6.8	9.7	***8.3***	21.9	26.7	***24.3***	42.1	30.4	***36.3***
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	1.4	0.4	***0.9***	4.1	6.7	***5.4***
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with bleeding or higher		29.5	72.0	***50.8***	53.6	53.8	***53.7***	68.4	57.8	***63.1***	58.6	54.6	***56.6***	30.4	35.7	***33.1***
with calculus		0.0	28.0	***14.0***	6.4	5.9	***6.2***	7.7	10.7	***9.2***	26.4	35.3	***30.9***	60.3	51.2	***55.8***
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	1.4	0.4	***0.9***	5.0	6.7	***5.9***
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	**n=**	**109**	**76**	***185***	**510**	**507**	***1017***	**536**	**541**	***1077***	**641**	**563**	***1204***	**466**	**403**	***869***
With bleeding,calculus, or pockets		37.8	30.7	***34.3***	55.1	52.4	***53.8***	67.0	65.5	***66.3***	92.1	88.6	***90.4***	93.9	94.6	***94***
with bleeding		25.8	17.7	***21.8***	30.4	27.4	***28.9***	29.5	29.8	***29.7***	28.4	23.7	***26.1***	10.2	12.2	***11.2***
with calculus		14.9	14.3	***14.6***	33.5	31.4	***32.5***	50.1	48.7	***49.4***	77.6	78.5	***78.1***	81.6	82.1	***81.9***
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	1.1	1.8	***1.5***	7.5	5.6	***6.6***	21.7	25.5	***23.6***
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.5	0.8	***0.7***	1.9	3.9	***2.9***
with bleeding or higher		25.8	17.7	***21.8***	30.4	27.4	***28.9***	29.5	29.8	***29.7***	28.4	23.7	***26.1***	10.2	12.2	***11.2***
with calculus		12.0	13.0	***12.5***	24.3	24.5	***24.4***	37.2	35.0	***36.1***	61.5	64.3	***62.9***	76.6	73.5	***75.1***
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.2	0.7	***0.5***	2.1	0.5	***1.3***	6.7	7.8	***7.3***
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.4	1.1	***0.8***
State Urban	**n=**	**25**	**27**	***52***	**229**	**222**	***451***	**267**	**230**	***497***	**286**	**275**	***561***	**204**	**181**	***385***
With bleeding,calculus, or pockets		48.2	31.7	***40.0***	47.6	45.7	***46.7***	59.6	60.7	***60.2***	90.1	84.5	***87.3***	93.3	91.6	***92.5***
with bleeding		12.4	6.8	***9.6***	22.9	15.7	***19.3***	27.5	26.2	***26.9***	35.0	25.4	***30.2***	16.1	18.4	***17.3***
with calculus		35.7	25.0	***30.4***	31.7	31.7	***31.7***	43.0	47.7	***45.4***	71.9	71.2	***71.6***	84.4	80.4	***82.4***
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	0.0	0.5	***0.3***	6.9	7.2	***7.1***	21.8	22.8	***22.3***
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.0	2.9	***2.5***
with bleeding or higher		12.4	6.8	***9.6***	22.9	15.7	***19.3***	27.5	26.2	***26.9***	35.0	25.4	***30.2***	16.1	18.4	***17.3***
with calculus		35.7	25.0	***30.4***	24.6	28.8	***26.7***	32.0	34.6	***33.3***	52.6	57.1	***54.9***	72.0	65.6	***68.8***
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	2.6	1.9	***2.3***	5.3	7.7	***6.5***
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Total	**n=**	**134**	**103**	***237***	**739**	**729**	***1468***	**803**	**771**	***1574***	**927**	**838**	***1765***	**670**	**584**	***1254***
With bleeding,calculus, or pockets		38.8	29.9	***34.4***	54.7	51.7	***53.2***	66.3	65.2	***65.8***	91.9	87.9	***89.9***	93.8	94.0	***93.9***
with bleeding		25.4	16.2	***20.8***	29.2	25.6	***27.4***	28.8	29.2	***29.0***	29.0	23.8	***26.4***	11.1	13.0	***12.1***
with calculus		16.2	14.9	***15.6***	34.0	31.7	***32.9***	49.8	49.0	***49.4***	76.8	77.4	***77.1***	82.1	81.8	***82.0***
with pockets 4-5 mm		NA	NA	NA	NA	NA	NA	1.0	1.7	***1.4***	7.5	5.7	***6.6***	21.7	24.8	***23.3***
with pockets 6 mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.4	0.7	***0.6***	1.9	3.7	***2.8***
with bleeding or higher		25.4	16.2	***20.8***	29.2	25.6	***27.4***	28.8	29.2	***29.0***	29.0	23.8	***26.4***	11.1	13.0	***12.1***
with calculus		13.4	13.7	***13.6***	25.2	25.5	***25.4***	37.3	35.4	***36.4***	60.5	63.5	***62.0***	76.0	72.3	***74.2***
with pockets 4-5 mm or higher		NA	NA	NA	NA	NA	NA	0.2	0.7	***0.5***	2.2	0.7	***1.5***	6.5	7.7	***7.1***
with pockets 6mm		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.3	1.0	***0.7***

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

Periodontal disease		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	**n=**	**188**	**150**	***338***	**171**	**173**	***344***	**166**	**174**	***340***	**190**	**240**	***430***	**190**	**159**	***349***
Mean no. of healthy sextants		1.7	1.7	***1.7***	2.6	2.8	***2.7***	1.8	2.3	***2.1***	0.5	1.0	***0.8***	0.5	0.5	***0.5***
With bleeding, calculus, pockets		0.5	0.2	***0.4***	2.6	2.6	***2.6***	4.1	3.7	***3.9***	5.4	4.9	***5.2***	4.6	4.5	***4.6***
with bleeding		0.4	0.1	***0.3***	0.9	0.7	***0.8***	1.1	1.0	***1.1***	0.9	0.9	***0.9***	0.4	0.2	***0.3***
with calculus		0.1	0.1	***0.1***	1.7	1.7	***1.7***	3.0	2.6	***2.8***	3.7	3.6	***3.7***	3.1	3.3	***3.2***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.1	0.2	***0.2***	0.8	0.4	***0.6***	1.0	0.9	***1.0***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Not recorded		3.8	4.0	***3.9***	0.8	0.6	***0.7***	0.1	0.0	***0.1***	0.1	0.1	***0.1***	0.9	0.9	***0.9***
Region 2	**n=**	**185**	**152**	***337***	**184**	**177**	***361***	**191**	**162**	***353***	**273**	**155**	***428***	**158**	**126**	***284***
Mean no. of healthy sextants		1.0	0.7	***0.9***	2.3	2.3	***2.3***	2.0	2.2	***2.1***	0.9	1.1	***1.0***	0.4	0.5	***0.5***
With bleeding, calculus, pockets		0.6	0.7	***0.7***	2.9	2.9	***2.9***	3.8	3.6	***3.7***	4.8	4.6	***4.7***	3.5	3.6	***3.6***
with bleeding		0.2	0.3	***0.3***	1.4	1.3	***1.4***	0.9	0.8	***0.9***	0.7	0.5	***0.6***	0.2	0.2	***0.2***
with calculus		0.4	0.4	***0.4***	1.5	1.6	***1.6***	2.9	2.7	***2.8***	4.0	4.0	***4.0***	2.7	2.5	***2.6***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.6	0.9	***0.8***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.1	***0.2***
Not recorded		4.4	4.6	***4.5***	0.8	0.7	***0.8***	0.2	0.2	***0.2***	0.3	0.3	***0.3***	1.8	1.8	***1.8***
Region 3	**n=**	**193**	**165**	***358***	**186**	**205**	***391***	**196**	**196**	***392***	**250**	**227**	***477***	**180**	**173**	***353***
Mean no. of healthy sextants		0.1	0.1	***0.1***	1.3	1.5	***1.4***	0.8	1.2	***1.0***	0.5	0.6	***0.6***	0.2	0.3	***0.3***
With bleeding, calculus, pockets		0.1	0.1	***0.1***	3.6	3.2	***3.4***	4.2	3.9	***4.1***	4.5	4.5	***4.5***	1.9	2.1	***2.0***
with bleeding		0.1	0.1	***0.1***	1.0	0.8	***0.9***	0.3	0.4	***0.4***	0.1	0.2	***0.2***	0.1	0.1	***0.1***
with calculus		0.0	0.0	***0.0***	2.6	2.4	***2.5***	3.9	3.5	***3.7***	4.3	4.3	***4.3***	1.7	1.6	***1.7***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.2	0.3	***0.3***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.4	0.4	***0.4***
Not recorded		5.8	5.8	***5.8***	1.1	1.4	***1.3***	1.0	0.9	***1.0***	0.9	0.9	***0.9***	3.5	3.3	***3.4***
Region 4	**n=**	**152**	**152**	***304***	**158**	**150**	***308***	**145**	**152**	***297***	**150**	**150**	***300***	**152**	**142**	***294***
Mean no. of healthy sextants		0.2	0.2	***0.2***	5.0	4.7	***4.9***	4.4	4.0	***4.2***	1.7	1.6	***1.7***	0.6	0.3	***0.5***
With bleeding, calculus, pockets		0.0	0.0	***0.0***	0.8	0.9	***0.9***	1.4	1.9	***1.7***	4.0	4.0	***4.0***	3.3	3.8	***3.6***
with bleeding		0.0	0.0	***0.0***	0.7	0.7	***0.7***	1.0	1.1	***1.1***	1.5	0.9	***1.2***	0.1	0.2	***0.2***
with calculus		0.0	0.0	***0.0***	0.2	0.2	***0.2***	0.4	0.8	***0.6***	2.4	3.1	***2.8***	2.9	3.0	***3.0***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.3	0.5	***0.4***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Not recorded		5.8	5.8	***5.8***	0.2	0.4	***0.3***	0.2	0.1	***0.2***	0.3	0.4	***0.4***	2.1	1.9	***2.0***
Region 5	**n=**	**133**	**133**	***266***	**146**	**136**	***282***	**153**	**133**	***286***	**133**	**117**	***250***	**141**	**114**	***255***
Mean no. of healthy sextants		0.1	0.0	***0.1***	2.8	2.9	***2.9***	2.4	2.6	***2.5***	1.2	0.9	***1.1***	0.5	0.5	***0.5***
With bleeding, calculus, pockets		0.1	0.0	***0.1***	2.7	2.7	***2.7***	3.4	3.2	***3.3***	4.3	5.0	***4.7***	4.6	4.5	***4.6***
with bleeding		0.1	0.0	***0.1***	2.1	2.0	***2.1***	2.5	2.0	***2.3***	1.8	1.9	***1.9***	0.8	0.8	***0.8***
with calculus		0.0	0.0	***0.0***	0.7	0.7	***0.7***	0.9	1.2	***1.1***	2.2	2.7	***2.5***	2.8	2.6	***2.7***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.1	0.1	***0.1***	0.3	0.3	***0.3***	0.9	1.1	***1.0***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.0	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.1	***0.2***
Not recorded		5.9	6.0	***6.0***	0.5	0.3	***0.4***	0.2	0.2	***0.2***	0.5	0.1	***0.3***	0.8	0.8	***0.8***

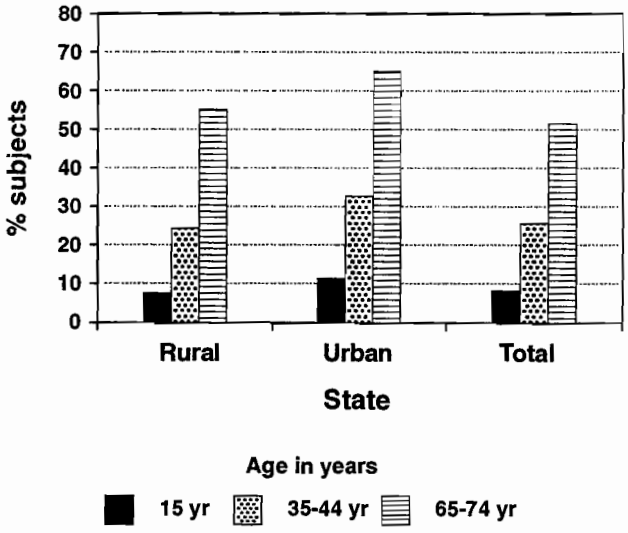
Periodontal disease		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
State Rural	n=	586	499	*1085*	570	572	*1142*	565	568	*1133*	681	589	*1270*	561	497	*1058*
Mean no. of healthy sextants		0.7	0.6	***0.7***	3.1	3.0	***3.1***	2.4	2.6	***2.5***	0.9	1.1	***1.0***	0.4	0.3	***0.4***
With bleeding, calculus, pockets		0.3	0.2	***0.3***	2.3	2.3	***2.3***	3.2	3.2	***3.2***	4.7	4.6	***4.7***	3.5	3.6	***3.6***
with bleeding		0.2	0.1	***0.2***	1.1	1.0	***1.1***	1.0	1.0	***1.0***	0.9	0.7	***0.8***	0.2	0.2	***0.2***
with calculus		0.1	0.1	***0.1***	1.2	1.2	***1.2***	2.2	2.1	***2.2***	3.5	3.7	***3.6***	2.6	2.7	***2.7***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.2	0.1	***0.2***	0.6	0.6	***0.6***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
Not recorded		5.1	5.2	***5.2***	0.6	0.7	***0.7***	0.4	0.3	***0.4***	0.4	0.4	***0.4***	2.0	2.0	***2.0***
State Urban	n=	265	253	*518*	275	269	*544*	286	249	*535*	315	300	*615*	260	217	*477*
Mean no. of healthy sextants		0.3	0.4	***0.4***	3.5	3.5	***3.5***	3.1	3.1	***3.1***	1.3	1.5	***1.4***	0.5	0.7	***0.6***
With bleeding, calculus, pockets		0.2	0.2	***0.2***	1.7	1.6	***1.7***	2.6	2.6	***2.6***	4.1	4.1	***4.1***	3.6	3.9	***3.8***
with bleeding		0.1	0.0	***0.1***	0.6	0.4	***0.5***	0.8	0.8	***0.8***	1.0	0.8	***0.9***	0.3	0.3	***0.3***
with calculus		0.2	0.1	***0.2***	1.1	1.2	***1.2***	1.8	1.8	***1.8***	2.8	3.1	***3.0***	2.8	2.9	***2.9***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.2	0.2	***0.2***	0.5	0.6	***0.6***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.0	***0.1***
Not recorded		5.5	5.5	***5.5***	0.8	0.9	***0.9***	0.2	0.3	***0.3***	0.6	0.4	***0.5***	1.9	1.4	***1.7***
State Total	n=	851	752	*1603*	845	841	*1686*	851	817	*1668*	996	889	*1885*	821	714	*1535*
Mean no. of healthy sextants		0.6	0.6	***0.6***	3.1	3.1	***3.1***	2.5	2.6	***2.6***	1.0	1.1	***1.1***	0.4	0.4	***0.4***
With bleeding, calculus, pockets		0.3	0.2	***0.3***	2.3	2.2	***2.3***	3.2	3.1	***3.2***	4.6	4.5	***4.6***	3.5	3.6	***3.6***
with bleeding		0.2	0.1	***0.2***	1.0	0.9	***1.0***	1.0	1.0	***1.0***	0.9	0.7	***0.8***	0.2	0.2	***0.2***
with calculus		0.1	0.1	***0.1***	1.3	1.3	***1.3***	2.1	2.1	***2.1***	3.4	3.6	***3.5***	2.6	2.7	***2.7***
with pockets(4-5 mm)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.2	0.1	***0.2***	0.5	0.6	***0.6***
with pockets (6mm or more)		NA	NA	NA	NA	NA	NA	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.1	***0.1***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
Not recorded		5.1	5.3	***5.2***	0.6	0.7	***0.7***	0.3	0.3	***0.3***	0.4	0.4	***0.4***	2.0	1.9	***2.0***

6.2.2 Loss of attachment

Tables 6.09 presents the per cent 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 yr, 35-44 yr and 65-74 yr age groups only. The CPI Probe was used to measure pocket depth.

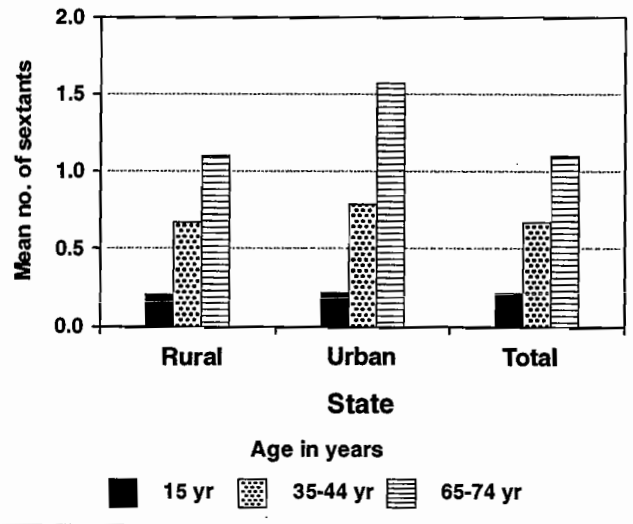
Fig. 6.09. Percent subjects with Loss of Attachment in Orissa



Overall, the prevalence proportion of subjects with loss of attachment (Table 6.09) in one or more sextants was highest in 65-74 years (57.4 per cent) in the state followed by the 35-44 year age group (25.6 per cent). It was almost equally distributed by sex in the age groups of 35-44 yr and 65-74 yr. 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 prevalence of loss of attachment was higher in rural than in urban areas. The pattern of distribution of severity of the loss of attachment remained similar in rural and urban areas and in between regions. There were no major gender related differentials.

Fig. 6.10. Mean number of sextants with Loss of Attachment in Orissa



The mean number of sextants with loss of attachment was 1.1 and 0.6 respectively in subjects aged 65-74 and 35-44 years. The mean number of teeth with loss of attachment of 4-5 mm was the highest and this number decreased as the measure of loss of attachment was increased to 12 mm or more. Again, 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: Orissa

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	**92**	106	*198*	**137**	157	*294*	**140**	108	*248*
With no loss of attachment (0-3 mm)		78.3	83.5	*80.9*	66.8	64.1	*65.5*	51.2	54.7	*53.0*
With loss of attachment		21.7	16.5	*19.1*	33.2	35.9	*34.6*	48.8	45.3	*47.1*
with LOA 4-5 mm		17.2	14.9	*16.1*	18.8	22.6	*20.7*	29.0	31.4	*30.2*
with LOA 6-8 mm		1.5	1.6	*1.6*	13.4	13.1	*13.3*	19.3	12.7	*16.0*
with LOA 9-11 mm		1.5	0.0	*0.8*	1.0	0.0	*0.5*	0.3	0.0	*0.2*
with LOA 12 mm or more		1.5	0.0	*0.8*	0.0	0.2	*0.1*	0.3	1.2	*0.8*
Region 2	n=	**140**	**117**	*257*	**192**	**106**	*298*	**91**	**75**	*166*
With no loss of attachment (0-3 mm)		95.4	90.5	*93.0*	86.3	94.5	*90.4*	70.1	66.2	*68.2*
With loss of attachment		4.6	9.5	*7.1*	13.7	5.5	*9.6*	24.3	33.8	*29.1*
with LOA 4-5 mm		3.8	8.0	*5.9*	13.1	4.4	*8.8*	17.4	25.6	*21.5*
with LOA 6-8 mm		0.8	1.5	*1.2*	0.6	1.1	*0.9*	4.4	6.7	*5.6*
with LOA 9-11 mm		0.0	0.0	*0.0*	0.0	0.0	*0.0*	2.5	1.5	*2.0*
with LOA 12 mm or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*
Region 3	n=	**77**	**86**	*163*	**116**	**88**	*204*	**48**	**57**	*105*
With no loss of attachment (0-3 mm)		100.0	96.7	*98.4*	90.9	96.9	*93.9*	47.1	42.8	*45.0*
With loss of attachment		0.0	3.3	*1.7*	8.0	3.1	*5.6*	42.6	45.9	*44.3*
with LOA 4-5 mm		0.0	3.3	*1.7*	3.3	3.1	*3.2*	18.7	16.2	*17.5*
with LOA 6-8 mm		0.0	0.0	*0.0*	3.6	0.0	*1.8*	21.3	27.5	*24.4*
with LOA 9-11 mm		0.0	0.0	*0.0*	1.1	0.0	*0.6*	2.6	2.2	*2.4*
with LOA 12 mm or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*
Region 4	n=	**138**	**144**	*282*	**116**	**111**	*227*	**89**	**75**	*164*
With no loss of attachment (0-3 mm)		93.8	94.0	*93.9*	61.4	64.7	*63.1*	16.9	9.5	*13.2*
With loss of attachment		6.2	6.0	*6.1*	38.6	35.3	*37.0*	83.1	90.5	*86.8*
with LOA 4-5 mm		4.6	6.0	*5.3*	35.1	33.1	*34.1*	68.5	67.0	*67.8*
with LOA 6-8 mm		1.6	0.0	*0.8*	3.6	1.0	*2.3*	14.0	19.3	*16.7*
with LOA 9-11 mm		0.0	0.0	*0.0*	0.0	1.2	*0.6*	0.6	4.2	*2.4*
with LOA 12 mm or more		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*
Region 5	n=	**139**	**114**	*253*	**104**	**104**	*208*	**111**	**96**	*207*
With no loss of attachment (0-3 mm)		94.3	96.5	*95.4*	72.6	73.5	*73.1*	44.0	45.5	*44.8*
With loss of attachment		5.7	3.5	*4.6*	27.4	26.5	*27.0*	54.8	51.8	*53.3*
with LOA 4-5 mm		5.7	3.5	*4.6*	19.9	21.9	*20.9*	38.4	37.6	*38.0*
with LOA 6-8 mm		0.0	0.0	*0.0*	3.7	4.1	*3.9*	10.8	9.5	*10.2*
with LOA 9-11 mm		0.0	0.0	*0.0*	2.5	0.0	*1.3*	3.9	1.8	*2.9*
with LOA 12 mm or more		0.0	0.0	*0.0*	1.2	0.5	*0.9*	1.6	2.9	*2.3*
State Rural	n=	**381**	**377**	*758*	**449**	**369**	*818*	**325**	**271**	*596*
With no loss of attachment (0-3 mm)		93.5	92.6	*93.1*	74.9	76.0	*75.5*	42.1	41.8	*42.0*
With loss of attachment		6.5	7.4	*7.0*	24.9	24.0	*24.5*	55.7	56.1	*55.9*
with LOA 4-5 mm		5.3	6.9	*6.1*	19.3	19.3	*19.3*	40.1	39.1	*39.6*
with LOA 6-8 mm		0.7	0.5	*0.6*	4.9	4.2	*4.6*	14.2	14.9	*14.6*
with LOA 9-11 mm		0.3	0.0	*0.2*	0.7	0.5	*0.6*	1.3	1.6	*1.5*
with LOA 12 mm or more		0.3	0.0	*0.2*	0.1	0.0	*0.1*	0.2	0.6	*0.4*
State Urban	n=	**205**	**190**	*395*	**216**	**197**	*413*	**154**	**140**	*294*
With no loss of attachment (0-3 mm)		88.2	90.4	*89.3*	70.2	66.5	*68.4*	38.8	30.2	*34.5*
With loss of attachment		11.8	9.6	*10.7*	29.8	33.5	*31.7*	60.5	69.8	*65.2*
with LOA 4-5 mm		8.8	8.7	*8.8*	25.7	27.7	*26.7*	43.3	47.0	*45.2*
with LOA 6-8 mm		3.0	0.9	*2.0*	4.0	5.1	*4.6*	14.2	17.3	*15.8*
with LOA 9-11 mm		0.0	0.0	*0.0*	0.0	0.0	*0.0*	2.1	4.5	*3.3*
with LOA 12 mm or more		0.0	0.0	*0.0*	0.0	0.6	*0.3*	0.8	1.1	*1.0*
State Total	n=	**586**	**567**	*1153*	**665**	**566**	*1231*	**479**	**411**	*890*
With no loss of attachment (0-3 mm)		92.3	92.1	*92.2*	74.2	74.4	*74.3*	41.4	39.8	*40.6*
With loss of attachment		7.7	7.9	*7.8*	25.6	25.6	*25.6*	56.5	58.3	*57.4*
with LOA 4-5 mm		6.1	7.3	*6.7*	20.0	20.6	*20.3*	40.2	39.9	*40.1*
with LOA 6-8 mm		1.2	0.5	*0.9*	4.9	4.5	*4.7*	14.6	15.6	*15.1*
with LOA 9-11 mm		0.2	0.0	*0.1*	0.6	0.4	*0.5*	1.4	2.1	*1.8*
with LOA 12 mm or more		0.2	0.0	*0.1*	0.1	0.1	*0.1*	0.2	0.7	*0.5*

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

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	**n=**	**166**	**174**	***340***	**190**	**240**	***430***	**190**	**159**	***349***
With no loss of attachment (0-3 mm)		2.3	2.7	***2.5***	2.8	2.6	***2.7***	2.3	2.2	***2.3***
With loss of attachment		0.4	0.4	***0.4***	1.0	0.9	***1.0***	1.3	1.1	***1.2***
with loss of attachment 4-5 mm		0.3	0.3	***0.3***	0.7	0.7	***0.7***	0.8	0.8	***0.8***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.3	0.2	***0.3***	0.5	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***	0.0	0.0	***0.0***
Not recorded		3.4	2.9	***3.2***	2.2	2.6	***2.4***	2.4	2.7	***2.6***
Region 2	**n=**	**191**	**162**	***353***	**273**	**155**	***428***	**158**	**126**	***284***
With no loss of attachment (0-3 mm)		4.1	3.7	***3.9***	3.6	3.6	***3.6***	2.5	2.3	***2.4***
With loss of attachment		0.1	0.2	***0.2***	0.3	0.1	***0.2***	0.4	0.6	***0.5***
with loss of attachment 4-5 mm		0.1	0.2	***0.2***	0.3	0.1	***0.2***	0.3	0.4	***0.4***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
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	0.1	***0.2***
Not recorded		1.8	2.1	***2.0***	2.1	2.2	***2.2***	2.8	3.1	***3.0***
Region 3	**n=**	**196**	**196**	***392***	**250**	**227**	***477***	**180**	**173**	***353***
With no loss of attachment (0-3 mm)		2.0	2.2	***2.1***	2.6	2.4	***2.5***	0.9	0.9	***0.9***
With loss of attachment		0.0	0.0	***0.0***	0.2	0.1	***0.2***	0.6	0.8	***0.7***
with loss of attachment 4-5 mm		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.3	0.3	***0.3***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.3	0.4	***0.4***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.2	***0.2***
Not recorded		4.0	3.7	***3.9***	3.2	3.6	***3.4***	4.4	4.1	***4.3***
Region 4	**n=**	**145**	**152**	***297***	**150**	**150**	***300***	**152**	**142**	***294***
With no loss of attachment (0-3 mm)		5.5	5.5	***5.5***	3.5	3.1	***3.3***	0.9	0.7	***0.8***
With loss of attachment		0.1	0.1	***0.1***	0.8	0.7	***0.8***	1.5	1.4	***1.5***
with loss of attachment 4-5 mm		0.1	0.1	***0.1***	0.7	0.7	***0.7***	1.3	1.1	***1.2***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	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***	0.0	0.0	***0.0***
Not recorded		0.4	0.4	***0.4***	1.7	2.1	***1.9***	3.6	3.9	***3.8***
Region 5	**n=**	**153**	**133**	***286***	**133**	**117**	***250***	**141**	**114**	***255***
With no loss of attachment (0-3 mm)		5.1	4.7	***4.9***	3.5	4.4	***4.0***	2.3	2.5	***2.4***
With loss of attachment		0.1	0.1	***0.1***	0.7	0.6	***0.7***	1.5	1.6	***1.6***
with loss of attachment 4-5 mm		0.1	0.1	***0.1***	0.5	0.5	***0.5***	1.2	1.4	***1.3***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.2	0.2	***0.2***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	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***	0.1	0.1	***0.1***
Not recorded		0.8	1.2	***1.0***	1.8	1.0	***1.4***	2.1	1.8	***2.0***

Loss of Attachment (LOA)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
State Rural	n=	565	568	*1133*	681	589	*1270*	561	497	*1058*
With no loss of attachment (0-3 mm)		3.8	3.8	***3.8***	3.2	2.9	***3.1***	1.6	1.4	***1.5***
With loss of attachment		0.1	0.2	***0.2***	0.6	0.5	***0.6***	1.1	1.0	***1.1***
with loss of attachment 4-5 mm		0.1	0.1	***0.1***	0.5	0.4	***0.5***	0.8	0.7	***0.8***
with loss of attachment 6-8 mm		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.2	0.2	***0.2***
with loss of attachment 9-11 mm		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.1	0.1	***0.1***
Not recorded		2.0	2.0	***2.0***	2.3	2.6	***2.5***	3.3	3.6	***3.5***
State Urban	n=	286	249	*535*	315	300	*615*	260	217	*477*
With no loss of attachment (0-3 mm)		4.3	4.5	***4.4***	3.5	3.4	***3.5***	1.7	1.8	***1.8***
With loss of attachment		0.2	0.2	***0.2***	0.6	0.8	***0.7***	1.3	1.9	***1.6***
with loss of attachment 4-5 mm		0.2	0.2	***0.2***	0.6	0.7	***0.7***	0.9	1.3	***1.1***
with loss of attachment 6-8 mm		0.1	0.0	***0.1***	0.1	0.1	***0.1***	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***	0.0	0.1	***0.1***
with loss of attachment 12 mm or more		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Excluded sextants		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Not recorded		1.5	1.3	***1.4***	1.9	1.9	***1.9***	3.0	2.2	***2.6***
State Total	n=	851	817	*1668*	996	889	*1885*	821	714	*1535*
With no loss of attachment (0-3 mm)		3.8	3.9	***3.9***	3.2	3.0	***3.1***	1.6	1.4	***1.5***
With loss of attachment		0.1	0.2	***0.2***	0.6	0.5	***0.6***	1.1	1.1	***1.1***
with loss of attachment 4-5 mm		0.1	0.1	***0.1***	0.5	0.5	***0.5***	0.8	0.8	***0.8***
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		2.0	2.0	***2.0***	2.2	2.5	***2.4***	3.2	3.4	***3.3***

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 per cent subjects with malocclusion, only those subjects with a DAI score of 26 or higher were included.

Malocclusion was not widely prevalent in the state: it appeared in 6.6 per cent subjects aged 12 years and 7.5 per cent subjects aged 15 years. The prevalence of very severe malocclusion in 12 and 15 year old subjects was low but higher than severe malocclusion.

Malocclusion appeared more prevalent in rural than in urban areas although the differences were small. There were no marked gender related differentials. There was no marked inter-regional differential.

Fig. 6.11. Percent subjects with malocclusion in Orissa

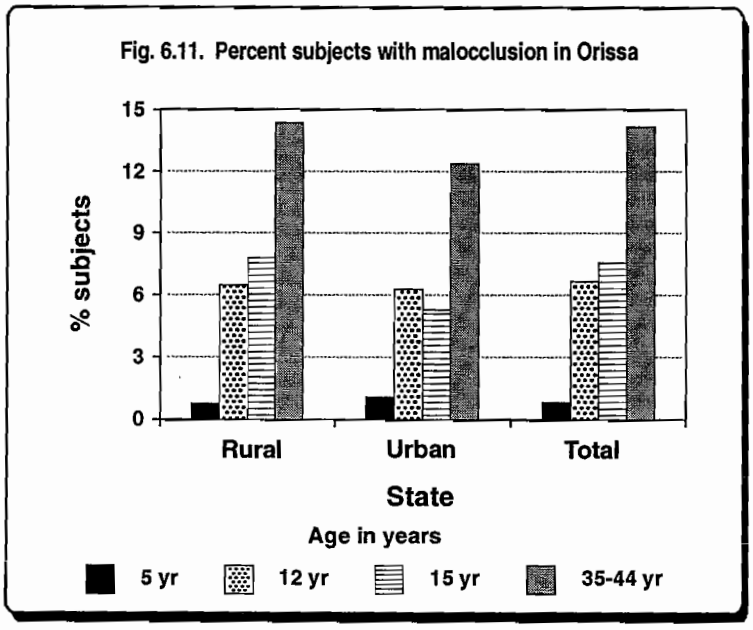


Table 6.11. Percent subjects with malocclusion by age, sex and geographical areas. **State: Orissa**

Malocclusion (DAI Score)		5 years			12 years			15 years			35-44 years		
		M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	188	150	*338*	171	173	*344*	166	174	*340*	190	240	*430*
None or minor malocclusion (<25)		99.3	100	*99.7*	81.7	81.7	*81.7*	82.3	84.2	*83.3*	81.1	78.6	*79.9*
Malocclusion present		0.7	0.0	*0.4*	18.3	18.3	*18.3*	17.7	15.8	*16.8*	18.9	21.4	*20.2*
Definite malocclusion (26 -30)		0.0	0.0	*0.0*	3.2	3.9	*3.6*	2.5	2.7	*2.6*	2.9	7.6	*5.3*
Severe malocclusion (31 - 35)		0.7	0.0	*0.4*	3.4	2.6	*3.0*	4.9	5.4	*5.2*	4.6	2.7	*3.7*
V Severe malocclusion (36 or more)		0.0	0.0	*0.0*	11.8	11.8	*11.8*	10.3	7.6	*9.0*	11.4	11.2	*11.3*
Region 2	n=	185	152	*337*	184	177	*361*	191	162	*353*	273	155	*428*
None or minor malocclusion (<25)		98.2	98.4	*98.3*	99	99.3	*99.2*	97.5	98.2	*97.9*	95.1	95.1	*95.1*
Malocclusion present		1.8	1.6	*1.7*	1.0	0.7	*0.9*	2.5	1.8	*2.2*	4.9	4.9	*4.9*
Definite malocclusion (26 -30)		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.6	1.4	*1.0*	1.7	1.5	*1.6*
Severe malocclusion (31 - 35)		0.0	0.4	*0.2*	0.3	0.0	*0.2*	1.3	0.0	*0.7*	0.4	1.1	*0.8*
V Severe malocclusion (36 or more)		1.8	1.2	*1.5*	0.7	0.7	*0.7*	0.6	0.3	*0.5*	2.8	2.3	*2.6*
Region 3	n=	193	165	*358*	186	205	*391*	196	196	*392*	250	227	*477*
None or minor malocclusion (<25)		99	100	*99.5*	97.7	97.8	*97.8*	97.8	95.8	*96.8*	80.2	84	*82.1*
Malocclusion present		1.0	0.0	*0.5*	2.3	2.2	*2.3*	2.2	4.2	*3.2*	19.8	16.0	*17.9*
Definite malocclusion (26 -30)		0.0	0.0	*0.0*	0.7	1.4	*1.1*	0.7	2.1	*1.4*	1.1	1.3	*1.2*
Severe malocclusion (31 - 35)		0.0	0.0	*0.0*	0.2	0.8	*0.5*	0.7	2.1	*1.4*	0.5	0.6	*0.6*
V Severe malocclusion (36 or more)		1.0	0.0	*0.5*	1.4	0.0	*0.7*	0.8	0.0	*0.4*	18.2	14.1	*16.2*
Region 4	n=	152	152	*304*	158	150	*308*	145	152	*297*	150	150	*300*
None or minor malocclusion (<25)		100	98.4	*99.2*	97.6	93.2	*95.4*	97.9	87.2	*92.6*	91.4	82.4	*86.9*
Malocclusion present		0.0	1.6	*0.8*	2.4	6.8	*4.6*	2.1	12.8	*7.5*	8.6	17.6	*13.1*
Definite malocclusion (26 -30)		0.0	0.0	*0.0*	1.8	4.0	*2.9*	2.1	10.8	*6.5*	6.6	9.1	*7.9*
Severe malocclusion (31 - 35)		0.0	0.0	*0.0*	0.3	1.2	*0.8*	0.0	0.8	*0.4*	0.8	4.0	*2.4*
V Severe malocclusion (36 or more)		0.0	1.6	*0.8*	0.3	1.7	*1.0*	0.0	1.2	*0.6*	1.2	4.5	*2.9*
Region 5	n=	133	133	*266*	146	136	*282*	153	133	*286*	133	117	*250*
None or minor malocclusion (<25)		100	100	*100.0*	91.8	94.1	*93.0*	94.4	93.9	*94.2*	87.7	89	*88.4*
Malocclusion present		0.0	0.0	*0.0*	8.2	5.9	*7.1*	5.6	6.1	*5.8*	12.3	11.0	*11.7*
Definite malocclusion (26 -30)		0.0	0.0	*0.0*	4.5	4.3	*4.4*	2.8	4.5	*3.7*	4.1	5.1	*4.6*
Severe malocclusion (31 - 35)		0.0	0.0	*0.0*	1.9	0.4	*1.2*	1.2	0.7	*1.0*	3.2	2.6	*2.9*
V Severe malocclusion (36 or more)		0.0	0.0	*0.0*	1.8	1.3	*1.6*	1.7	0.9	*1.3*	5	3.3	*4.2*
State Rural	n=	586	499	*1085*	570	572	*1142*	565	568	*1133*	681	589	*1270*
None or minor malocclusion (<25)		99.4	99.1	*99.3*	94.5	92.7	*93.6*	94.4	90.3	*92.4*	87	84.2	*85.6*
Malocclusion present		0.6	0.9	*0.8*	5.5	7.3	*6.4*	5.6	9.7	*7.7*	13.0	15.8	*14.4*
Definite malocclusion (26 -30)		0.0	0.0	*0.0*	1.5	2.8	*2.2*	1.6	5.5	*3.6*	3.7	5.7	*4.7*
Severe malocclusion (31 - 35)		0.2	0.0	*0.1*	0.8	1.0	*0.9*	1.4	2.0	*1.7*	1.5	2.0	*1.8*
V Severe malocclusion (36 or more)		0.4	0.9	*0.7*	3.2	3.5	*3.4*	2.6	2.2	*2.4*	7.7	8.0	*7.9*
State Urban	n=	265	253	*518*	275	269	*544*	286	249	*535*	315	300	*615*
None or minor malocclusion (<25)		98.7	99.1	*98.9*	92.8	94.9	*93.9*	95.7	93.1	*94.4*	91.9	83.4	*87.7*
Malocclusion present		1.3	0.9	*1.1*	7.2	5.1	*6.2*	4.3	6.9	*5.6*	8.1	16.6	*12.4*
Definite malocclusion (26 -30)		0.0	0.0	*0.0*	3.2	2.3	*2.8*	2.0	3.9	*3.0*	1.2	5.9	*3.6*
Severe malocclusion (31 - 35)		0.0	0.4	*0.2*	2.5	1.8	*2.2*	1.3	1.1	*1.2*	1.4	4.7	*3.1*
V Severe malocclusion (36 or more)		1.3	0.4	*0.9*	1.6	1.1	*1.4*	1.0	1.9	*1.5*	5.6	6.0	*5.8*
State Total	n=	851	752	*1603*	845	841	*1686*	851	817	*1668*	996	889	*1885*
None or minor malocclusion (<25)		99.3	99.1	*99.2*	94	92.9	*93.5*	94.5	90.6	*92.6*	87.5	84	*85.8*
Malocclusion present		0.7	0.9	*0.8*	6.0	7.1	*6.6*	5.5	9.4	*7.5*	12.5	16.0	*14.3*
Definite malocclusion (26 -30)		0.0	0.0	*0.0*	1.8	2.8	*2.3*	1.6	5.2	*3.4*	3.3	5.7	*4.5*
Severe malocclusion (31 - 35)		0.2	0.1	*0.2*	1.1	1.1	*1.1*	1.4	2	*1.7*	1.5	2.4	*2.0*
V Severe malocclusion (36 or more)		0.5	0.8	*0.7*	3.1	3.2	*3.2*	2.5	2.2	*2.4*	7.7	7.8	*7.8*

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

6.4 ORAL CANCER & ORAL MUCOSAL LESIONS

Tables 6.12 presents the numbers 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.

The prevalence of oral mucosal lesions was one per cent on average in the 5, 12 and 15 year age groups but significantly increased in 35-44 year olds (21%) and 65-74 year olds (28%). Oral cancers were reported from all age groups except the 15 year olds. While one or two cases of oral cancers were reported from each age group, there were 7 cases in the 35-44 year olds. The most prevalent condition in all age groups was ulceration followed by leukoplakia (35-44 years and 65-74 years) and abscesses.

There appeared to be a higher prevalence of oral mucosal lesions in the rural areas except in the 65-74 year age group where the urban residents had more oral mucosal lesions than their rural counterparts. There were no major differentials in the pattern of distribution of the lesions related to gender or in between regions.

The lesions were also analysed by their location in the mouth (Table 6.13). it was revealed that the highest number of lesions were on the buccal mucosa in the state. The lesions, in order of prevalence, were leukoplakia, ulcerations, lichen planus and others.

There were three instances of oral cancer located on the buccal mucosa out of a total of 6 instances. Oral cancer also occurred on the vermillion border, floor of mouth and the hard or soft palate.

Oral cancer was detected in one (0.1%) female subject, aged 65-74 yr, from the urban area. The lesion was located on the vermillion border in the mouth. Leukoplakia is the most common precancerous lesion while lichen planus is categorized as a probable precancerous lesion. Leukoplakia was detected in 3 males (0.7%) in the age group of 35-44 yr and 2 females (0.5%) in the age group of 65-74 yr (Tables 6.12 & 6.13). It was located on the sulci and buccal mucosa, and equally distributed in rural and urban area.

The other more prevalent but still very rare conditions were Ulceration and Abscess, appearing on the alveolar ridges and gingiva.

A broad analysis of the lesions by location in the oral mucosa (Table 6.12) showed that Ulceration was distributed on the buccal mucosa, vermillion border and tongue; and abscesses occurred on alveolar border/ gingiva.

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

Oral Mucosal Lesions		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	184	150	*334*	170	173	*343*	166	174	*340*	189	238	*427*	187	158	*345*
Oral mucosal lesions present		1	2	*3*	5	3	*8*	8	2	*10*	28	29	*57*	42	33	*75*
Oral Cancer		0	0	*0*	0	0	*0*	0	0	*0*	0	2	*2*	1	0	*1*
Leukoplakia		0	0	*0*	0	0	*0*	0	0	*0*	12	6	*18*	16	15	*31*
Lichen Planus		0	0	*0*	0	0	*0*	0	1	*1*	0	2	*2*	2	0	*2*
Ulceration		0	0	*0*	2	2	*4*	4	1	*5*	7	6	*13*	5	4	*9*
ANUG		0	1	*1*	2	0	*2*	1	0	*1*	6	7	*13*	4	6	*10*
Candidiasis		1	0	*1*	0	0	*0*	0	0	*0*	0	0	*0*	1	1	*2*
Abscess		0	1	*1*	1	1	*2*	0	0	*0*	0	2	*2*	1	1	*2*
Any other condition		0	0	*0*	0	0	*0*	3	1	*4*	7	9	*16*	17	11	*28*
Region 2	n=	181	148	*329*	181	174	*355*	188	157	*345*	263	149	*412*	150	125	*275*
Oral mucosal lesions present		0	0	*0*	2	1	*3*	0	2	*2*	11	2	*13*	12	8	*20*
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*	4	2	*6*	4	0	*4*
Lichen Planus		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	0	1	*1*
Ulceration		0	0	*0*	0	0	*0*	0	1	*1*	3	1	*4*	4	4	*8*
ANUG		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	1	1	*2*
Candidiasis		0	0	*0*	1	1	*2*	0	0	*0*	2	0	*2*	2	1	*3*
Abscess		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*
Any other condition		0	0	*0*	2	1	*3*	0	2	*2*	5	0	*5*	7	4	*11*
Region 3	n=	166	143	*309*	157	176	*333*	161	167	*328*	216	192	*408*	148	152	*300*
Oral mucosal lesions present		0	1	*1*	1	1	*2*	0	1	*1*	7	5	*12*	4	8	*12*
Oral Cancer		0	0	*0*	0	0	*0*	0	0	*0*	4	1	*5*	2	4	*6*
Leukoplakia		0	0	*0*	0	0	*0*	0	0	*0*	2	2	*4*	2	3	*5*
Lichen Planus		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*
Ulceration		0	0	*0*	0	1	*1*	0	0	*0*	0	3	*3*	0	0	*0*
ANUG		0	1	*1*	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	1	*1*	1	0	*1*	0	1	*1*
Any other condition		0	0	*0*	1	0	*1*	0	0	*0*	0	0	*0*	0	0	*0*
Region 4	n=	149	150	*299*	156	148	*304*	142	147	*289*	143	146	*289*	149	137	*286*
Oral mucosal lesions present		5	1	*6*	31	26	*57*	41	47	*88*	112	104	*216*	112	97	*209*
Oral Cancer		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	1	0	*1*
Leukoplakia		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	1	0	*1*
Lichen Planus		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*
Ulceration		0	0	*0*	0	0	*0*	1	1	*2*	2	0	*2*	3	1	*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		2	1	*3*	0	0	*0*	0	0	*0*	0	1	*1*	3	4	*7*
Any other condition		4	0	*4*	31	26	*57*	41	46	*87*	112	104	*216*	111	96	*207*

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 5	n=	128	128	*256*	142	134	*276*	149	128	*277*	124	115	*239*	137	110	*247*
Oral mucosal lesions present		2	2	*4*	21	20	*41*	27	25	*52*	42	32	*74*	53	38	*91*
Oral Cancer		0	0	*0*	0	1	*1*	0	1	*1*	0	0	*0*	0	0	*0*
Leukoplakia		0	0	*0*	0	0	*0*	0	1	*1*	2	2	*4*	10	0	*10*
Lichen Planus		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*
Ulceration		0	0	*0*	0	1	*1*	0	0	*0*	1	0	*1*	3	1	*4*
ANUG		0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*	0	0	*0*
Candidiasis		0	0	*0*	0	0	*0*	1	0	*1*	0	0	*0*	1	0	*1*
Abscess		0	0	*0*	0	1	*1*	0	1	*1*	1	1	*2*	1	2	*3*
Any other condition		2	2	*4*	21	17	*38*	26	23	*49*	40	30	*70*	44	35	*79*
State Rural	n=	557	477	*1034*	549	550	*1099*	539	542	*1081*	645	565	*1210*	530	474	*1004*
Oral mucosal lesions present		6	6	*12*	47	42	*89*	59	57	*106*	146	134	*280*	159	136	*295*
Oral Cancer		0	0	*0*	0	1	*1*	0	1	*1*	4	2	*6*	3	3	*6*
Leukoplakia		0	0	*0*	0	0	*0*	0	1	*1*	14	9	*23*	21	12	*33*
Lichen Planus		0	0	*0*	0	0	*0*	0	1	*1*	0	1	*1*	0	1	*1*
Ulceration		0	0	*0*	0	2	*2*	4	3	*7*	10	9	*19*	10	4	*14*
ANUG		0	2	*2*	2	0	*2*	1	0	*1*	4	6	*10*	3	6	*9*
Candidiasis		1	0	*1*	1	1	*2*	0	0	*0*	1	0	*1*	3	1	*4*
Abscess		1	2	*3*	1	0	*1*	0	2	*2*	1	4	*5*	3	7	*10*
Any other condition		4	2	*6*	44	39	*83*	55	52	*107*	121	109	*230*	133	110	*243*
State Urban	n=	251	242	*493*	257	255	*512*	267	231	*498*	290	275	*565*	241	208	*449*
Oral mucosal lesions present		2	0	*2*	13	9	*22*	17	20	*37*	54	38	*92*	64	48	*112*
Oral Cancer		0	0	*0*	0	0	*0*	0	0	*0*	0	1	*1*	1	1	*2*
Leukoplakia		0	0	*0*	0	0	*0*	0	0	*0*	6	3	*9*	12	6	*18*
Lichen Planus		0	0	*0*	0	0	*0*	0	0	*0*	0	1	*1*	2	0	*2*
Ulceration		0	0	*0*	2	2	*4*	1	0	*1*	3	1	*4*	5	6	*11*
ANUG		0	0	*0*	0	0	*0*	0	0	*0*	2	1	*3*	2	1	*3*
Candidiasis		0	0	*0*	0	0	*0*	1	0	*1*	1	0	*1*	1	1	*2*
Abscess		1	0	*1*	0	2	*2*	0	0	*0*	1	0	*1*	2	1	*3*
Any other condition		2	0	*2*	11	5	*16*	15	20	*35*	43	34	*77*	46	36	*82*
State Total	n=	808	719	*1527*	806	805	*1611*	806	773	*1579*	935	840	*1775*	771	682	*1453*
Oral mucosal lesions present		8	6	*14*	60	51	*111*	76	77	*153*	200	172	*372*	223	184	*407*
Oral Cancer		0	0	*0*	0	1	*1*	0	1	*1*	4	3	*7*	4	4	*8*
Leukoplakia		0	0	*0*	0	0	*0*	0	1	*1*	20	12	*32*	33	18	*51*
Lichen Planus		0	0	*0*	0	0	*0*	0	1	*1*	0	2	*2*	2	1	*3*
Ulceration		0	0	*0*	2	4	*6*	5	3	*8*	13	10	*23*	15	10	*25*
ANUG		0	2	*2*	2	0	*2*	1	0	*1*	6	7	*13*	5	7	*12*
Candidiasis		1	0	*1*	1	1	*2*	1	0	*1*	2	0	*2*	4	2	*6*
Abscess		2	2	*4*	1	2	*3*	0	2	*2*	2	4	*6*	5	8	*13*
Any other condition		6	2	*8*	55	44	*99*	70	72	*142*	164	143	*307*	179	146	*325*

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

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	1	0	0	0	8	3	0	0	2	2	0	0	1	1	12	6
Commissures	0	0	0	1	0	0	3	4	0	0	0	0	0	0	0	0	3	5
Lips	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2
Sulci	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
Buccal mucosa	0	0	16	13	0	1	13	8	0	2	1	0	2	1	20	9	52	34
Floor of mouth	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	3
Tongue	0	0	6	1	0	1	0	1	0	0	0	0	0	1	7	8	13	12
Hard/Soft palate	6	5	3	0	0	0	0	0	0	0	0	0	0	2	0	0	9	7
Alv ridges/ Gingiva	0	0	0	1	0	0	0	1	8	11	0	0	5	9	313	279	326	301
Rural Total	7	5	26	18	0	2	24	19	8	13	3	2	7	14	341	298	416	371
State Urban																		
Vermilion Border	0	0	0	0	0	0	0	1	0	0	1	0	0	0	11	14	12	15
Commissures	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1
Lips	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	2	0
Sulci	0	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	1
Buccal mucosa	1	0	14	8	2	1	6	5	0	0	1	1	0	0	6	1	30	16
Floor of mouth	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Tongue	0	0	3	0	0	0	1	0	0	0	0	0	0	0	1	0	5	0
Hard/Soft palate	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Alv ridges/ Gingiva	0	0	0	0	0	0	0	0	4	4	0	0	4	3	84	73	92	80
Urban Total	1	1	19	9	2	1	10	8	4	4	2	1	4	3	103	88	145	115
State Total																		
Vermilion Border	0	0	1	0	0	0	8	4	0	0	3	2	0	0	12	15	24	21
Commissures	0	0	1	1	0	0	3	5	0	0	0	0	0	0	0	0	4	6
Lips	0	0	0	1	0	0	1	1	0	0	0	0	0	0	1	0	2	2
Sulci	1	1	0	0	0	0	2	0	0	0	0	0	0	1	0	0	3	2
Buccal mucosa	1	0	30	21	2	2	19	13	0	2	2	1	2	1	26	10	82	50
Floor of mouth	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	1	0	4
Tongue	0	0	9	1	0	1	1	1	0	0	0	0	0	1	8	8	18	12
Hard/Soft palate	6	5	4	1	0	0	0	0	0	0	0	0	0	2	0	0	10	8
Alv ridges/ Gingiva	0	0	0	1	0	0	0	1	12	15	0	0	9	12	397	352	418	381
State Total	8	6	45	27	2	3	34	27	12	17	5	3	11	17	444	386	561	486

6.5 DENTAL FLUOROSIS STATUS

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

Fluorosis was not widely prevalent in the state. In 5 year old children, it appeared in 2.8 per cent of the subjects examined. The corresponding prevalence percentages were 6.1 per cent (12 years); 4.4 per cent (15 years); 5.9 per cent (35-44 years); and 4.9 per cent (65-74 years). The level of severity (Dean's Index) which was most prevalent in the state across age groups was 'very mild and mild'. An almost equal proportion of subjects in the state had 'questionable' fluorosis. A small percentage of the population had 'moderate' fluorosis. There was only a negligible occurrence of the 'severe' form.

Fluorosis was marginally higher in rural residents compared with their rural counterparts. There were wide inter-regional differences and Region 3 virtually reported no fluorosis. Male and female differentials were noted in between age groups but a clear gender based pattern did not emerge.

Fig. 6.14. Percent subjects with fluorosis in Orissa

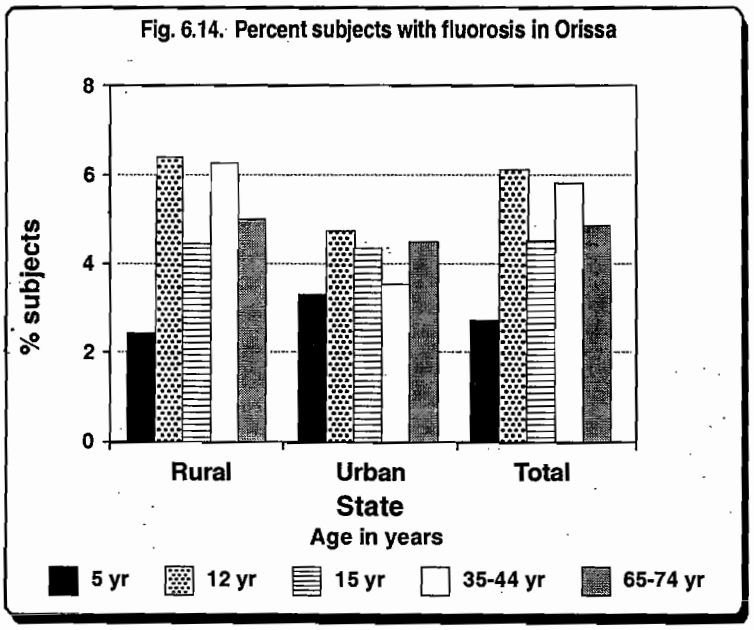


Table 6.14. Percent distribution of subjects with severity of dental fluorosis by age, sex and geographical area. State: Orissa

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=	179	145	*324*	169	168	*337*	161	173	*334*	186	233	*419*	175	148	*323*
With Fluorosis		11.6	7.6	***9.6***	21.1	15.4	***18.3***	14.3	13.0	***13.7***	17.4	16.9	***17.2***	18.8	6.1	***12.5***
Questionable		4.3	3.3	***3.8***	8.2	8.9	***8.6***	4.4	6.0	***5.2***	8.4	6.5	***7.5***	6.1	2.6	***4.4***
V Mild & Mild		7.3	4.0	***5.7***	11.4	6.5	***9.0***	8.9	6.9	***7.9***	6.4	8.4	***7.4***	11.6	3.0	***7.3***
Moderate		0.0	0.2	***0.1***	0.8	0.0	***0.4***	0.8	0.0	***0.4***	0.9	2.0	***1.5***	0.2	0.5	***0.4***
Severe		0.0	0.0	***0.0***	0.8	0.0	***0.4***	0.2	0.0	***0.1***	1.7	0.0	***0.9***	1.0	0.0	***0.5***
Region 2	n=	146	129	*275*	180	168	*348*	180	152	*332*	255	150	*405*	132	113	*245*
With Fluorosis		1.1	2.3	***1.7***	1.7	4.5	***3.1***	3.7	4.1	***3.9***	3.5	5.1	***4.3***	0.4	3.5	***2.0***
Questionable		1.1	2.3	***1.7***	1.0	3.1	***2.1***	1.3	3.4	***2.4***	2.3	1.9	***2.1***	0.0	1.0	***0.5***
V Mild & Mild		0.0	0.0	***0.0***	0.7	1.4	***1.1***	2.3	0.8	***1.6***	1.1	3.2	***2.2***	0.4	2.5	***1.5***
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 3	n=	134	117	*251*	155	175	*330*	156	164	*320*	209	188	*397*	131	134	*265*
With Fluorosis		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Questionable		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
V Mild & Mild		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
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 4	n=	136	136	*272*	154	146	*300*	141	148	*289*	105	130	*235*	74	70	*144*
With Fluorosis		0.9	0.0	***0.5***	2.0	7.0	***4.5***	2.1	2.0	***2.1***	2.5	2.9	***2.7***	3.7	4.1	***3.9***
Questionable		0.0	0.0	***0.0***	2.0	6.1	***4.1***	2.1	1.2	***1.7***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
V Mild & Mild		0.9	0.0	***0.5***	0.0	0.8	***0.4***	0.0	0.8	***0.4***	2.5	2.9	***2.7***	3.7	2.0	***2.9***
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	2.0	***1.0***
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=	65	67	*132*	140	126	*266*	147	125	*272*	121	111	*232*	126	98	*224*
With Fluorosis		2.1	0.0	*1.1*	0.0	3.3	*1.7*	0.0	1.0	*0.5*	1.0	0.9	*1.0*	2.0	1.3	*1.7*
Questionable		2.1	0.0	***1.1***	0.0	3.3	***1.7***	0.0	1.0	***0.5***	1.0	0.0	***0.5***	2.0	1.3	***1.7***
V Mild & Mild		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.9	***0.5***	0.0	0.0	***0.0***
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=	459	394	*853*	544	533	*1077*	527	531	*1058*	593	541	*1134*	429	376	*805*
With Fluorosis		3.5	1.6	***2.6***	5.7	6.8	***6.3***	4.2	4.5	***4.4***	5.7	6.7	***6.2***	6.8	3.3	***5.1***
Questionable		1.3	0.7	***1.0***	2.6	4.8	***3.7***	1.6	2.3	***2.0***	2.8	2.1	***2.5***	2.0	0.9	***1.5***
V Mild & Mild		2.2	0.9	***1.6***	2.7	1.9	***2.3***	2.4	2.2	***2.3***	2.4	4.0	***3.2***	4.5	1.8	***3.2***
Moderate		0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.2	0.0	***0.1***	0.2	0.6	***0.4***	0.0	0.5	***0.3***
Severe		0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.0	0.0	***0.0***	0.4	0.0	***0.2***	0.3	0.0	***0.2***
State Urban	n=	201	200	*401*	254	250	*504*	258	231	*489*	283	271	*554*	209	187	*396*
With Fluorosis		2.6	4.3	***3.5***	3.2	6.2	***4.7***	4.9	3.6	***4.3***	2.3	5.1	***3.7***	4.7	3.9	***4.3***
Questionable		1.6	3.6	***2.6***	2.1	4.7	***3.4***	3.3	3.0	***3.2***	0.5	2.1	***1.3***	1.5	1.7	***1.6***
V Mild & Mild		1.1	0.3	***0.7***	1.1	1.5	***1.3***	1.3	0.6	***1.0***	1.2	2.4	***1.8***	2.4	1.4	***1.9***
Moderate		0.0	0.3	***0.2***	0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.6	***0.5***	0.4	0.8	***0.6***
Severe		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.0	***0.2***	0.3	0.0	***0.2***	0.4	0.0	***0.2***
State Total	n=	660	594	*1254*	798	783	*1581*	785	762	*1547*	876	812	*1688*	638	563	*1201*
With Fluorosis		3.5	2.0	***2.8***	5.5	6.7	***6.1***	4.3	4.4	***4.4***	5.2	6.5	***5.9***	6.5	3.3	***4.9***
Questionable		1.4	1.1	***1.3***	2.6	4.8	***3.7***	1.8	2.4	***2.1***	2.5	2.2	***2.4***	2.0	1.0	***1.5***
V Mild & Mild		2.1	0.9	***1.5***	2.5	1.9	***2.2***	2.2	2.0	***2.1***	2.2	3.7	***3.0***	4.3	1.7	***3.0***
Moderate		0.0	0.0	***0.0***	0.2	0.0	***0.0***	0.2	0.0	***0.0***	0.2	0.6	***0.4***	0.0	0.5	***0.3***
Severe		0.0	0.0	***0.0***	0.2	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.0	***0.0***	0.3	0.0	***0.0***

6.6 OTHER LESIONS

6.6.1 Extra oral lesions

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

Extra oral lesions were reported in all age groups although the prevalence was very low. While subjects in the age group of 35-44 years had the lowest prevalence of these lesions (2 per cent), the highest prevalence of the lesions appeared in of subjects in the age group of 65-74 years. (4.3 per cent). The lesions recorded were ulceration, sores, erosions and fissures; enlarged lymph nodes of the head and neck; cancrum oris; and abnormalities of upper and lower lips.

The prevalence was higher in rural than in urban areas. More males than females were affected except in the age group of 12 years where the opposite was true. There were wide inter-regional variations with virtually no lesions detected in Region 3.

Fig. 6.15. Percent subjects with extra oral lesions in Orissa

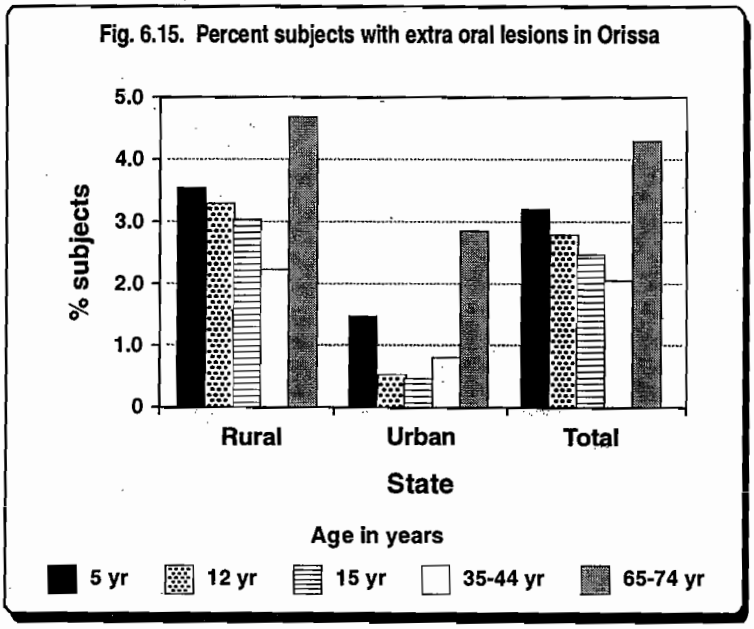


Table 6.15. Percent distribution of subjects with extra oral lesions by age, sex and geographical area. **State: Orissa**

Extra Oral Lesions		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	186	150	336	170	173	343	166	173	339	189	239	428	188	157	345
With extra oral lesions		1.4	1.8	1.6	0.9	2.4	1.7	2.4	0.7	1.6	1.6	0.0	0.8	1.6	2.3	2.0
Ulceration,sores,erosions,fissures		1.4	1.8	1.6	0.9	0.9	0.9	2.4	0.0	1.2	1.6	0.0	0.8	0.0	0.8	0.4
head, neck, limbs		1.4	0.9	1.2	0.0	0.2	0.1	0.8	0.0	0.4	0.7	0.0	0.4	0.0	0.8	0.4
nose, cheeks, chin		0.0	0.0	0.0	0.2	0.7	0.5	0.8	0.0	0.4	0.2	0.0	0.1	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	0.9	0.5	0.8	0.0	0.4	0.8	0.0	0.4	0.7	0.0	0.4	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	0.9	0.2	0.6
Abnormalities of upper & lower lips		0.0	0.0	0.0	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.8
Enlarged lymph nodes(head & neck)		0.0	0.0	0.0	0.0	0.7	0.4	0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Region 2	n=	181	148	329	182	174	356	186	157	343	260	151	411	151	125	276
With extra oral lesions		0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.7	2.5	2.7	3.6	3.2
Ulceration,sores,erosions,fissures		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
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	0.8	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	0.0	0.4	0.2	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	1.4	0.8	1.1	0.8	0.0	0.4
Abnormalities of upper & lower lips		0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.9	0.5
Enlarged lymph nodes(head & neck)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.8	0.6	0.8	2.7	1.8
Region 3	n=	166	143	309	157	176	333	160	166	326	219	190	409	149	153	302
With extra oral lesions		0.8	0.0	0.4	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.7	0.4	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	0.7	0.4	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	0.7	0.4	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		0.8	0.0	0.4	0.0	0.8	0.4	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=	149	149	298	155	149	304	143	148	291	142	146	288	150	137	287
With extra oral lesions		8.7	4.8	6.8	5.7	8.3	7.0	7.8	4.6	6.2	4.3	3.4	3.9	10.2	8.0	9.1
Ulceration,sores,erosions,fissures		6.7	4.0	5.4	4.9	7.5	6.2	6.9	4.6	5.8	4.3	3.4	3.9	9.0	4.9	7.0
head, neck, limbs		0.0	0.7	0.4	0.0	1.7	0.9	0.0	0.0	0.0	0.9	0.0	0.5	0.0	0.0	0.0
nose, cheeks, chin		0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.9	0.0	0.0	0.0	0.0	0.9	0.5
commissures		6.7	3.3	5.0	4.9	5.8	5.4	5.2	4.6	4.9	3.5	3.4	3.5	9.0	4.0	6.5
vermilion border		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cancrum oris		1.7	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.4
Abnormalities of upper & lower lips		0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Enlarged lymph nodes(head & neck)		0.3	0.8	0.6	0.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.7	1.8

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 5	n=	128	128	256	142	133	275	149	131	280	123	114	237	137	109	246
With extra oral lesions		5.5	4.2	**4.9**	0.3	1.6	**1.0**	0.0	2.8	**1.4**	1.8	1.1	**1.5**	2.1	2.5	**2.3**
Ulceration,sores,erosions,fissures		4.1	3.8	**4.0**	0.0	0.0	**0.0**	0.0	1.9	**1.0**	1.4	0.0	**0.7**	1.8	0.9	**1.4**
head, neck, limbs		0.0	1.9	**1.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.4	0.0	**0.2**	0.9	0.5	**0.7**
nose, cheeks, chin		2.0	1.0	**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**
commissures		2.0	1.0	**1.5**	0.0	0.0	**0.0**	0.0	0.9	**0.5**	1.0	0.0	**0.5**	0.9	0.5	**0.7**
vermilion border		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.9	**0.5**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Cancrum oris		1.0	0.0	**0.5**	0.0	1.3	**0.7**	0.0	0.9	**0.5**	0.4	0.0	**0.2**	0.3	0.0	**0.2**
Abnormalities of upper & lower lips		0.0	0.4	**0.2**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	1.1	**0.6**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		0.4	0.0	**0.2**	0.3	0.0	**0.2**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
State Rural	n=	558	477	1035	549	551	1100	539	542	1081	643	563	1206	535	473	1008
With extra oral lesions		4.2	2.9	**3.6**	2.5	4.1	**3.3**	3.7	2.2	**3.0**	2.4	2.0	**2.2**	5.1	4.2	**4.7**
Ulceration,sores,erosions,fissures		3.3	2.3	**2.8**	2.2	3.2	**2.7**	3.3	1.9	**2.6**	1.9	1.6	**1.8**	3.9	2.1	**3.0**
head, neck, limbs		0.4	0.4	**0.4**	0.0	0.7	**0.4**	0.2	0.0	**0.1**	0.5	0.2	**0.4**	0.1	0.2	**0.2**
nose, cheeks, chin		0.2	0.1	**0.2**	0.0	0.2	**0.1**	0.9	0.0	**0.5**	0.0	0.1	**0.1**	0.0	0.4	**0.2**
commissures		2.8	1.6	**2.2**	2.0	2.3	**2.2**	2.1	1.8	**2.0**	1.3	1.3	**1.3**	3.8	1.5	**2.7**
vermilion border		0.0	0.2	**0.1**	0.2	0.0	**0.1**	0.2	0.1	**0.2**	0.2	0.0	**0.1**	0.0	0.0	**0.0**
Cancrum oris		0.9	0.0	**0.5**	0.0	0.3	**0.2**	0.0	0.1	**0.1**	0.4	0.1	**0.3**	0.3	0.0	**0.2**
Abnormalities of upper & lower lips		0.0	0.2	**0.1**	0.0	0.5	**0.3**	0.0	0.0	**0.0**	0.1	0.1	**0.1**	0.2	0.4	**0.3**
Enlarged lymph nodes(head & neck)		0.0	0.4	**0.2**	0.3	0.2	**0.3**	0.0	0.2	**0.1**	0.0	0.1	**0.1**	0.5	1.6	**1.1**
State Urban	n=	252	241	493	257	254	511	265	233	498	290	277	567	240	208	448
With extra oral lesions		1.0	1.9	**1.5**	0.5	0.7	**0.6**	0.0	0.9	**0.5**	1.4	0.4	**0.9**	1.8	3.9	**2.9**
Ulceration,sores,erosions,fissures		0.0	1.7	**0.9**	0.3	0.3	**0.3**	0.0	0.9	**0.5**	0.5	0.4	**0.5**	0.0	1.5	**0.8**
head, neck, limbs		0.0	1.7	**0.9**	0.0	0.3	**0.2**	0.0	0.0	**0.0**	0.2	0.0	**0.1**	0.0	0.3	**0.2**
nose, cheeks, chin		0.0	0.0	**0.0**	0.3	0.0	**0.2**	0.0	0.0	**0.0**	0.3	0.0	**0.2**	0.0	0.0	**0.0**
commissures		0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.9	**0.5**	0.0	0.4	**0.2**	0.0	1.3	**0.7**
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	0.2	**0.1**	0.0	0.0	**0.0**	0.2	0.0	**0.1**	1.4	1.4	**1.4**
Abnormalities of upper & lower lips		0.0	0.2	**0.1**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**	0.0	0.0	**0.0**
Enlarged lymph nodes(head & neck)		1.0	0.0	**0.5**	0.2	0.0	**0.1**	0.0	0.0	**0.0**	0.8	0.0	**0.4**	0.0	0.0	**0.0**
State Total	n=	810	718	1528	806	805	1611	804	775	1579	933	840	1773	775	681	1456
With extra oral lesions		3.7	2.7	**3.2**	2.1	3.6	**2.9**	3.0	1.9	**2.5**	2.2	1.7	**2.0**	4.5	4.0	**4.3**
Ulceration,sores,erosions,fissures		2.8	2.2	**2.5**	1.8	2.7	**2.3**	2.7	1.7	**2.2**	1.6	1.4	**1.5**	3.2	2.0	**2.6**
head, neck, limbs		0.3	0.6	**0.5**	0.0	0.6	**0.3**	0.2	0.0	**0.1**	0.4	0.1	**0.3**	0.1	0.2	**0.2**
nose, cheeks, chin		0.1	0.1	**0.1**	0.0	0.2	**0.1**	0.7	0.0	**0.4**	0.0	0.1	**0.1**	0.0	0.3	**0.2**
commissures		2.3	1.3	**1.8**	1.6	1.9	**1.8**	1.7	1.6	**1.7**	1.0	1.1	**1.1**	3.2	1.4	**2.3**
vermilion border		0.0	0.2	**0.1**	0.2	0.0	**0.1**	0.2	0.1	**0.2**	0.1	0.0	**0.1**	0.0	0.0	**0.0**
Cancrum oris		0.8	0.0	**0.4**	0.0	0.3	**0.2**	0.0	0.1	**0.1**	0.3	0.1	**0.2**	0.5	0.2	**0.4**
Abnormalities of upper & lower lips		0.0	0.2	**0.1**	0.0	0.4	**0.2**	0.0	0.0	**0.0**	0.1	0.1	**0.1**	0.2	0.3	**0.3**
Enlarged lymph nodes(head & neck)		0.2	0.3	**0.3**	0.3	0.2	**0.3**	0.0	0.2	**0.1**	0.1	0.1	**0.1**	0.4	1.3	**0.9**

6.6.2 T M joint symptoms and signs

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

Overall, TM Joint symptoms and signs did not appear to be a major public health problem in the state as the prevalence was very low. Symptoms and signs were not reported in 5 year old subjects. The prevalence of TM Joint symptoms and signs was lowest in the age group of 12 years and highest in the age group 35-44 years. Signs present included clicking, tenderness and reduced jaw mobility in that order.

The prevalence of signs and symptoms was similar in rural and urban areas and in between regions. There were no marked differentials in the pattern of distribution of signs and symptoms. There were no gender related differentials.

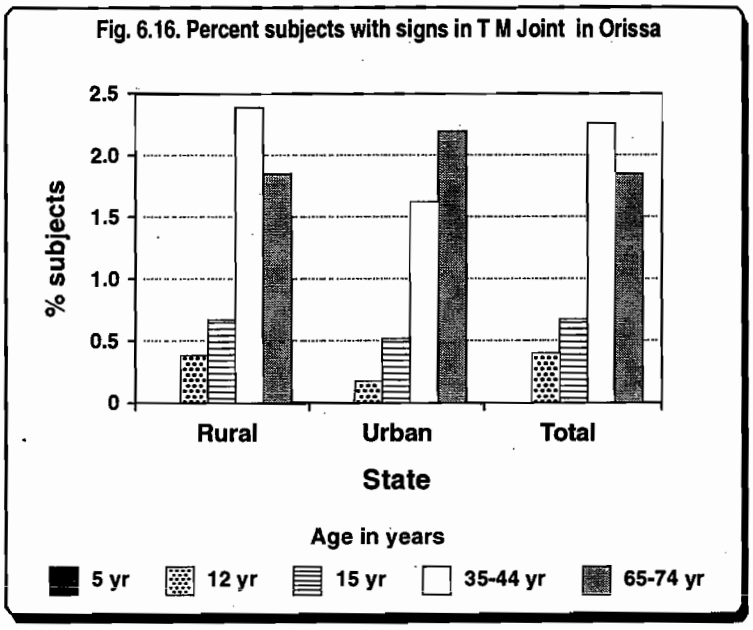


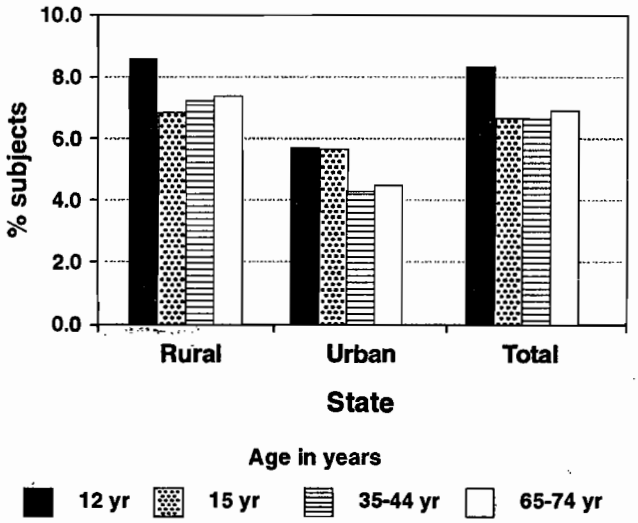
Table 6.16. Percent subjects with symptoms and signs in the tempromandibular joints by age, sex and geographical area **State: Orissa**

T M Joints Assessment		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	185	149	334	170	172	342	166	172	338	188	239	427	184	157	341
Symptoms present		0.0	0.0	0.0	0.9	0.0	0.5	1.6	1.5	1.6	3.1	3.1	3.1	1.1	0.4	0.8
Signs present		0.0	0.0	0.0	2.5	0.7	1.6	2.4	2.9	2.7	5.9	5.3	5.6	5.1	4.4	4.8
Clicking		0.0	0.0	0.0	2.5	0.7	1.6	2.4	2.9	2.7	5.9	5.3	5.6	3.6	4.2	3.9
Tenderness		0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0	2.2	0.0	1.1
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	0.7	0.2	0.5
Region 2	n=	181	148	329	182	174	356	185	158	343	261	151	412	150	125	275
Symptoms present		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	2.9	2.7	2.8	2.7	3.6	3.2
Signs present		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	2.9	2.7	2.8	2.7	3.6	3.2
Clicking		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	2.9	2.7	2.8	2.7	3.6	3.2
Tenderness		0.0	0.0	0,0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduced jaw mobility		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Region 3	n=	166	143	309	157	176	333	159	166	325	218	188	406	149	153	302
Symptoms present		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Signs present		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Clicking		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tenderness		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Reduced jaw mobility		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Region 4	n=	149	149	298	154	146	300	143	147	290	141	146	287	149	137	286
Symptoms present		0.0	0.0	0.0	0.0	0.9	0.5	0.0	0.0	0.0	0.0	0.3	0.2	0.0	0.0	0.0
Signs present		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.2	1.1	0.8	0.0	0.4
Clicking		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.2	1.1	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	0.3	0.2	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	0.8	0.0	0.4
Region 5	n=	128	128	256	142	134	276	149	129	278	123	114	237	137	107	244
Symptoms present		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	1.2	0.6
Signs present		0.0	0.0	0.0	0.0	0.9	0.5	0.0	0.0	0.0	2.0	1.1	1.6	0.0	3.8	1.9
Clicking		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	1.1	1.6	0.0	3.3	1.7
Tenderness		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	1.6	0.8
Reduced jaw mobility		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	0.0	0.0
State Rural	n=	557	476	###	549	548	1097	538	541	1079	640	562	1202	531	473	1004
Symptoms present		0.0	0.0	0.0	0.2	0.4	0.3	0.4	0.4	0.4	1.4	1.3	1.4	0.6	0.8	0.7
Signs present		0.0	0.0	0.0	0.5	0.3	0.4	0.6	0.7	0.7	2.3	2.4	2.4	1.9	1.7	1.8
Clicking		0.0	0.0	0.0	0.5	0.2	0.4	0.6	0.7	0.7	2.3	2.4	2.4	1.2	1.7	1.5
Tenderness		0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.6	0.1	0.4
Reduced jaw mobility		0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3
State Urban	n=	252	241	493	256	254	510	264	231	495	291	276	567	238	206	444
Symptoms present		0.0	0.0	0.0	0.3	0.0	0.2	0.4	0.5	0.5	0.7	1.8	1.3	1.1	0.7	0.9
Signs present		0.0	0.0	0.0	0.3	0.0	0.2	0.4	0.5	0.5	1.4	1.8	1.6	1.7	2.6	2.2
Clicking		0.0	0.0	0.0	0.3	0.0	0.2	0.4	0.5	0.5	1.4	1.8	1.6	1.7	2.0	1.9
Tenderness		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.3	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	0.0	0.0	0.0	0.4	0.2
State Total	n=	809	717	###	805	802	1607	802	772	1574	931	838	1769	769	679	1448
Symptoms present		0.0	0.0	0.0	0.2	0.4	0.3	0.4	0.4	0.4	1.3	1.4	1.4	0.7	0.7	0.7
Signs present		0.0	0.0	0.0	0.5	0.2	0.4	0.6	0.7	0.7	2.2	2.3	2.3	1.9	1.7	1.8
Clicking		0.0	0.0	0.0	0.5	0.2	0.4	0.6	0.7	0.7	2.2	2.3	2.3	1.2	1.7	1.5
Tenderness		0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.0	0.1	0.0	0.1	0.1	0.5	0.1	0.3
Reduced jaw mobility		0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.3

6.6.3 Enamel defects (opacities, hypoplasia)

Table 6.17 presents the per cent 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.

Fig. 6.17. Percent subjects with enamel defects in Orissa



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

Overall, there was a relatively low but evenly distributed prevalence of enamel defects in the state across age groups from 12 to 65-74 years. In all age groups, the most prevalent type of enamel defect was demarcated opacity, followed by diffuse opacity and enamel hypoplasia.

Enamel defects were higher in prevalence in rural residents compared with urban residents. More females were affected except in 65-74 years where more males were affected.

While prevalent in all age groups surveyed, the mean number of teeth with enamel defects was less than one tooth across age groups.

There were no major gender, rural and urban or regional differentials in the type and pattern of distribution of mean number of teeth with enamel defects.

Fig. 6.18. Mean number of teeth with enamel defects in Orissa

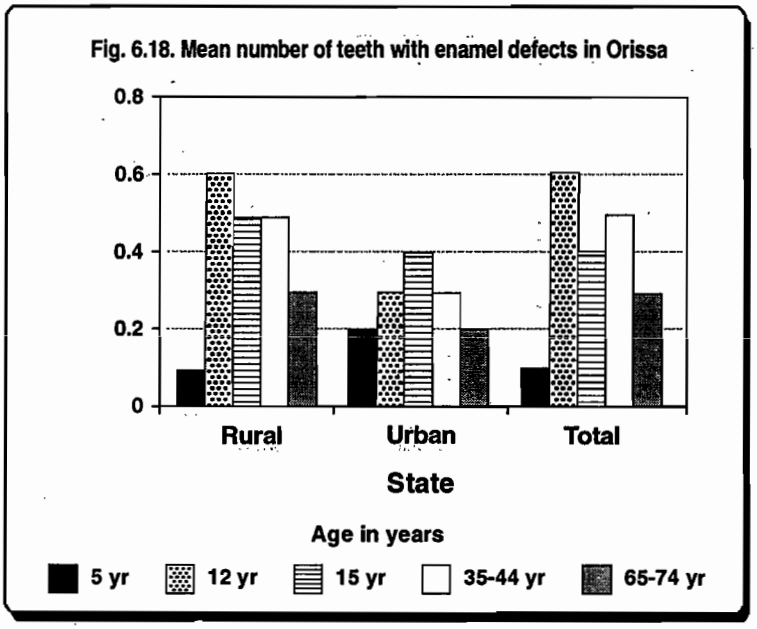


Table 6.17. Percent distribution of subjects with enamel defects (opacities/ hypoplasia) by age, sex & geographical area. State: Orissa

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=	161	166	327	164	173	337	189	237	426	178	151	329
enamel defects		25.9	27.7	26.8	21.1	21.0	21.1	17.8	21.9	19.9	23.0	13.1	18.1
demarcated opacity		11.8	18.8	15.3	14.6	12.9	13.8	11.9	14.2	13.1	11.9	6.4	9.2
diffuse opacity		6.8	5.8	6.3	2.3	3.3	2.8	5.3	6.2	5.8	4.1	2.8	3.5
hypoplasia		7.2	3.9	5.6	3.5	3.3	3.4	0.0	1.3	0.7	1.1	0.9	1.0
other defects		0.0	0.2	0.1	0.0	0.0	0.0	0.9	0.3	0.6	6.1	2.8	4.5
combinations of opacities and hypoplasia		2.6	1.0	1.8	1.8	1.6	1.7	1.1	3.4	2.3	2.4	0.9	1.7
all three conditions		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.4	1.1	0.8
Region 2	n=	179	174	353	186	158	344	264	152	416	133	111	244
enamel defects		7.0	3.7	5.4	4.5	8.7	6.6	5.8	3.4	4.6	5.8	0.5	3.2
demarcated opacity		5.7	3.0	4.4	2.8	6.5	4.7	4.4	2.7	3.6	4.0	0.5	2.3
diffuse opacity		0.7	0.3	0.5	1.0	2.9	2.0	0.9	0.8	0.9	0.9	0.0	0.5
hypoplasia		0.0	0.3	0.2	0.7	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
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
combinations of opacities and hypoplasia		0.7	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.2	0.9	0.0	0.5
all three conditions		0.0	0.7	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Region 3	n=	157	177	334	162	168	330	216	191	407	127	128	255
enamel defects		0.0	0.8	0.4	0.8	0.8	0.8	1.2	0.0	0.6	0.0	2.1	1.1
demarcated opacity		0.0	0.0	0.0	0.0	0.8	0.4	0.0	0.0	0.0	0.0	2.1	1.1
diffuse opacity		0.0	0.8	0.4	0.0	0.0	0.0	0.6	0.0	0.3	0.0	0.0	0.0
hypoplasia		0.0	0.0	0.0	0.8	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
other defects		0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.3	0.0	0.0	0.0
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
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=	154	147	301	143	149	292	100	119	219	67	66	133
enamel defects		2.6	6.1	4.4	3.0	1.5	2.3	1.9	1.1	1.5	0.0	3.1	1.6
demarcated opacity		0.8	3.2	2.0	1.2	0.3	0.8	0.5	0.0	0.3	0.0	0.0	0.0
diffuse opacity		1.1	2.9	2.0	0.9	1.2	1.1	1.3	1.1	1.2	0.0	0.0	0.0
hypoplasia		0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
other defects		0.3	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
combinations of opacities and hypoplasia		0.8	0.0	0.4	0.9	0.0	0.5	0.0	0.0	0.0	0.0	3.1	1.6
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=	140	133	273	149	129	278	121	111	232	130	100	230
enamel defects		0.0	3.5	1.8	2.6	1.3	2.0	0.4	1.6	1.0	1.3	4.3	2.8
demarcated opacity		0.0	2.6	1.3	2.6	1.3	2.0	0.4	1.6	1.0	1.0	4.3	2.7
diffuse opacity		0.0	0.9	0.5	0.9	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
hypoplasia		0.0	0.9	0.5	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0
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
combinations of opacities and hypoplasia		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.2
all three conditions		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Enamel opacities/Hypoplasia		12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T
State Rural	n=	540	544	###	539	544	1083	601	538	###	423	372	795
enamel defects		7.7	9.3	8.5	6.6	7.1	6.9	6.5	7.7	7.1	8.7	5.6	7.2
demarcated opacity		3.9	5.8	4.9	4.1	4.5	4.3	4.2	4.7	4.5	4.9	3.0	4.0
diffuse opacity		2.0	2.6	2.3	1.0	1.6	1.3	2.0	2.4	2.2	1.5	0.9	1.2
hypoplasia		1.6	1.0	1.3	1.1	0.7	0.9	0.0	0.4	0.2	0.3	0.3	0.3
other defects		0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.2	2.1	0.9	1.5
combinations of opacities and hypoplasia		1.0	0.2	0.6	0.7	0.4	0.6	0.3	1.1	0.7	1.0	0.8	0.9
all three conditions		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2
State Urban	n=	251	253	504	265	233	498	289	272	561	212	184	396
enamel defects		5.4	6.3	5.9	5.6	5.2	5.4	3.4	5.0	4.2	5.0	4.2	4.6
demarcated opacity		2.1	4.9	3.5	4.0	3.0	3.5	2.3	4.1	3.2	2.1	1.8	2.0
diffuse opacity		1.4	1.9	1.7	1.3	1.5	1.4	0.3	1.2	0.8	0.8	0.4	0.6
hypoplasia		0.8	0.4	0.6	0.3	0.6	0.5	0.0	0.5	0.3	0.8	0.0	0.4
other defects		0.8	0.3	0.6	0.0	0.0	0.0	0.3	0.6	0.5	0.4	0.4	0.4
combinations of opacities and hypoplasia		0.3	0.3	0.3	0.3	0.3	0.3	0.5	0.0	0.3	0.7	1.2	1.0
all three conditions		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.2	0.8	0.4	0.6
State Total	n=	791	797	###	804	777	1581	890	810	###	635	556	1191
enamel defects		7.5	9.1	8.3	6.6	7.0	6.8	6.1	7.5	6.8	8.2	5.5	6.9
demarcated opacity		3.7	5.9	4.8	4.2	4.4	4.3	3.9	4.8	4.4	4.5	2.9	3.7
diffuse opacity		1.9	2.5	2.2	1.0	1.6	1.3	1.8	2.2	2.0	1.4	0.8	1.1
hypoplasia		1.6	1.0	1.3	1.0	0.7	0.9	0.0	0.4	0.2	0.3	0.3	0.3
other defects		0.1	0.0	0.1	0.0	0.0	0.0	0.3	0.1	0.2	1.9	0.8	1.4
combinations of opacities and hypoplasia		0.9	0.2	0.6	0.6	0.4	0.5	0.3	1.0	0.7	0.9	0.9	0.9
all three conditions		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3	0.2

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

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=	188	150	338	171	173	344	166	174	340	190	240	430	190	159	349
Mean no. of teeth with enamel defects		0.4	0.3	0.4	1.7	2.0	1.9	1.6	1.3	1.5	1.3	1.7	1.5	1.6	0.9	1.3
demarcated opacity		0.2	0.1	0.2	0.8	1.2	1.0	1.0	0.9	1.0	0.8	1.0	0.9	0.7	0.4	0.6
diffuse opacity		0.1	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.2	0.3	0.4	0.4	0.2	0.1	0.2
hypoplasia		0.0	0.0	0.0	0.5	0.3	0.4	0.3	0.2	0.3	0.0	0.1	0.1	0.0	0.0	0.0
other defects		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.5	0.2	0.4
combinations of opacities and hypoplasia		0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1
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=	185	152	337	184	177	361	191	162	353	273	155	428	158	126	284
Mean no. of teeth with enamel defects		0.1	0.1	0.1	0.6	0.3	0.5	0.4	0.8	0.6	0.5	0.3	0.4	0.4	0.0	0.2
demarcated opacity		0.1	0.1	0.1	0.5	0.2	0.4	0.3	0.6	0.5	0.4	0.3	0.4	0.3	0.0	0.2
diffuse opacity		0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1
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
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
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
all three conditions		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
Region 3	n=	193	165	358	186	205	391	196	196	392	250	227	477	180	173	353
Mean no. of teeth with enamel defects		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
demarcated opacity		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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
hypoplasia		0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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
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
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=	152	152	304	158	150	308	145	152	297	150	150	300	152	142	294
Mean no. of teeth with enamel defects		0.0	0.0	0.0	0.1	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.1	0.1
demarcated opacity		0.0	0.0	0.0	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
diffuse opacity		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
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
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
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	0.1	0.1
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=	133	133	266	146	136	282	153	133	286	133	117	250	141	114	255
Mean no. of teeth with enamel defects		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2
demarcated opacity		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.2	0.2
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
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
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
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
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
State Rural	n=	586	499	*1085*	570	572	*1142*	565	568	*1133*	681	589	*1270*	561	497	*1058*
Mean no. of teeth with enamel defects		0.1	0.1	***0.1***	0.5	0.6	***0.6***	0.4	0.5	***0.5***	0.4	0.5	***0.5***	0.4	0.2	***0.3***
demarcated opacity		0.1	0.0	***0.1***	0.3	0.4	***0.4***	0.3	0.3	***0.3***	0.3	0.3	***0.3***	0.2	0.1	***0.2***
diffuse opacity		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.1	0.1	***0.1***	0.1	0.1	***0.1***	0.1	0.0	***0.1***
hypoplasia		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***
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***	0.1	0.1	***0.1***
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	0.1	***0.1***	0.0	0.0	***0.0***
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=	265	253	*518*	275	269	*544*	286	249	*535*	315	300	*615*	260	217	*477*
Mean no. of teeth with enamel defects		0.2	0.2	***0.2***	0.3	0.3	***0.3***	0.4	0.3	***0.4***	0.2	0.4	***0.3***	0.2	0.2	***0.2***
demarcated opacity		0.1	0.2	***0.2***	0.2	0.2	***0.2***	0.3	0.2	***0.3***	0.1	0.3	***0.2***	0.1	0.1	***0.1***
diffuse opacity		0.0	0.0	***0.0***	0.0	0.1	***0.1***	0.1	0.1	***0.1***	0.0	0.1	***0.1***	0.0	0.0	***0.0***
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***
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***
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	0.1	***0.1***
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=	851	752	*1603*	845	841	*1686*	851	817	*1668*	996	889	*1885*	821	714	*1535*
Mean no. of teeth with enamel defects		0.1	0.1	***0.1***	0.5	0.6	***0.6***	0.4	0.4	***0.4***	0.4	0.5	***0.5***	0.4	0.2	***0.3***
demarcated opacity		0.1	0.0	***0.1***	0.3	0.4	***0.4***	0.3	0.3	***0.3***	0.3	0.3	***0.3***	0.2	0.1	***0.2***
diffuse opacity		0.0	0.0	***0.0***	0.1	0.1	***0.1***	0.1	0.1	***0.1***	0.1	0.1	***0.1***	0.1	0.0	***0.1***
hypoplasia		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***
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***	0.1	0.1	***0.1***
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	0.1	***0.1***	0.0	0.0	***0.0***
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 Prosthetic status

The prosthetic status was recorded for subjects 15 yrs 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).

Table 6.19 and 6.20 presents the per cent subjects with prosthetic status of upper and lower dental arches respectively by type of prostheses. Table 6.21 presents the per cent subjects wearing full mouth removable dentures.

In 65-74 year old subjects, prostheses were present in 1.8 per cent subjects (upper dental arch) and 1.3 per cent subjects (lower dental arch) respectively. The corresponding percentage for 35-44 year old subjects was 0.4 for both upper and lower dental arches. In both age groups, partial dentures followed by bridges were prevalent, in that order. Full removable dentures in both upper and lower dental arches were rare (0.4 per cent) in 65-74 year old subjects and these were absent in the 35-44 year age group. There were no gender related differentials. Urban residents were wearing more prostheses than their rural counterparts in the 35-44 year age group while in 65-74 year age group, there were no marked rural and urban differentials.

The Ganjam Region (Region 5) was conspicuous because of the absence or near absence of any subjects with prostheses in the age group of 35-44 and 65-74 years. The pattern of distribution of the type of prostheses was similar between regions.

The overall per cent of subjects in 65-74 years who were wearing full mouth removable dentures was 0.4 per cent (Table 6.21). There were virtually no subjects in Koraput, Cuttack and Ganjam (Region 3, 4 and 5) who were wearing full mouth removable dentures.

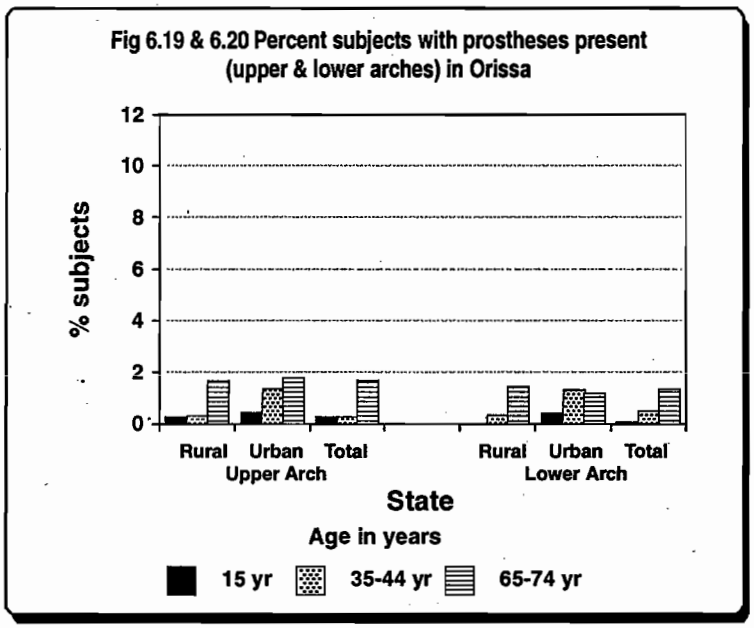


Table 6.19. Percent distribution of subjects with their prosthetic status (upper arch) by age, sex, and geographical area. State: Orissa

Prosthetic Status (Upper)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	*n=*	**166**	**174**	***340***	**190**	**240**	***430***	**190**	**159**	***349***
With Prostheses present		0.8	0.0	***0.4***	0.0	0.0	***0.0***	2.4	0.8	***1.6***
Bridge or more than one bridge		0.8	0.0	***0.4***	0.0	0.0	***0.0***	1.6	0.0	***0.8***
Partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.7	0.8	***0.8***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***
Region 2	*n=*	**191**	**162**	***353***	**273**	**155**	***428***	**158**	**126**	***284***
With Prostheses present		0.3	0.0	***0.2***	1.0	1.1	***1.1***	5.2	5.4	***5.3***
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		0.3	0.0	***0.2***	1.0	1.1	***1.1***	2.9	2.7	***2.8***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.3	2.7	***2.5***
Region 3	*n=*	**196**	**196**	***392***	**250**	**227**	***477***	**180**	**173**	***353***
With Prostheses present		0.7	0.0	***0.4***	0.5	0.0	***0.3***	0.0	0.8	***0.4***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.5	0.0	***0.3***	0.0	0.8	***0.4***
Partial denture		0.7	0.0	***0.4***	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 removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 4	*n=*	**145**	**152**	***297***	**150**	**150**	***300***	**152**	**142**	***294***
With Prostheses present		0.0	0.0	***0.0***	0.0	0.3	***0.2***	1.1	1.7	***1.4***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.0	0.3	***0.2***	0.8	0.9	***0.9***
Partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.9	***0.6***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 5	*n=*	**153**	**133**	***286***	**133**	**117**	***250***	**141**	**114**	***255***
With Prostheses present		0.0	0.4	***0.2***	0.0	1.1	***0.6***	0.0	0.0	***0.0***
Bridge or more than one bridge		0.0	0.4	***0.2***	0.0	1.1	***0.6***	0.0	0.0	***0.0***
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 removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	*n=*	**565**	**568**	***1133***	**681**	**589**	***1270***	**561**	**497**	***1058***
With Prostheses present		0.3	0.0	***0.2***	0.3	0.1	***0.2***	1.6	2.0	***1.8***
Bridge or more than one bridge		0.2	0.0	***0.1***	0.1	0.1	***0.1***	0.7	0.5	***0.6***
Partial denture		0.2	0.0	***0.1***	0.1	0.0	***0.1***	0.5	1.0	***0.8***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.5	***0.5***
State Urban	*n=*	**286**	**249**	***535***	**315**	**300**	***615***	**260**	**217**	***477***
With Prostheses present		0.4	0.2	***0.3***	1.1	1.9	***1.5***	3.1	0.0	***1.6***
Bridge or more than one bridge		0.0	0.2	***0.1***	0.0	0.7	***0.4***	0.3	0.0	***0.2***
Partial denture		0.4	0.0	***0.2***	1.1	1.2	***1.2***	2.5	0.0	***1.3***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.0	***0.2***
State Total	*n=*	**851**	**817**	***1668***	**996**	**889**	***1885***	**821**	**714**	***1535***
With Prostheses present		0.4	0.0	***0.2***	0.4	0.4	***0.4***	1.8	1.7	***1.8***
Bridge or more than one bridge		0.2	0.0	***0.1***	0.1	0.2	***0.2***	0.6	0.5	***0.6***
Partial denture		0.2	0.0	***0.1***	0.3	0.2	***0.3***	0.8	0.9	***0.9***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.4	***0.4***

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: Orissa

Prosthetic Status (Lower)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	166	174	*340*	190	240	*430*	190	159	*349*
Prostheses present		0.0	0.0	***0.0***	0.7	0.0	***0.4***	1.1	0.0	***0.6***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Partial denture		0.0	0.0	***0.0***	0.7	0.0	***0.4***	0.9	0.0	***0.5***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***
Region 2	n=	191	162	*353*	273	155	*428*	158	126	*284*
Prostheses present		0.3	0.3	***0.3***	1.0	1.1	***1.1***	4.9	6.3	***5.6***
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		0.3	0.3	***0.3***	1.0	1.1	***1.1***	2.6	3.6	***3.1***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.3	2.7	***2.5***
Region 3	n=	196	196	*392*	250	227	*477*	180	173	*353*
Prostheses present		0.0	0.0	***0.0***	0.5	0.0	***0.3***	0.0	0.0	***0.0***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.5	0.0	***0.3***	0.0	0.0	***0.0***
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 removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 4	n=	145	152	*297*	150	150	*300*	152	142	*294*
Prostheses present		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	0.9	***0.9***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.9	***0.5***
Partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.8	0.0	***0.4***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 5	n=	153	133	*286*	133	117	*250*	141	114	*255*
Prostheses present		0.0	0.0	***0.0***	0.4	0.0	***0.2***	1.2	0.4	***0.8***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.4	0.0	***0.2***	1.2	0.4	***0.8***
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 removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	n=	565	568	*1133*	681	589	*1270*	561	497	*1058*
Prostheses present		0.0	0.0	***0.0***	0.4	0.0	***0.2***	1.3	1.5	***1.4***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.1	0.0	***0.1***	0.1	0.4	***0.3***
Partial denture		0.0	0.0	***0.0***	0.3	0.0	***0.2***	0.8	0.6	***0.7***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.5	***0.5***
State Urban	n=	286	249	*535*	315	300	*615*	260	217	*477*
Prostheses present		0.4	0.4	***0.4***	1.3	1.2	***1.3***	2.1	0.3	***1.2***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.2	0.3	***0.3***
Partial denture		0.4	0.4	***0.4***	1.1	1.2	***1.2***	1.6	0.0	***0.8***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.0	***0.2***
State Total	n=	851	817	*1668*	996	889	*1885*	821	714	*1535*
Prostheses present		0.1	0.1	***0.1***	0.6	0.2	***0.4***	1.4	1.2	***1.3***
Bridge or more than one bridge		0.0	0.0	***0.0***	0.2	0.0	***0.1***	0.1	0.3	***0.2***
Partial denture		0.1	0.1	***0.1***	0.4	0.2	***0.3***	0.9	0.5	***0.7***
Both Bridge and partial denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Full removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.4	***0.4***

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 dentures (upper and lower arch) by age, sex, and geographical area.

State: Orissa

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=	165	174	*339*	189	240	*429*	188	158	*346*
Percent subjects with full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.2	0.0	***0.1***
Region 2	n=	184	159	*343*	263	153	*416*	150	124	*274*
Percent subjects with full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	2.4	2.8	***2.6***
Region 3	n=	159	164	*323*	216	192	*408*	146	151	*297*
Percent subjects with full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 4	n=	141	147	*288*	140	148	*288*	145	138	*283*
Percent subjects with full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
Region 5	n=	147	130	*277*	123	116	*239*	139	109	*248*
Percent subjects with full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.0	0.0	***0.0***
State Rural	n=	534	540	*1074*	640	570	*1210*	528	474	*1002*
Percent subjects with full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.5	0.5	***0.5***
State Urban	n=	262	234	*496*	291	279	*570*	240	206	*446*
Percent subjects with full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.3	0.0	***0.2***
State Total	n=	796	774	*1570*	931	849	*1780*	768	680	*1448*
Percent subjects with full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	0.4	0.4	***0.4***

6.6.5 Prosthetic need

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.

Table 6.22 and Table 6.23 presents the per cent subjects with prosthetic need of upper and lower dental arches by type of prostheses needed. Table 6.24 presents the per cent subjects who needed full mouth removable dentures.

It appeared that the need for prostheses was high in the state for both upper and lower dental arches, with a higher need for prostheses in the lower jaw. Dental prostheses was needed in 54.7 per cent subjects in the upper dental arch in the age group of 65-74 years. the corrsoponding figure for lower dental arch was 62.1 per cent. Multi-unit prostheses, full prostheses and one-unit prostheses were required, in that order. Te need for prostheses was much lower in 35-44 year age group where the need was higher for one unit prostheses, followed by multi-unit prostheses.

There were no marked rural and urban differentials or marked gender based differentials. Inter-regional differentials were not marked.

The need for full mouth removable dentures was 11.8 per cent in subjects aged 65-74 years. The need was higher in rural as compared to urban areas. There were inter-regional variations and the need was lowest (4.9 per cent) in Dhankonal (Region 1) while it was highest (22.9 per cent) in Koraput (Region 3).

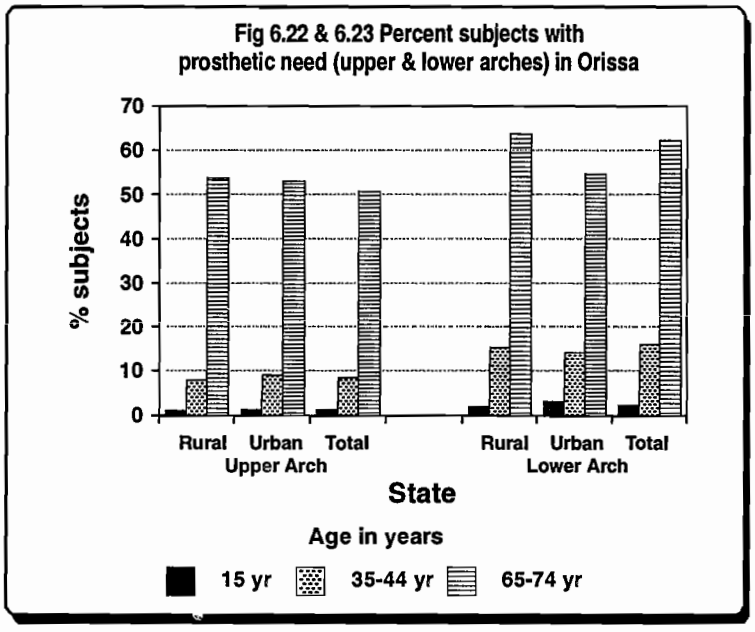


Table 6.22. Percent distribution of subjects with their prosthetic need status (upper arch) by age, sex, and geographical area. State: Orissa

Prosthetic Need (Upper)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	166	174	340	190	240	430	190	159	349
With Prosthetic need		3.4	1.6	2.5	8.9	14.8	11.9	55.9	59.4	57.7
Need for one unit prosthesis		1.6	1.6	1.6	5.8	9.1	7.5	10.0	16.6	13.3
Need for multi unit prosthesis		1.8	0.0	0.9	3.1	5.7	4.4	34.6	31.6	33.1
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	3.1	5.3	4.2
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	8.2	5.9	7.1
Region 2	n=	191	162	353	273	155	428	158	126	284
With Prosthetic need		1.2	1.0	1.1	3.2	9.7	6.5	45.8	48.5	47.2
Need for one unit prosthesis		0.9	1.0	1.0	2.8	7.9	5.4	2.2	5.4	3.8
Need for multi unit prosthesis		0.3	0.0	0.2	0.4	1.8	1.1	24.4	20.1	22.3
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	9.4	8.1	8.8
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	9.8	14.8	12.3
Region 3	n=	196	196	392	250	227	477	180	173	353
With Prosthetic need		0.7	0.0	0.4	6.7	7.5	7.1	51.0	54.8	52.9
Need for one unit prosthesis		0.7	0.0	0.4	4.3	5.3	4.8	7.4	13.9	10.7
Need for multi unit prosthesis		0.0	0.0	0.0	2.5	2.2	2.4	22.2	21.1	21.7
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.8
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	20.7	19.0	19.9
Region 4	n=	145	152	297	150	150	300	152	142	294
With Prosthetic need		0.0	0.8	0.4	5.6	11.1	8.4	59.1	56.9	58.0
Need for one unit prosthesis		0.0	0.0	0.0	4.0	7.1	5.6	7.8	6.8	7.3
Need for multi unit prosthesis		0.0	0.0	0.0	1.7	4.0	2.9	25.7	23.5	24.6
Need for combination of one and/or MUP		0.0	0.8	0.4	0.0	0.0	0.0	10.6	10.1	10.4
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	15.1	16.5	15.8
Region 5	n=	153	133	286	133	117	250	141	114	255
With Prosthetic need		0.0	0.9	0.5	9.7	7.4	8.6	51.9	49.2	50.6
Need for one unit prosthesis		0.0	0.9	0.5	6.0	4.8	5.4	13.8	11.4	12.6
Need for multi unit prosthesis		0.0	0.0	0.0	1.9	2.6	2.3	26.3	22.8	24.6
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	5.3	7.9	6.6
Need for full prosthesis		0.0	0.0	0.0	1.9	0.0	1.0	6.5	7.2	6.9
State Rural	n=	565	568	1133	681	589	1270	561	497	1058
With Prosthetic need		1.0	0.9	1.0	6.0	10.9	8.5	54.1	55.2	54.7
Need for one unit prosthesis		0.7	0.6	0.7	4.2	7.4	5.8	7.7	10.0	8.9
Need for multi unit prosthesis		0.4	0.0	0.2	1.7	3.5	2.6	26.6	24.0	25.3
Need for combination of one and/or MUP		0.0	0.3	0.2	0.0	0.0	0.0	6.5	6.9	6.7
Need for full prosthesis		0.0	0.0	0.0	0.2	0.0	0.1	13.3	14.3	13.8
State Urban	n=	286	249	535	315	300	615	260	217	477
With Prosthetic need		1.1	0.8	1.0	7.0	10.9	9.0	54.2	54.6	54.4
Need for one unit prosthesis		0.4	0.8	0.6	4.5	6.4	5.5	8.7	13.6	11.2
Need for multi unit prosthesis		0.7	0.0	0.4	2.5	4.6	3.6	27.9	25.0	26.5
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	6.0	5.6	5.8
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	11.7	10.4	11.1
State Total	n=	851	817	1668	996	889	1885	821	714	1535
With Prosthetic need		1.1	0.9	1.0	6.2	10.9	8.6	54.1	55.2	54.7
Need for one unit prosthesis		0.7	0.6	0.7	4.2	7.3	5.8	7.8	10.6	9.2
Need for multi unit prosthesis		0.4	0.0	0.2	1.8	3.7	2.8	26.9	24.3	25.6
Need for combination of one and/or MUP		0.0	0.3	0.2	0.0	0.0	0.0	6.3	6.6	6.5
Need for full prosthesis		0.0	0.0	0.0	0.1	0.0	0.1	13.1	13.7	13.4

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: Orissa

Prosthetic Need (Lower)		15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T
Region 1	n=	166	174	340	190	240	430	190	159	349
With Prosthetic need		4.2	3.8	4.0	17.1	25.4	21.3	63.8	71.5	67.7
Need for one unit prosthesis		2.6	1.5	2.1	12.2	12.4	12.3	6.8	9.5	8.2
Need for multi unit prosthesis		1.6	2.4	2.0	3.5	9.7	6.6	45.0	50.4	47.7
Need for combination of one and/or MUP		0.0	0.0	0.0	1.4	3.3	2.4	5.7	6.5	6.1
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	6.3	5.1	5.7
Region 2	n=	191	162	353	273	155	428	158	126	284
With Prosthetic need		0.3	1.0	0.7	11.2	11.2	11.2	46.2	54.3	50.3
Need for one unit prosthesis		0.0	0.7	0.4	8.9	10.5	9.7	1.9	3.6	2.8
Need for multi unit prosthesis		0.3	0.3	0.3	2.3	0.7	1.5	25.8	28.7	27.3
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	9.0	7.2	8.1
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	9.4	14.8	12.1
Region 3	n=	196	196	392	250	227	477	180	173	353
With Prosthetic need		0.7	2.4	1.6	16.0	19.6	17.8	61.8	64.6	63.2
Need for one unit prosthesis		0.7	2.4	1.6	13.7	14.8	14.3	1.0	5.1	3.1
Need for multi unit prosthesis		0.0	0.0	0.0	2.3	4.8	3.6	39.0	38.9	39.0
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.9	1.2
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	20.3	19.8	20.1
Region 4	n=	145	152	297	150	150	300	152	142	294
With Prosthetic need		3.3	2.0	2.7	8.8	16.7	12.8	64.8	63.6	64.2
Need for one unit prosthesis		2.4	1.6	2.0	5.3	7.6	6.5	5.4	6.8	6.1
Need for multi unit prosthesis		0.9	0.3	0.6	2.7	6.8	4.8	33.9	27.6	30.8
Need for combination of one and/or MUP		0.0	0.0	0.0	0.8	2.3	1.6	10.1	13.0	11.6
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	15.4	16.1	15.8
Region 5	n=	153	133	286	133	117	250	141	114	255
With Prosthetic need		2.5	0.0	1.3	16.7	15.5	16.1	57.7	57.3	57.5
Need for one unit prosthesis		2.5	0.0	1.3	8.5	8.2	8.4	13.0	10.5	11.8
Need for multi unit prosthesis		0.0	0.0	0.0	7.2	7.4	7.3	30.2	32.9	31.6
Need for combination of one and/or MUP		0.0	0.0	0.0	0.9	0.0	0.5	8.0	7.9	8.0
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	6.5	6.1	6.3
State Rural	n=	565	568	1133	681	589	1270	561	497	1058
With Prosthetic need		2.3	2.0	2.2	13.2	18.7	16.0	61.1	65.0	63.1
Need for one unit prosthesis		1.6	1.4	1.5	10.0	10.9	10.5	4.7	7.0	5.9
Need for multi unit prosthesis		0.7	0.5	0.6	2.6	6.2	4.4	36.5	35.6	36.1
Need for combination of one and/or MUP		0.0	0.0	0.0	0.7	1.6	1.2	7.3	8.2	7.8
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	12.6	14.2	13.4
State Urban	n=	286	249	535	315	300	615	260	217	477
With Prosthetic need		2.2	3.3	2.8	12.1	18.6	15.4	55.8	53.9	54.9
Need for one unit prosthesis		1.8	1.7	1.8	6.6	10.4	8.5	6.5	5.3	5.9
Need for multi unit prosthesis		0.4	1.6	1.0	5.6	6.7	6.2	30.5	32.7	31.6
Need for combination of one and/or MUP		0.0	0.0	0.0	0.0	1.5	0.8	6.1	6.5	6.3
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	12.8	9.4	11.1
State Total	n=	851	817	1668	996	889	1885	821	714	1535
With Prosthetic need		2.3	2.1	2.2	13.2	18.9	16.1	60.4	63.7	62.1
Need for one unit prosthesis		1.7	1.4	1.6	9.7	11.0	10.4	4.9	6.8	5.9
Need for multi unit prosthesis		0.7	0.7	0.7	3.0	6.3	4.7	35.8	35.6	35.7
Need for combination of one and/or MUP		0.0	0.0	0.0	0.6	1.6	1.1	7.0	7.7	7.4
Need for full prosthesis		0.0	0.0	0.0	0.0	0.0	0.0	12.6	13.5	13.1

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 needing full mouth removable dentures by age, sex, and geographical area.

State: Orissa

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=	166	174	*340*	187	237	*424*	189	159	*348*
Percent subjects needing full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	4.7	5.1	***4.9***
Region 2	n=	184	158	*342*	262	153	*415*	149	124	*273*
Percent subjects needing full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	9.1	13.3	***11.2***
Region 3	n=	160	163	*323*	216	191	*407*	147	150	*297*
Percent subjects needing full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	24.0	21.8	***22.9***
Region 4	n=	140	147	*287*	140	146	*286*	147	136	*283*
Percent subjects needing full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	11.2	14.1	***12.7***
Region 5	n=	148	129	*277*	123	115	*238*	139	109	*248*
Percent subjects needing full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	3.9	6.3	***5.1***
State Rural	n=	536	538	*1074*	638	568	*1206*	532	474	*1006*
Percent subjects needing full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	10.8	13.2	***12.0***
State Urban	n=	262	233	*495*	290	274	*564*	239	204	*443*
Percent subjects needing full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	11.1	9.9	***10.5***
State Total	n=	798	771	*1569*	928	842	*1770*	771	678	*1449*
Percent subjects needing full mouth removable denture		0.0	0.0	***0.0***	0.0	0.0	***0.0***	10.9	12.7	***11.8***

6.6.6 Community need for immediate care and referrals

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

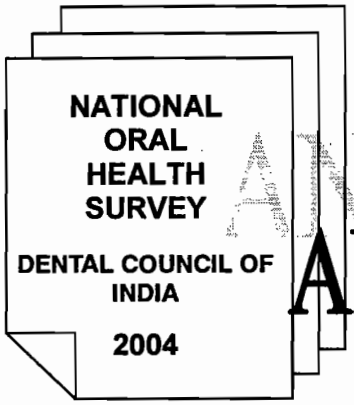
Overall, life threatening conditions had an extremely low prevalence in the state and appeared in 0.3 per cent subjects in 12, 35-44 and 65-74 year age-groups. Pain and infection appeared in 15.4 per cent subjects aged 5 years to a maximum of 31.8 per cent subjects in the age group of 65-74 years. Referrals were made for almost all of the conditions recorded.

The prevalence of conditions by type of condition were not uniformaly distributed by rural and urban areas and there were some gender related differentials. There were also wide inter-regional variations.

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: Orissa

Need For Care & Referral		5 years			12 years			15 years			35-44 years			65-74 years		
		M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
Region 1	n=	183	146	*329*	163	167	*330*	161	171	*332*	183	234	*417*	185	152	*337*
Life threatening condition		0.0	0.0	*0.0*	0.0	0.8	*0.4*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*
Pain or infection		5.1	3.3	*4.2*	8.8	5.8	*7.3*	6.2	5.5	*5.9*	13.1	15.4	*14.3*	17.0	9.5	*13.3*
Other condition		0.7	0.0	*0.4*	0.0	0.8	*0.4*	0.0	0.0	*0.0*	0.0	1.2	*0.6*	0.8	0.9	*0.9*
Referral		2.2	2.1	*2.2*	7.0	4.1	*5.6*	4.6	5.5	*5.1*	10.9	12.8	*11.9*	14.2	7.8	*11.0*
Region 2	n=	181	147	*328*	178	175	*353*	186	160	*346*	265	154	*419*	152	123	*275*
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		3.8	5.0	*4.4*	6.1	4.4	*5.3*	4.2	7.2	*5.7*	7.5	2.3	*4.9*	3.5	5.1	*4.3*
Other condition		0.0	0.9	*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*
Referral		3.8	5.9	*4.9*	6.0	4.4	*5.2*	4.2	7.3	*5.8*	7.5	2.3	*4.9*	3.5	5.1	*4.3*
Region 3	n=	165	144	*309*	156	175	*331*	161	169	*330*	217	191	*408*	147	151	*298*
Life threatening condition		0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.0	0.0	*0.0*	0.6	0.2	*0.4*	0.0	0.0	*0.0*
Pain or infection		4.7	7.6	*6.2*	0.0	3.2	*1.6*	0.8	0.0	*0.4*	4.2	2.2	*3.2*	1.7	2.6	*2.2*
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	0.3	*0.2*
Referral		4.6	7.6	*6.1*	0.0	3.2	*1.6*	0.0	0.0	*0.0*	3.0	2.2	*2.6*	1.8	2.6	*2.2*
Region 4	n=	148	150	*298*	153	146	*299*	140	147	*287*	143	147	*290*	142	137	*279*
Life threatening condition		0.0	0.0	*0.0*	0.0	0.3	*0.2*	0.0	0.0	*0.0*	0.0	0.3	*0.2*	0.9	0.0	*0.5*
Pain or infection		31.8	33.0	*32.4*	37.1	38.0	*37.6*	36.1	48.1	*42.1*	60.1	72.0	*66.1*	75.7	70.8	*73.3*
Other condition		7.8	3.3	*5.6*	6.8	7.7	*7.3*	6.8	8.6	*7.7*	24.5	15.4	*20.0*	18.8	18.7	*18.8*
Referral		27.8	28.4	*28.1*	40.4	44.0	*42.2*	40.2	52.0	*46.1*	72.7	79.2	*76.0*	85.2	80.9	*83.1*
Region 5	n=	128	128	*256*	141	130	*271*	146	129	*275*	122	115	*237*	136	110	*246*
Life threatening condition		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	0.5	*0.3*
Pain or infection		15.1	13.1	*14.1*	18.1	22.6	*20.4*	21.8	17.9	*19.9*	26.9	23.2	*25.1*	26.7	28.9	*27.8*
Other condition		1.0	0.0	*0.5*	0.0	0.0	*0.0*	0.3	0.4	*0.4*	1.0	1.1	*1.1*	0.0	0.0	*0.0*
Referral		14.7	13.1	*13.9*	17.4	18.0	*17.7*	19.5	17.4	*18.5*	26.0	21.8	*23.9*	22.8	26.1	*24.5*
State Rural	n=	553	474	*1027*	535	542	*1077*	531	542	*1073*	639	565	*1204*	526	468	*994*
Life threatening condition		0.0	0.0	*0.0*	0.0	0.2	*0.1*	0.0	0.0	*0.0*	0.2	0.0	*0.1*	0.3	0.0	*0.2*
Pain or infection		15.2	17.3	*16.3*	17.8	18.1	*18.0*	16.7	21.2	*19.0*	25.2	30.7	*28.0*	34.9	32.1	*33.5*
Other condition		2.9	1.4	*2.2*	2.3	2.9	*2.6*	2.4	2.8	*2.6*	6.7	5.1	*5.9*	5.6	6.4	*6.0*
Referral		12.8	15.0	*13.9*	19.1	19.8	*19.5*	17.6	22.6	*20.1*	28.4	32.6	*30.5*	37.1	34.9	*36.0*
State Urban	n=	252	241	*493*	256	251	*507*	263	234	*497*	291	276	*567*	236	205	*441*
Life threatening condition		0.0	0.0	*0.0*	0.0	0.8	*0.8*	0.0	0.0	*0.0*	0.0	1.0	*1.0*	0.0	0.3	*0.3*
Pain or infection		10.8	13.2	*12.0*	16.4	14.4	*15.4*	14.3	17.2	*15.8*	20.4	24.4	*22.4*	25.0	28.9	*27.0*
Other condition		1.7	0.9	*1.3*	1.6	1.8	*1.7*	1.1	3.9	*2.5*	4.7	4.9	*4.8*	6.6	8.9	*7.8*
Referral		10.2	13.9	*12.1*	14.4	13.7	*14.1*	13.3	18.5	*15.9*	22.9	24.7	*23.8*	29.1	34.5	*31.8*
State Total	n=	805	715	*1520*	791	793	*1584*	794	776	*1570*	930	841	*1771*	762	673	*1435*
Life threatening condition		0.0	0.0	*0.0*	0.0	0.3	*0.3*	0.0	0.0	*0.0*	0.2	0.1	*0.3*	0.3	0.0	*0.3*
Pain or infection		14.3	16.4	*15.4*	17.1	17.2	*17.2*	15.9	20.0	*18.0*	24.1	29.2	*26.7*	32.7	30.9	*31.8*
Other condition		2.7	1.3	*2.0*	2.2	2.7	*2.5*	2.1	2.9	*2.5*	6.2	4.9	*5.6*	5.7	6.7	*6.2*
Referral		12.2	14.7	*13.5*	17.8	18.5	*18.2*	16.5	21.4	*19.0*	27.0	30.7	*28.9*	35.0	34.0	*34.5*



ANNEXURES

DENTAL COUNCIL OF INDIA

EXECUTIVE COMMITTEE

Dr. R K Bali
President
New Delhi

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

Dr. Anil Kohli
New Delhi

Dr. Ravindra Ratolikar,
Hyderabad

Dr. S. G. Damle
Mumbai

Dr. B. H. Sripathi Rao
Mangalore.

Dr. J. R. Sabharwal
New Delhi

Dr. S. P. Agarwal,
New Delhi

OUTGOING MEMBERS

Dr. Mahesh Verma, New Delhi.

Dr. V. Surindra Shetty, Mangalore.

Dr. B. Suresh Chandra, Mangalore.

SUPPORT STAFF

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

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

Mr. C.L. Bhatia

Mr. K. V. Abraham

Mr. P. K. De

Mr. Shiv Kumar

Mr. Praveen Kumar

Mr. S. S. Kanyal

Mr. Puneet Bansal

Mr. Anil Kumar

NOHS SECRETARIAT

Mrs. Sarita Verma

ANNEXURE - 1

CENTRAL SURVEY TEAM

Dr. R. K. Bali

Dr. V. B. Mathur

Prof. P. P. Talwar

Mr. H. B. Chanana

ANNEXURE - 2

TECHNICAL WORKING GROUP

Dr. R. K. Bali

Dr. V.B. Mathur

Dr. Shankar Aradhya

Dr. K.V.V. Prasad

Dr. M.B. Aswathnarayana

Prof. P.P. Talwar

Dr. Amrit Tiwari

LIST OF STATES, REGIONS WITHIN STATES AND SELECTED DISTRICTS

ANNEXURE - 3

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

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

ANNEXURE - 4

LIST OF PARTICIPATING DENTAL COLLEGES

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

ANNEXURE - 5

REGIONAL COORDINATORS

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

NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING

ANNEXURE - 6

TEAM MEMBERS (ORISSA)

S. No.	Name	Designation
1	Dr. Ashok Kumar Mohapatra	Regional Coordinator
2	Dr. T.K. Patra	Supervisor
3	Dr. Abinas Mohapatra	Supervisor
4	Dr. Abita Seshadri	Dental Surgeon
5	Dr. K. Karuna	Dental Surgeon
6	Dr. Prangya Parmesh Swain	Dental Surgeon
7	Dr. Niharika Swain	Dental Surgeon
8	Dr. S. Behera	Dental Surgeon
9	Dr. Bikram Kumar Sahoo	Dental Surgeon
10	Dr. Satish Kumar Sahoo	Dental Surgeon
11	Dr. Sanat Kumar Tiwari	Dental Surgeon
12	Dr. Swasat Kumar Mund	Dental Surgeon
13	Dr. Susant Mohanty	Dental Surgeon
14	Dr. Nita Mohanty	Dental Surgeon
15	Dr. P. K. Nanda	Dental Surgeon
16	Dr. Sandeep Pradhan	Dental Surgeon
17	Dr. Sanjukta Mishra	Dental Surgeon
18	Dr. Bibhukesh Panigsabri	Dental Surgeon
18	Dr. Sanghamitra Mohapatra	Social Scientist
19	Mr. Ashok Kumar Routray	Social Scientist
20	Mr. Ayodhya Kumar Behera	Social Scientist
21	Mrs. S.B. Chakra	Social Scientist
22	Mrs. Pratima Mishra	Social Scientist
23	Mr. P.K. Mohapatra	Social Scientist
24	Mrs. Lily Sahoo	Social Scientist
25	Mrs. P. Sahoo	Social Scientist

ANNEXURE - 7

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

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

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

FORM NO. फार्म संख्या | 1 | 0 | (1-2)

STATE / राज्य | | | (6-7)

TEAM NO. दल संख्या (टीम) | | | | (3-5)

ZONE / क्षेत्र (जोन) | | | (8-9)

DISTRICT / जिला | | (10)

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

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

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

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

NAME OF SPOUSE _____
पत्नी का नाम

ADDRESS OF THE HOUSEHOLD _____
घर का पता

_____

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

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

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

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

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

FORM NO. फार्म संख्या | 1 | 1 |

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

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

B. FOOD HABITS / खाद्य सम्बन्धी आदतें

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

FORM NO. फार्म संख्या | 1 | 2 |

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

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

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

B. Abnormal Oral Habits

ब. मुख सम्बन्धी असामान्य आदतें

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

C. Eating Habits

स. खान–पान की आदतें

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

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

D. Oral Hygiene Practices
द. मुख की सफाई

36.	How do you generally clean your teeth?/ सामान्यतः आप अपने दांत कैसे साफ करते हैं?	Finger/ उंगली से ..... 1 Brush/ ब्रुश से ..... 2 Datun/ दातुन ..... 3 Others (Specify) ..... 4 अन्य		If Code chosen either 3 or 4, go to Q. 42.						(130-134)
37.	How often do you clean your teeth in a day ? / दिन में आप कितनी बार दांत साफ करते हैं?	Once/ दिन में एक बार ..... 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								(135-139)
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								(140-144)
39.	What material do you generally use to clean teeth ? / सामान्यतः आप अपने दांत किस चीज से साफ करते हैं?	Toothpaste ..... 1 टूथपेस्ट Toothpowder ..... 2 टूथपाउडर Others (Specify) ..... 3 अन्य		If Code chosen 3, go to Q. 41						(145-149)

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

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

E. Pattern of Practices for Dental Treatment

द. दंत–चिकित्सा के तरीके

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

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

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

F. Awareness and Knowledge of Dental Health Problems

एफ. दंत–स्वास्थ्य समस्याओं की जानकारी व जागरूकता

50.	***What, in your opinion, are the common problems associated with mouth and teeth? /*** आपकी राय में मुख व दांतों से सम्बन्धित सामान्य समस्याएँ क्या हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***Tooth Decay*** ..... 1 दंत–क्षय ***Gum Disease*** ..... 2 मसूड़ों की बीमारी ***Bad Smell*** ..... 3 दुर्गन्ध ***Crooked teeth*** ..... 4 टेढ़े–मेढ़े दांत ***Mouth Ulcers*** ..... 5 मुख का अल्सर ***Stained teeth*** ..... 6 गन्दे दांत ***Others (Specify)*** ..... 7 अन्य ***Don't Know*** ..... 8 नहीं जानता			NOT TO BE ASKED					(275-294)
51.	***What, in your opinion, are the major factors which cause dental problems?/*** आपकी राय में, किन मुख्य कारणों से दांतों की समस्याएँ पैदा होती हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***Eating sweets icecreams/chocolates*** मिठाई/आइसक्रीम/चाकलेट खाना ..... 1 ***Not brushing regularly*** नियमित रूप से ब्रुश न करना ..... 2 ***Not rinsing*** पानी से मुख साफ न करना ..... 3 ***Consuming Tobacco products/*** तम्बाकू उत्पाद खाना ..... 4 ***Others (Specify)*** अन्य ..... 5 ***Don't Know*** नहीं जानता 6								(295-314)

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

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

53.	***Do you smoke? /*** क्या आप धूम्रपान करते हैं?	***No/*** नहीं	1	**In case NO go to Q. 61**						(335-339)
		Yes/ हां	2							
54.	***What do you smoke? /*** आप कौन सा धूम्रपान करते हैं? ***(Tick as many as reported)*** (जितना बताएं सब लिखें)	***Chillum/*** चिलम	1							(340-359)
		Hookah/ हुक्का	2							
		Cigars/ सिगार	3							
		Cigarettes/ सिगरेट	4							
		Bidis/ बिड़ी	5							
		Others (Specify)/ अन्य	6							

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

SKIP TO NOTE

DENTAL COUNCIL OF INDIA, NEW DELHI

NATIONAL ORAL HEALTH SURVEY & FLUORIDE MAPPING

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

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

FORM NO. 2 0 (1-2)

STATE (6-7)

ZONE (8-9)

TEAM NO. (3-5)

DISTRICT (10)

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

CODE

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

SERIAL NO. OF HOUSEHOLD VISITED (14-16)

NAME OF HEAD OF HOUSEHOLD Mr. / Mrs. _____

NAME OF SPOUSE _____

ADDRESS OF THE HOUSEHOLD _____

_____

EXAMINER _____ (NAME) (SIGN)

RECORDER _____ (NAME) (SIGN)

NAME OF INTERVIEWER _____ (NAME) (SIGN)

FIELD CHECKED BY _____ (NAME) (SIGN)

SCRUTINISED BY _____ (NAME) (SIGN)

CHECKED BY _____ (NAME) (SIGN)

WHO ORAL HEALTH ASSESSMENT FORM (1997)

GENERAL INFORMATION

Name .....

Date of birth (17) Year Month (20)

Age in years (21) (22)

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

Ethnic group (24)

Occupation (25)

Geographical location (26) (27)

Location type : (28)

1 = Urban
2 = Periurban
3 = Rural

OTHER DATA (specify and provide codes)

..... (29)

..... (30)

CONTRAINDICATION TO EXAMINATION

Reason..... (31)

..... 0 = No 1 = yes

CLINICAL ASSESSMENT

EXTRA-ORAL EXAMINATION

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

TEMPOROMANDIBULAR JOINT ASSESSSMENT

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

SIGNS
0 = No
1 = Yes
9 = Not recorded

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

ORAL MUCOSA

CONDITION

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

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

LOCATION

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

ENAMEL OPACITIES/HYPOPLASIA

Permanent teeth

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

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

LOSS OF ATTACHMENT*

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

(53)

COMMUNITY PERIODONTAL INDEX (CPI)

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

*Not recorded under 15 years of age

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

LOSS OF ATTACHMENT*

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

*Not recorded under 15 years of age

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

DENTITION STATUS AND TREATMENT NEED

Identification Number

		55	54	53	52	51	61	62	63	64	65					
		18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28	
Crown	(66)																	(81)
Root	(82)																	(97)
Treatment	(98)																	(113)

		85	84	83	82	81	71	72	73	74	75					
		48	47	46	45	44	43	42	41	31	32	33	34	35	36	37	38	
Crown	(114)																	(129)
Root	(130)																	(145)
Treatment	(146)																	(161)

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

TREATMENT

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

PROSTHETIC STATUS

Upper Lower (162) [ ][ ] (163)

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

PROSTHETIC NEED

Upper Lower (164) [ ][ ] (165)

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

DENTOFACIAL ANOMALIES

DENTITION

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

SPACE

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

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

[ ] (170)
Diastema in mm

[ ] (171)
Largest anterior maxillary irregulaity in mm

[ ] (172)
Largest anterior mandibular irregularity in mm

OCCLUSION

[ ] (173)
Anterior maxillary overjet in mm

[ ] (174)
Anterior mandibular overjet in mm

[ ] (175)
Vertical anterior openbite in mm

[ ] (176)
Antero-posterior molar relation :

0 = Normal
1 = Half cusp
2 = Full cusp

NEED FOR IMMEDIATE CARE AND REFERRAL

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

0 = Absent
1 = Present
2 = Not recorded

Referral
0 = No
1 = Yes
9 = Not recorded

[ ] (180)

NOTES