ORIGINAL RESEARCH PAPER

Volume-8 | Issue-7 | July - 2019 | PRINT ISSN No. 2277 - 8179

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

ORAL HEALTH STATUS IN NORTH EAST PART OF CHENNAI, THIRUVANNAMALAI, KANCHIPURAM DISTRICT TAMILNADU-A CROSS-SECTIONAL STUDY

Dental Science

Vishnuprasad S — Reader & HOD, Department of Public Health Dentistry, Karpaga Vinayaga Institute of Dental Sciences, Chinnakolambakkam, Kanchipuram, Tamil Nadu, India.

Mahesh J* — Senior Lecturer, Department of Public Health Dentistry, Karpaga Vinayaga Institute of Dental Sciences, Chinnakolambakkam, Kanchipuram, Tamil Nadu, India. *Corresponding Author

Aniz A — Professor, Department of Periodontics, Karpaga Vinayaga Institute of Dental Sciences, Chinnakolambakkam, Kanchipuram, Tamil Nadu, India.

Saravanan T — Professor, Department of Oral medicine and Radiology Karpaga Vinayaga Institute of Dental Sciences, Chinnakolambakkam, Kanchipuram, Tamil Nadu, India.

Sakthisri V — Intern, Karpaga Vinayaga Institute of Dental Sciences, Chinnakolambakkam, Kanchipuram, Tamil Nadu ,India.

Gokila R — Intern, Karpaga Vinayaga Institute of Dental Sciences, Chinnakolambakkam, Kanchipuram, Tamil Nadu, India.

ABSTRACT

Background: Oral health is an essential component of general health. With increasing life expectancy of population, oral health plays a major role in improving the quality of life. Hence, the present study was conducted to evaluate the oral health status of population which helps in assessing and evaluating the population and to improve the standards of screening and treatment planning.

Aim & Objectives: To evaluate the oral health status in North East part of Chennai, Thiruvannamalai, Kanchipuram district of Tamilnadu.

Materials and Methods: The data collection was done from the hospital record. A total of 192 screening camps was been conducted based on contract with NGO, industries, schools (private and government). A total of 28601 subjects data were recorded from 1st January 2018 to 31st December 2018 by MTDI (Mirror Tactile Dental Inspection) method in north-east parts of Chennai, Kanchipuram, Thiruvannamalai.

Results: Based on zonal distribution, the prevalence of periodontal disease is 39.3% and oral cancer 0.2% which is high in other districts. The prevalence of dental caries 57.3% is high among North Chennai. In Thiruvannamalai the prevalence of Dental trauma is high of 1.3% and malocclusion of 6.1%. Among the 28601 subjects the prevalence of periodontal disease and dental caries increases with age. Based on distribution of camps the prevalence of periodontal disease is high in public camps (35%) than school camps whereas dental caries is high in public camp and private schools but is comparatively low in government schools.

Conclusion: The study helps to understand the prevalence of oral disease among the various zones in North East part of Tamil Nadu.

KEYWORDS

Oral health status, dental Camps, screening, MTDI

INTRODUCTION

Oral health is an essential component of general health throughout life.[1] Almost 8% of all Indian population reside in rural areas and have no access to dental care and the majorities are illiterate[2]. With an increasing life expectancy of Indian population, oral health plays a major role in improving the quality of life. The community oral health can be enhanced by screening, awareness and treatment programs. The need and aim of the study was to assess the oral health status of people in North East areas of Tamilnadu. The objectives were to determine the prevalence of dental caries**,** to determine the prevalence of periodontal disease, to determine the prevalence of malocclusion and to determine the prevalence of oral cancer. To assess the oral health status of the population, to facilitate planning and evaluation of future oral health programs.

MATERIALS AND METHODS

A descriptive cross sectional study was conducted in North East part of Chennai, Thiruvannamalai, Kanchipuram district of Tamil Nadu. The dental camps were organized based on the contract with government schools, private schools, NGO's, companies, old age homes, Puzhal central prison, utility services and private colleges. The data was collected from the hospital records of dental camps. Mobile van and portable equipment were used to ensure ease of transportation to the dental camps conducted from 1st January to 31st December 2018. Camps conducted were classified as public camps and school camps as private schools and government school camps. All patients who registered were eligible for participation. The data was segregated based on age, sex, location (zones). Records which were incomplete or missing were excluded. Thus, out of 28630 subjects only 28601 subjects were included. The data obtained were compiled systematically in the Microsoft Excel sheet and subjected to statistical analysis using Statistical package for social sciences software version 20. The data was subjected to descriptive and inferential statistics. The statistical analysis used was Pearson correlation coefficient and in terms of frequency and percentage for descriptive statistics.

RESULTS:

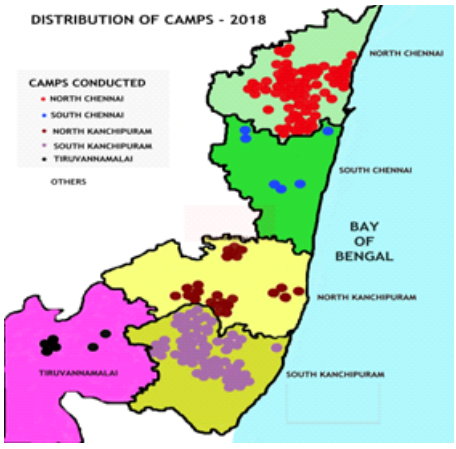
Out of the 192 camps held 28,601 were registered and 5529 received dental treatment. A Total of 28,601 participants with the mean age of 17.54±15 were included in the study. Among the participants 51.1% participants were male and 48.9% were female. The dental treatment like scaling, restoration and extractions were done. Based on zonal distribution, the prevalence of periodontal disease is 39.3% and oral cancer 0.2% which is high in other districts is shown in Graph 1&5. The prevalence of dental caries 57.3% is high among North Chennai is shown in Graph 2. In Thiruvannamalai the prevalence of dental trauma is high of 1.3% and malocclusion of 6.1% is shown in Graph 3&4. The percentage of periodontal disease and dental caries increases with age. Based on location, the percentage of periodontal disease is more increased, it is 38.5% in public camp, 23.6% in private school, 25.1% in government school. The percentage severity of Dental caries is 12.6% in public camps, 8.2% in private schools, 3.9% in government schools. The percentage of dental trauma is high in private schools (1%). The percentage of malocclusion and oral cancer is least among other disease.

Table 01: Frequency Of Camps Based Zone Distribution

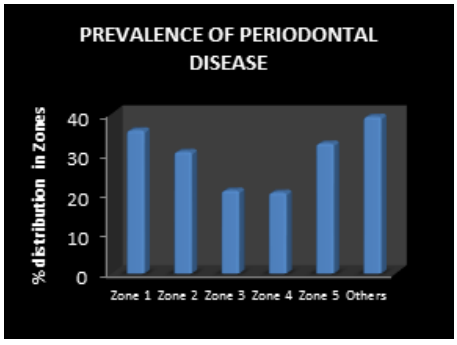
Zone Distribution	No.of Camps	Total No. Of Patients
Zone 1 North – Chennai	80	7783
Zone 2 South- Chennai	9	632
Zone 3 North- Kanchipuram	24	3018

Zone 4 South- Kanchipuram	59	9809
Zone 5 Thiruvannamalai	8	6241
Others- Kanniyakumari, Nagarcovil, Pudukotai, Villupuram And Salem	12	1118

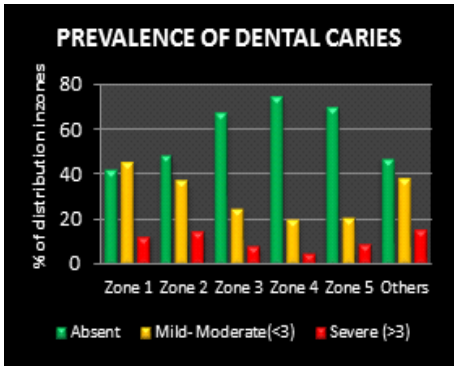
FIGURE 01: DISTRIBUTION OF CAMPS



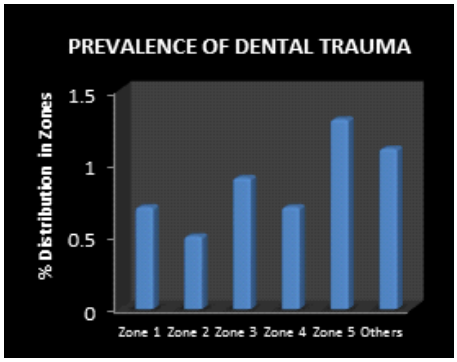
GRAPH 01: PREVALENCE OF PERIODONTAL DISEASE BASED ON ZONES



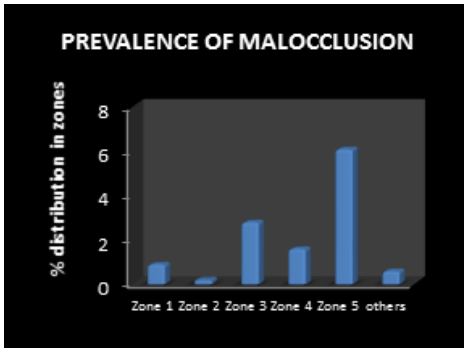
GRAPH 02: PREVALENCE OF DENTAL CARIES BASED ON ZONES



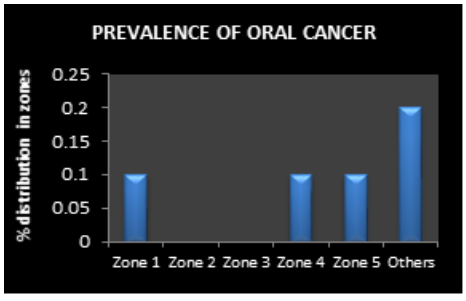
GRAPH 03: PREVALENCE OF DENTAL TRAUMA BASED ON ZONES



GRAPH 04: PREVALENCE OF MALOCCLUSION BASED ON ZONES



GRAPH 05: PREVALENCE OF ORAL CANCER BASED ON ZONES



DISCUSSION

The prevalence of dental caries is high among North Chennai whereas malocclusion and dental trauma in Thiruvannamalai district. Periodontal disease and oral cancer are high in Kanniyakumari, Nagercoil, Pudhukottai, Salem, Villupuram. The prevalene of dental caries in North Chennai is 57.3%. This is similarly to the study conducted by Nazeem Shah where they report the prevalence of dental caries as 50-60%[7]. However the results were found to be higher than that found in a study conducted by Doifode et al. in Nagpur (43.2%)[8]. In our study the prevalence of dental caries is high in private schools (8.2%) than government schools (3.9%). This may be due to lifestyle modification in recent time, which includes poor hygiene, frequent intake of sticky foods. The percentage of periodontal disease is 39.3% which is high in other districts. Calculus was the most frequently observed periodontal condition among public. Socioeconomic status of the public and inability to access to the dentist are some barriers to undergo treatment. A MEDLINE search including 47 studies indicated that 29 out of the 36 studies were in favor of the association between socio economic factors and periodontal disease[5]. The prevalence of oral cancer is 0.2% which is high in other districts. Poor oral hygiene also causes oral cancer. In one study, more than 85% of oral cancer patients had poor oral hygiene[9]. The prevalence of Malocclusion is 6.1% which is high in Thiruvannamalai district. The prevalence of dental trauma is found to be high in Thiruvannamalai district 1.3%. Usually people may seek treatment when there is pain or emergency. Thus encountering of dental trauma is somehow rare in public as well as school camps.

The average prevalence of malocclusion in the 10–12 years age group is reported to be 30%–35%[7]. However, the results obtained from our study shows lower percentage this was due to the observer's error whom may not consider malocclusion as a problem. During screening, underestimation of oral disease may occur. Eventhough the standardized methods like MTDI (Mirror Tactile Dental Inspection)[10], Training of examiners, Reliability and validity of examiners[11] with close agreement in assessment of public were followed. The underestimation may be due to participation of multiple examiners in screening program.

Accessibility of oral health care services has been identified as a key barrier or challenge for rural dwelling individuals and those living in long term care facilities[3]. Thus the need for oral health care is much more important among public. The dental camps were initiated with dental awareness talks, educating students and the common population about the common dental ailments, especially stressing on tooth decay and gum diseases and measures to prevent them. The main purpose of

the dental camps is to provide basic dental health education to the population and motivate dental hygiene maintenance. Different methods were adopted in educating and motivating the population. Once the camp schedule is intimated necessary instruments and checklist was prepared, each team is headed by a senior dentist. The instruments were sterilized and segregated into diagnostic, restorative, surgical instruments. Portable dental chairs along with dental awareness posters and models, necessary medications were taken. The patients in need of medicines were also provided with free of cost during the camp. The study results helps in knowing the distribution of oral disease in zones thus helps in proper planning of resources, manpower and improving treatment. Dental education materials should also be planned and executed based on area specific to enhance the awareness, knowledge and practices towards oral health care and maintenance. The article is compiled based on RECORD checklist[12].

CONCLUSION:

The study helps to know the prevalence of oral disease among the various zones in North East parts of Tamil Nadu. Improving patient's oral health by initiating oral hygiene measures, awareness programs and performing preventive procedure will decrease the overall burden of oral disease.

ACKNOWLEDGEMENT

I thank all my dedicated team members Dr. K. Santhosh, Dr. A. Santhosh for providing their support and services in the dental camps.

REFERENCES

1. S Vishnuprasad, M Shiva Kumar, PD Madhan Kumar, AM Suresh Babu. Oral health status and treatment needs of a Residential school children aged 3-15 years in Chennai city. J Indian Assoc Public Health Dent. 2011; 9(5): 309-313.
2. Bhat M. Oral hygiene status and treatment needs of a rural Indian fishing community. West Indian Med J. 2008;57:414.
3. Sandesh N, Nagarajappa R, Hussain SA, Ramesh G, Singla A, Prabhusankar K. Utilization of mobile dental vans at post graduate dental institutions in India. Oral Health Dent Manag. Mar 2014; 13(1): 20-6.
4. Mahesh Kumar P, Joseph T, Varma RB, Jayanthi M. Oral health status of 5 years and 12 years school going children in Chennai city – An epidemiological study. J Indian Soc Pedod Prev Dent 2005;23:17-22.
5. Klinge, Bjorn Norlund, Anders. A socioeconomic perspective on periodontal disease: a systemic review. Journal of Clinical periodontology 2005; 32: 314-25.
6. Jyothi S, Subha M. Oral Health Awareness among the General Population in Chennai. Research J. Pharm. and Tech. Nov 2017; 10(11): 1994-1997.
7. Naseem Shah. Oral and dental diseases: Causes, prevention and treatment strategies: Burden of disease, National Commission on Macroeconomics and Health; 2005. p. 275-98.
8. Doifode VV, Ambadekar NN, Lanewar AG. Assessment of oral health status and its association with some epidemiological factors in population of Nagpur, India. Indian J Med Sci 2000;54: 261-9.
9. R. Sankaranarayanan, K. Ramadas, G. Thomas et al., "Effect of screening on oral cancer mortality in Kerala, India: a clusterrandomised controlled trial," The Lancet, vol. 365, no. 9475, pp. 1927–1933, 2005.
10. Thompson NJ, Boyer EM. Validity of oral health screening in Field conditions: pilot study. J Dent Hyg 2006;80:1–10
11. Oral Health Surveys, Basic Methods. 5th ed.2013
12. Benchimol EI, Smeeth L, Guttmann A, Harron K, Moher D, Petersen I, Sørensen HT, von Elm E, Langan SM, the RECORD Working Committee. The REporting of studies Conducted using Observational Routinely-collected health Data (RECORD) Statement. PLoS Medicine 2015; in press.