ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 8, Issue, 07, pp.34148-34150, July, 2016

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

PREVALENCE OF DENTAL CARIES AMONG SCHOOL CHILDREN IN CHENNAI

Roshna, K. R. and *Dr. R. Pradeep Kumar

Saveetha Dental College and Hospital, Velappanchavdi, Chennai-77

ARTICLE INFO

Article History:
Received 10th April, 2016
Received in revised form
09th May, 2016
Accepted 23rd June, 2016
Published online 16th July, 2016

Key words:

Prevalence,
Dental caries,
School children.

ABSTRACT

Background: Dental caries is highly prevalent and a significant public health problem among children throughout the world. The prevalence and incidence of dental caries in a population is influenced by a number of risk factor such as age, sex, socio-economic status, dietary patterns and hygienic habits. The main objective of the study was to determine the prevalence of dental caries among school children in Chennai.
Aim and objectives: This study is to assess the prevalence of dental caries among 3-15 year old school children in Chennai.
Methods: A dental screening camp conducted for 570 school children in Chennai.
Results: The prevalence of dental caries was found higher among males. The mean decayed teeth were found to be higher in 3-5year old children when compared to 3 to 15 year old school children.
Conclusion: In the present study, it was observed that approximately half of children are caries free. Still as public health people. It is important to maintain low prevalence of caries among children by increasing awareness and promoting oral health care strategies and we have to aim at achieving DMFT for all school going children.

Citation: Roshna, K. R. and Dr. Pradeep Kumar, 2016. "Prevalence of dental caries among school children in Chennai", *International Journal of Current Research*, 8, (07), 34148-34150.

INTRODUCTION

Dental health is often neglected by the majority of population especially developing countries like India and the prevalence of dental caries is very high particularly among school children and adolescents. Oral health is an important component of general health, with dental caries affecting a person's ability to eat, speak or socialize. (Parker and Jamieson, 2007) Dental caries is the most prevalent oral disease and it has multifactorial causes. There is practically no geographic area in the world whose inhabitant does not excibite some evidence of dental caries. It affects both the sexes, all races, all socio-economical status and all age groups. (Prakash *et al*., 1999) Scientific researches still continues to make better diagnosis, prevention, and treatment of dental caries. Schools are the best centre for effectively implementing the comprehensive health care programme. In order to assess the prevalence, then it is necessary to know the extent and severity of the disease. The prevalence of dental evidence shows that this decline has ceased in certain developed countries (Prakash *et al*., 1999). The localized prevalence data is essential not only to understand the disease, but also plays a vital role in prevention and treatment planning. In developing countries, children have a high prevalence of dental caries affecting primary dentition and permanent dentition. Hence the aim of the study is to assess the prevalence of dental caries among 3-15 year old school children in Chennai city.

Corresponding author: Dr. R. Pradeep Kumar, MDS.M.Sc.,
Reader, Saveetha Dental College and Hospital, 162, Poonamallee High Road, Velappanchavdi, Chennai-77

MATERIALS AND METHODS

A cross sectional study was carried out among 570school children in 3 schools in Chennai population. A pilot study was carried out in order to test the feasibility and the sample size was estimated to be 570 school children. School children aged 3-18 years who were residents of Chennai city are included in this study, whereas individuals suffering from systemic illness and who were not willing to participate in the study were excluded. Prior to start the study and consent was obtained from the child's parent. The children were examined individually in the school premises by the examiners using plane mouth mirrors, tweezers, and probe. The examination was done under day natural light. The age of children was taken from the school records. The children were examined for the presence of decay. The tooth was considered carious if there was visible evidence of a cavity, including untreated dental caries. No radiographs were taken during the study.

RESULTS

Table 1. Distribution of study population

Age(Yrs)	Male		Female		Total	
	N	%	n	%	N	%
3-5	123	21.5	75	13.1	198	34.7
6-9	73	12.8	55	9.6	128	22.4
10-12	47	8.2	56	9.8	103	18.1
13-15	73	12.8	69	12.1	142	24.9

Table 2. Gender wise Caries prevalence

Caries Prevalence	Male	Female	Total
Caries free children	146	123	269
Children with decay	169	132	301
Total	315	255	570
Percentage	55.2	44.7%	100%
Caries prevalence	29.6%	23.1%	52.8%

Table 3. Overall mean decay scores

Age(Yrs)	Male	Mean decay	Female	Mean decay
2-5	123	2.09	75	2.5
6-9	73	2.8	55	2.4
10-12	47	1.8	56	1.8
13-15	77	1.8	69	2.5

Mean decay of this study: 2.27±0.4

Table 1 and **Table 2** shows distribution of the participants according to gender and age. The mean decay score of this study group was 2.27±0.4. The prevalence of dental caries was 52.8%.

DISCUSSION

In the present study reveals that approximately half of the children are caries affected.Table1 shows that, in primary dentition especially 3-6 year old children are more prone for caries. Dental caries which affect amongst young children is a serious public health problem in both developing industrialized countries. It can begin early in life, progresses rapidly in those who are at high risk, and often goes untreated. Its consequences can affect immediate and long term quality of life of the child's family as well. Hence in this study oral health education was provided to all the teachers and parents who accompanied the participants. S.A. Al-Mutawa *et al*. done a study, in that the age group of 4-6 years school children to assess the caries status in the primary dentition since this age group is often regarded as global monitoring age group and international comparison age group for general and oral health status (Wyne, 2008). ZaferAzizi *et al*. done a study which shows 76% of children with dmft. Similarly when compared to other developing countries, recent studies in Pakistan and India revealed that caries prevalence in preschool children range between 50-60%. (4) In the present study it is observed that it is 35% and it can considered much better than all these studies. In the other hand, caries prevalence in preschool children in some Arab countries like Saudi Arabia has been found to be high and it approaching 75%. Compared to our study, a cross sectional study of 1000 pre school children was done by Narendar Dawani *et al*. in Pakisthan, in their study caries prevalence was 51%. (Narendar Dawani *et al*., 2012)

There are many studies which shows the treatment requirement is over 92%.This could be because of negligence or lack of awareness about the importance of primary teeth. There are studies revealed that approximately more than half of the study population suffered from dental caries in their primary dentition. However, some local studies have determined caries prevalence among preschool children to be somewhat lesser compared to be current estimate, even though the disparity is trivial. (Paul, 2003) A study conducted in Islamabad, reported a high dmft score amongst primary dentate children but the study sample included children who were already suffering from caries and visited the hospital for treatment purpose. (Begzati *et al*., 2011) The degree of satisfaction and attitudes towards oral and regular general health were high for both genders (Simratvir *et al*., 2009) however, regular oral hygiene practices were reported more frequently among girls, similarly in our study boys are more affected than girls. Most children reported visiting the dentist for symptomatic treatment of dental caries rather than for early diagnosis and prevention. At this stage it is crucial to increase awareness among children and their parents of the oral health consequences of high sugar consumption. In addition, community based oral health programme, fluoride prevention programmes and preventive oriented public dental health care services should be made available and accessible to all children and especially for those from the disadvantaged population. Untreated oral diseases in children frequently lead to serious general health, significant pain, and interference with eating and lost school time. One of the factors to be considered when planning for the required growth in dental care facilities is the prevalence of dental diseases and their treatment need in the population. Joyson Moses *et al*. done a study to assess the prevalence of dental caries, socio- economic status and treatment needs among 5-15 year old school going children of Chidambaram, the results were similar when compared to the present study which shows that boys are more affected than girls in all groups (Joyson Moses, 2011).

Conclusion

In the present study, it was observed that approximately half of children are caries free. Still it is important to maintain low prevalence of caries among children by increasing awareness and promoting oral health care strategies and it will improve the situation of the oral and dental health in young children. At this stage it is crucial to increase awareness among children of the oral health consequences of high sugar consumption. In addition, community based oral health promotion, fluoride prevention programmes and preventive oriented public dental health care services should be made available and accessible to all children. It is always possible to prevent dental caries in primary dentition and lower the caries prevalence in young children starting with good dental health education of the parents and teaching them how to take care of their children's teeth as soon as they start to erupt. Emphasis on babies feeding habits as well as the use of kids toothpaste is also important. Parents should be encouraged to take their children to the dentist before the age of 1 year. Parents should have an idea about dental health programmes and topical fluoride

application campaigns. Mobile dental clinics would probably help in reaching rural areas that dental services. Preventive measures campaigns including topical fluoride application, fissure sealants, and healthy diet promotion would be a lot of help to improve the situation of the oral and dental health in young children who go to nurseries and kindergartens.

REFERENCES

Begzati A, Mega K, Siegenthaler D, *et al*. 2011. Dental health evaluation of children in Kosovo. *Europ J of Dent*, 5:32-39.

Joyson Moses, 2011. Prevalence of dental caries, socio economic status and treatment needs among 5 to 15 year old school going children of Chidambaram. *Journal of Clinical and Diagnostic Research,* Feb, Vol-5(1):146-151.

NarendarDawani, NighatNisar, Nazeer Khan, Shahbano Syed and Navara Tanweer:prevalence and fatos related to dental caries among preschool children of Saddar town, Karaachi, Pakistan:a cross sectional study, *BMC Oral Health*, 20121472-6831/12/59.

Parker E J. and Jamieson LM. 2007. Oral health comparisons between children attending an Aboriginal health service and a Government school dental service in a regional location. *Rural Remote Health*, 7:625.

Paul TR. 2003. Dental health status and caries pattern of preschool children in AL-Kharj, Soudi Arabia. *Saudi Med J*., 24:1347-1351.

Prakash H, Sindhu SS and Surendran K R. 1999. Prevalance of Dental Caries among delhi school children. *J Ind Dent Assoc*., 70:12-14.

Simratvir M, Moghe GA, Thomas AM, Singh N, Chopra S. 2009. Evaluation of caries experience in 3-6-year-old children, and dental attitudes amongst the care-givers in the Ludhiyanacity. *J Indian Pedod Prev Dent*, ,27:164-169.

Wyne AH. 2008. Cariesprevalence, severity, and pattern in preschool children. *J Contemp Dent Pract*., 3:024-031.

ZaferAzizi, 2014. The prevalence of dental caries in primary dentition in 4to 5 year old preshool children in NorthrnPalasthine. *Int Journal of Dentistry*.

****