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Original Research

Assessment of prevalence of dental caries among school going children in a known population

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***ABSTRACT*:**

Background: Dental caries are most common among the spectrum of oral diseases and are still a major public health burden in developing countries, affecting 60%-90% of school children and a number of adults. Hence; the present study was undertaken for assessing the prevalence of dental caries among school going children in a known population. **Materials & methods:** A total of 325 school going children were enrolled in the present study. Complete demographic details of all the patients were obtained. A self-framed questionnaire was made and was given to parents/guardians of all the subjects for obtaining the detailed medical, clinical and demographic data. Mouth mirror, explorer and probe were used for doing clinical oral examination of all the children. Presence of any catch or caries lesion was recorded separately. All the examination procedures were carried out under the hands of skilled and experienced dental surgeons. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software. **Results:** Among these subjects, dental caries was found to be present in 131 children. Therefore; the overall prevalence of dental caries was found to be 40.31%. Majority of these children belonged to the age group of 9 to 12 years. 13.54 percent of the children with dental caries belonged to the age group of 12 to 15 years. Out of 131 patients with dental caries, 78 patients were males while the remaining 53 patients were females. **Conclusion:** School going children are accompanied by presence of significant proportion of caries lesions.

Key words: Prevalence, Dental caries, School going

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INTRODUCTION

Oral health is defined as a state of the mouth and its associated structures, where there is no disease or pain and able to function well to masticate food and state of teeth which are of a socially acceptable appearance. Oral health is integral to general health and essential for well-being. Dental caries are most common among the spectrum of oral diseases and are still a major public health burden in developing countries, affecting 60%-90% of school children and a number of adults.[1-3]

Studying the prevalence of dental caries and its associated factors in a community assists in determining its public health importance and means of controlling it. Dental caries is behavioural related; therefore, its occurrence and severity is likely to vary between communities with different risk behaviours.[4, 5] Hence; the present study was undertaken for assessing the prevalence of dental caries among school going children in a known population.

MATERIALS & METHODS

The present study was conducted with the aim of assessing the prevalence of dental caries among school going children in a known population. A total of 325 school going children were enrolled in the present study. Exclusion criteria for the present study included:

- Patients with presence of any developmental disturbance of tooth,
- Patients with presence of any other systemic illness,
- Patients with presence of any metabolic disorder
- Patients more than 15 years of age

After meeting the exclusion criteria, complete demographic details of all the patients were obtained. A self-framed questionnaire was made and was given to parents/guardians of all the subjects for obtaining the detailed medical, clinical and demographic data. Mouth mirror, explorer and probe were used for doing clinical oral examination of all the children. Presence of any catch or caries lesion was recorded separately. All the examination procedures were carried out under the hands of skilled and experienced dental surgeons. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software. Chi-square test was used for assessing the level of significance.

RESULTS

In the present study, a total of 325 school going children were analyzed. Among these subjects, dental caries was found to be present in 131 children. Therefore; the overall prevalence of dental caries was found to be 40.31%. Majority of these children belonged to the age group of 9 to 12 years. 13.54 percent of the children with dental caries belonged to the age group of 12 to 15 years. In the present study, out of 131 patients with dental caries, 78 patients were males while the remaining 53 patients were females.

Table 1: Prevalence of dental caries

Parameter		Number of patients	Percentage
Age group (years)	Less than 8	39	12
	9 to 12	48	14.77
	12 to 15	44	13.54
Overall		131	40.31

Table 2: Gender-wise distribution

Gender	Number of patients	Percentage
Male	78	24
Female	53	16.37
Overall	131	40.31

DISCUSSION

According to the WHO, dental caries is defined as "the localized, post-eruptive, pathological process of external origin involving softening of the hard tooth tissue and proceeding to the formation of a cavity." It is a hastily succeeding disease among preschool children which involves the primary maxillary anterior teeth and posterior teeth, whereas the mandibular anterior teeth are less affected because of the rapid saliva formation which helps to wash out the ingredients required for bacterial growth.[6-8] Dental caries is known to have multifactorial etiology with a number of variables that influence the prevalence of the condition. In the past, innumerable studies and surveys have been conducted to determine the prevalence of the disease and the variables associated with its prevalence across the globe. Still a number of towns and districts lack data on the prevalence of oral health problems which is very essential to formulate an action plan to combat them.[9, 10]

In the present study, a total of 325 school going children were analyzed. Among these subjects, dental caries was found to be present in 131 children. Therefore; the overall prevalence of dental caries was found to be 40.31%. Majority of these children belonged to the age group of 9 to 12 years. 13.54 percent of the children with dental caries belonged to the age group of 12 to 15 years. Hiremath A et al assessed the prevalence of dental caries and treatment needs of 6-11years old Indian school children. Sampling frame consisted of 6-11years old primary school children. Study sample consisted of 13,200 children selected from 10 talukas of Belgavi District, Karnataka, India. Clinical examination for dmft and DMFT was carried out in the school premises by five teams, each consisting of one faculty, three postgraduate students and five interns from the KLE VK Institute of Dental Sciences, Belagavi, Karnataka, India. The examiners were trained and calibrated by the principal investigator. The overall caries prevalence was 78.9%, mean dmft was 2.97±2.62 and mean DMFT was 0.17±0.53. The decayed teeth component was the principal component in both dmft and DMFT indices. The mean dmft in boys was higher compared to girls and it was found to be statistically significant ($p<0.05$). This study provided with the baseline data, using which treatment was provided to all the children screened.[10]

In the present study, out of 131 patients with dental caries, 78 patients were males while the remaining 53 patients were females. Mwakayoka H et al determined dental caries status and associated factors in 2 to 4-year-old children in Mbeya city. A cross sectional study was conducted among 525 children aged 2-4 years and their parents/caregivers. Caries was assessed using caries assessment spectrum and treatment index, oral hygiene by visual inspection for visible plaque on index teeth, and dietary and oral hygiene habits by a questionnaire. Caries free children for dmft1, dmft2 and dmft3 were 79.8%, 83.8% and 94.7% and caries experience was 0.49, 0.4 and 0.10 respectively. Older age; and frequent consumption of factory made sugary foods/snacks at age 1-2 years were associated with caries. Prolonged breastfeeding for more than 1 year and breastfeeding at night had no association with dental caries. The prevalence of dental caries was very low. Older age and frequent consumption of factory made sugary foods at age 1-2 years were associated with higher odds of developing dental caries.[11] Maintaining primary dentition in a healthy condition is important for the well-being of the child. Primary dentition is required for proper mastication, esthetics, phonetics, space maintenance, and for prevention of aberrant habits. Reducing dental plaque formation, changing the bacterial composition of plaque, and modification of dietary habits are essential for the prevention of dental caries. Prevention of the progress of the ECC can be achieved with the aid of restorations, diet counseling, educating parents regarding decay promoting

feeding behaviors, maintain good oral hygiene, and the use of preventive agents like topical fluorides.[9-11]

CONCLUSION

School going children are accompanied by presence of significant proportion of caries lesions. Therefore, adequate educational workshops should be initiated for increasing the awareness about oral health among this age- group of population.

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