Prevalence of dental caries in school going children

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Abstract

Background: To evaluate the prevalence of dental caries in school going children. **Materials & methods:** The study was carried out on 150 school going children. Children were of age group 4-7 years. This study was completed in a span of 1 month. Complete screening of children was done. The children were examined individually in the school premises by using plane mouth mirrors and community periodontal index probe. The examination was done under natural day light using WHO criteria. **Results:** In this study, a total of 150 school children were enrolled. Out of which 90 were boys and 60 were girls. The prevalence of dental caries was 73.4% among boys and 63.3% among girls. The girls had lower dmft scores than boys and the overall prevalence was 68.34%. According to residential area, the rural population had 58.4% and urban had 54.5% of caries prevalence rate. **Conclusion:** The prevalence of dental caries among 4-7 years old children is high.

Keywords: dental caries, prevalence, children.
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INTRODUCTION

Dental caries is the most common type of oral health problem globally. Despite credible scientific advances and the fact that caries is preventable, the disease continues to be a major public health problem. In developing countries, changing lifestyles and dietary patterns are markedly increasing incidence of caries. [1,2]

Dental caries is the most prevalent chronic disease affecting humans irrespective of age, sex, race and socioeconomic status. [3] As around 90% of school children and most of the adults have been affected by dental caries, hence it has been considered as the most important global oral health burden. [4] Epidemiological surveys are important for monitoring trends in dental caries and for assessing the dental needs. [5] According to the World Health Organization (WHO 1997), detection of dental caries in surveys has been performed at cavitation level because examiners frequently cannot reliably assess the non-cavitated lesions. However, the

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inclusion of non-cavitated caries lesions is necessary since these can be arrested through certain preventive measures and lowering the cost of restorative treatment. [6]

Considering that school age is an influential period during which every child extends health related behaviors, beliefs, and attitudes and that the disease is irreversible, efforts should be focused on revealing factors that predispose/resist students to dental caries during this stage. [7] An extent spectrum of factors influencing this disease has been documented in the literature. However, because socioeconomic factors have the possibility to influence the prevalence of dental caries in children through their effects on oral health practices and parental oral health knowledge and attitudes as well as health care accessibility, recently, they have concerned the investigators. [8,9] Hence, this present study was conducted to show the prevalence of dental caries among school going children.

MATERIALS & METHODS

The study was carried out on 150 school going children. Children were of age group 4-7 years. This study was completed in a span of 1 month. Complete screening of children was done. The children were examined individually in the school premises by using plane mouth mirrors and community periodontal index probe. The examination was done under natural day light using WHO criteria. The children were examined for the presence of decay, missing and filled teeth (dmft) index was used to record primary dentition status. The dmft index values are recorded and mean deviation is calculated. Data was collected and evaluation was done. Results were analysed using SPSS software.

RESULTS

In this study, a total of 150 school children were enrolled. Out of which 90 were boys and 60 were girls. The prevalence of dental caries was 73.4% among boys and 63.3% among girls. The girls had lower dmft scores than boys and the overall prevalence was 68.34%. Restored teeth were only 5.8% and extracted teeth accounted for 2.9%. The mean dmft score for boys was 2.82 and girls was 2.74. According to residential area, the rural population had 58.4% and urban had 54.5% of caries prevalence rate.

Table 1: Prevalence of dental caries

Variables	Number of children examined	Children affected	Percentage %	Score dmft (mean)
Gender				
Boys	90	66	73.4	2.82
Girls	60	38	63.3	2.74
Total	150	104	68.34	2.78

Table 2: according to residence prevalence rate of dental caries

Residence	Number	Percentage %
Rural	60	58.4
Urban	90	54.5

DISCUSSION

Dental caries is a common dental disease occurring during childhood and it continues to be a major public health problem. [10] The World Health Organization (WHO) has ranked it as number three among all chronic non-communicable diseases that require worldwide attention for prevention and

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treatment. [11] ICDAS (International Caries Detection and Assessment system) is a universally accepted system to evaluate the prevalence of dental caries, in which estimation of early enamel lesions, helps in planning early treatment and monitoring caries pattern at the population level. [12] In the present study, a total of 150 school children were enrolled. Out of which 90 were boys and 60 were girls. The prevalence of dental caries was 73.4% among boys and 63.3% among girls. The girls had lower dmft scores than boys and the overall prevalence was 68.34%. Restored teeth were only 5.8% and extracted teeth accounted for 2.9%.

Dental caries is the most common type of oral health problem globally. It is known to have multifactorial etiology with a number of variables that influence the prevalence of the condition. One of the study was carried out with an aim to determine the prevalence of dental caries in children of 5 to 13 years. It was a descriptive type of epidemiological study and the design adopted for the study was cross-sectional. No active intervention and follow-up examinations were performed. A total of 1,000 children of 5 to 13 year age group were examined for the study. The study population was categorized based on age, sex, location, and socioeconomic status. [13] The examination procedure and criteria were those recommended by the World Health Organization (WHO). The difference in the caries prevalence between the age groups and between the socioeconomic level was very highly significant (p = 0.000). There was a statistically significant difference observed in the prevalence of caries between the sexes (p = 0.016) as well as between urban and rural (p = 0.018). It is expected that the data obtained with the help of this survey will prove to be very useful to the concerned authorities in handling dental caries which is a biosocial disease rooted in the technology and economy of our society. [14] In present study, the mean dmft score for boys was 2.82 and girls was 2.74. According to residential area, the rural population had 58.4% and urban had 54.5% of caries prevalence rate.

Another study was conducted to determine the prevalence of dental caries in primary teeth among 4-6 years old school going children in the Namakkal District. The age group selected for this study ranged from 4 to 6 years of age. Each child was examined in their respective schools by one of the four calibrated examiners and decay, missing and filled teeth (dmft) index was recorded along with demographic details. Of 850 children examined, 560 (65.88%) children had dental caries. Mean dmft score was 2.86. Prevalence of dental caries was higher in boys (69.6%) than in girls (61.5%). The untreated decay teeth accounted for 92.4%. [15]

CONCLUSION

The prevalence of dental caries among 4-7 years old children is high.

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