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ORIGINAL RESEARCH

Assessment of Prevalence of Dental Caries among School Going Children: A Clinical Study

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ABSTRACT:

Background: For the well-being of an individual, it is important to maintain oral health along with general health. Among all other oral diseases, dental caries is the most common pathologic oral lesions affecting the humans. Hence; under the light of above mentioned data, we have planned the present study to assess the prevalence of dental caries among school going children. **Materials & methods:** The present research involved evaluation of prevalence of dental caries among school going children. A total of 300 children within the age group of 8 to 15 years were included in the present study. Age-wise and gender-wise distribution of all the subjects was done. Mouth mirror and probe was used for evaluating the oral cavity of all the subjects and for assessing the presence of dental caries. All the results were analyzed by SPSS software. **Results:** Overall prevalence of dental caries among school going children in the present study was 40 percent. While assessing the prevalence of dental caries among school going children divided on the basis of gender, non- significant results were obtained. **Conclusion:** Dental caries has a high prevalence rate among school going children.

Key words: Caries, Dental, Prevalence

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INTRODUCTION

Oral health in humans refers to that oral status in which all the associated structures are disease and pain free, along with which, are in a state of adequate functional activity for carrying out mastication and other oral functions.[1-3] For the well-being of an individual, it is important to maintain oral health along with general health. Among all other oral diseases, dental caries is the most common pathologic oral lesions affecting the humans. It also represents a major burden on the society because of its high prevalence.[4, 5]

Hence; under the light of above mentioned data, we have planned the present study to assess the prevalence of dental caries among school going children.

MATERIALS & METHODS

The present research involved evaluation of prevalence of dental caries among school going children. Written consent was obtained from the parents/guardians of all the subjects before starting of the study. A total of 300 children within the age group of 8 to 15 years were included in the present study. Age-wise and gender-wise distribution of all the subjects was done. Mouth mirror and probe was used for evaluating the oral cavity of all the subjects and for assessing the presence of dental caries. Exclusion criteria for the present study included:

- Subjects with presence of any systemic or metabolic disorder,
- Subjects with special health care needs,

After meeting the exclusion criteria, detailed demographic and clinical data records of all the subjects were obtained and were recorded in Microsoft excel sheet followed by analysis with SPSS software. Chi- square test was used for evaluation of level of significance; with P- value of less than 0.05 was taken as significant.

RESULTS

In the present clinical study, we analyzed a total of 300 school going children with mean age of 10.5 years. 40 percent of the children were less than 10 years of age. 26.7 percent of the children were between 10 to 12 years of age. 33.3 percent of the children were more than 12 years of age as shown in **Table 1**. 60 percent of the subjects of the present study were females while the remaining were males as shown in **Table 2**. Overall prevalence of dental caries among school going children in the present study was 40 percent as shown in **Table 3**. 40 percent of the patients with dental caries belonged to the age group of less than 10 years. 22.5 percent of the patients belonged to the age group of 10 to 12 years as shown in **Table 4**. No- significant results were obtained while comparing the prevalence of dental caries among school going children divided on the basis of age (**P- value > 0.05**). While assessing the prevalence of dental caries among school going children divided on the basis of gender, non- significant results were obtained as shown in **Table 5** (**P- value > 0.05**).

Table 1: Age-wise distribution of subjects

Age-group (years)	Number of subjects	Percentage
Less than 10	120	40
10 to 12	80	26.7
More than 12	100	33.3
Total	300	100

Table 2: Gender-wise distribution of subjects

Gender	Number of subjects	Percentage
Male	120	40
Female	180	60
Total	300	100

Table 3: Overall prevalence of dental caries among children

Parameter	Number of children with dental caries	Percentage of children with dental caries
Prevalence	120	40

Table 4: Prevalence of dental caries among children of different age group

Age group (years)	Number of children with dental caries	Percentage of children with dental caries	P- value
Less than 10	48	40	0.52
10 to 12	27	22.5	
More than 12	45	37.5	
Total	120	100	

Table 5: Prevalence of dental caries among children of different gender

Gender	Number of children with dental caries	Percentage of children with dental caries	P- value
Males	65	54.17	0.40
Females	55	45.83	
Total	120	100	

DISCUSSION

Around the world, dental caries has a very high prevalence rate in comparison to other oral diseases. In developing countries like India, data relation to prevalence of dental caries is variable. Studies conducted in the past literature are mostly focused to smaller communities. In updating the recent trends of the diseases, epidemiological studies play a very crucial role.[6- 8] Hence; under the light of above mentioned data, we have planned the present study to assess the prevalence of dental caries among school going children.

In the present study, we observed that 40 percent of the children were less than 10 years of age. 26.7 percent of the children were between 10 to 12 years of age. 33.3 percent of the children were more than 12 years of age. 60 percent of the subjects of the present study were females while the remaining were males. Karunakaran R et al assessed the incidence of dental caries among school going children of 4 to 6 years of age in the Namakkal District. They assessed a total of 850 school going children in 26 schools. Subjects in their study group belonged to the age group of 4 to 6 years. Four calibrated examiners were employed for examination of children in their respective schools. Decay, missing and filled teeth (dmft) in all the subjects was assessed along with the demographic data. The entire research was conducted in a time period of 1 month. Prevalence of dental caries in their study was found to be 65.88 percent. A total of 560 children out of 850 school going children had dental caries. Mean dmft score observed in their study was 2.86. Among boys, the prevalence of dental caries was higher in boys in comparison to girls. 92.4 percent was the untreated decay teeth. From the results, they concluded that in Namakkal district, school going children had high prevalence of dental caries.[9]

In the present study, overall prevalence of dental caries among school going children in the present study was 40 percent. 40 percent of the patients with dental caries belonged to the age group of less than 10 years. 22.5 percent of the patients belonged to the age group of 10 to 12 years. Hiremath A et al evaluated the incidence of dental caries and treatment needs of 6-11years old Indian school children. Inspecting outline comprised of 6-11years old elementary school youngsters. Study test comprised of 13,200 kids chose from 10 talukas of Belgavi District, Karnataka, India. Clinical examination for dmft and DMFT was completed in the school premises by five groups, each comprising of one

workforce, three postgraduate understudies and five assistants. The inspectors were prepared and aligned by the central examiner. The general caries predominance was 78.9%, mean dmft was 2.97±2.62 and mean DMFT was 0.17±0.53. The rotted teeth segment was the key part in both dmft and DMFT files. The mean dmft in young men was higher contrasted with young ladies and it was observed to be factually critical. This investigation furnished us with the pattern information, utilizing which treatment was given to every one of the youngsters screened.[10]

In the present study, no- significant results were obtained while comparing the prevalence of dental caries among school going children divided on the basis of age. While assessing the prevalence of dental caries among school going children divided on the basis of gender, non-significant results were obtained. Saravanan S et al assessed caries prevalence and treatment needs among children aged 5-10 years. Kids contemplating in all the elementary schools (six schools) in the field hone region of the Rural Health Center of the Faculty of Medicine, Annamalai University, Chidambaram, were overviewed. Every kid was clinically inspected in the schools by aligned analysts. Five hundred and eight 5-multi year-old fashioned kids (247 young men and 261 young ladies) were reviewed. Caries commonness was 71.7 and 26.5% in essential and changeless dentition, individually. The mean dmft and rotted missing filled tooth (DMFT) scores were 3.00 and 0.42 individually. The mean dmft diminished with age ($P < 0.01$) while the mean DMFT expanded with age ($P < 0.001$). In spite of the fact that the mean dmft scores were not measurably noteworthy distinctive for the two genders, the mean DMFT score was observed to be higher among young ladies than among young men ($P < 0.02$). The whole dmft/DMFT esteem spoke to the 'rot' segment as it were. There was a solid requirement for single surface reclamations (60.6%). In the WHO record age (5-6 years), the caries predominance was 70.2% (29.8% without caries) with a mean dmft estimation of 3.54 +/ - 3.71. Dental caries is a critical general medical issue in this populace. A broad framework to give essential oral human services must be produced in the provincial territories of India.[12]

CONCLUSION

Under the light of above obtained data, the authors conclude that dental caries has a high prevalence rate among school going children. However; further studies are recommended.

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