



**ORIGINAL RESEARCH PAPER**

**Dentistry**

**A STUDY OF DENTAL CARIES AMONG SCHOOL GOING CHILDREN NEAR A PRACTICE FIELD AREA OF A TERTIARY MEDICAL INSTITUTE OF RAIPUR**

**KEY WORDS:** Dental caries , rural , school children

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**ABSTRACT**

**Introduction:** Dental caries are a public health problem in India. The problem is dreadful among school children particularly of lower socio-economic status. The present study was planned to assess the magnitude of dental caries among students after the eruption of permanent dentition and to find out the association of socio-demographic characteristics with the prevalence of dental caries as such studies are needed in this rural part to reduce RHD Burden.  
**Method:** Study was designed as a cross sectional Analytical study . Study was conducted in a rural high school near a practice field area of a tertiary Medical Institute. Students studying and aged 13-14 years were checked for presence of dental caries and asked about the hygienic habit and socio-demographic characteristics with the help of predesigned questionnaire. Students were chosen by systematic random sampling .  
**Results:** Among Total students participated in the study the overall magnitude of dental caries was found to be 72%. The prevalence of dental caries was significantly higher among students belonging to family having less per capita monthly income. The prevalence was significantly lower among students who had brushing habits twice a day as compared to those having brushing habit once daily or not every day.  
**Conclusion:** Dental caries can be prevented by proper hygienic habits. Awareness among students and their guardians should be generated for primary prevention of this condition. Early diagnosis and prompt treatment can prevent further damage and can save the teeth

**INTRODUCTION**

Dental health is often neglected by a vast majority of population. In India the prevalence of dental carries is very high particularly among the children and adolescents. The prevalence is even higher in rural people and among school children. The absence of practice of healthy habits often leads to this type of problem. Dental caries is not only a medical problem but many sociodemographic factors are said to be associated with this. Usually the habit of taking care of dental health is obtained from the parents and other senior members of family. In India where the birth rate is still high and there is less spacing between two births, mothers often are not capable of giving proper care to all the children. The unhealthy practice of children often leads to many medical problems some of which can cause permanent damage. If dental caries develops after the eruption of permanent dentition and proper care is not taken, it may lead to permanent damage and spread of infection throughout the body can also occur. Utmost care must thus be taken so that dental caries should not develop. Early diagnosis with prompt treatment is also necessary. The present study was conducted in a rural high school near a practice field area of a tertiary Medical Institute of Raipur District , CG , India to assess the prevalence of dental caries among students after the eruption of permanent dentition to find out the association of socio-demographic characteristics with the prevalence of dental caries.

**METHODOLOGY**

After local ethical committee approval study was done Over a period of 3 months .A cross sectional Analytical Study was conducted in rural high schools near a practice field area of a tertiary Medical Institute of Raipur District CG, India . Students studying and aged 13-14 years were checked for presence of dental caries and asked about the hygienic habit and socio-demographic characteristics with the help of predesigned questionnaire. 4 schools were randomly selected Students were chosen by systematic random sampling.

The students OF 13-14 years were chosen as they have complete eruption of permanent dentition except 3rd molar. The study was done by interviewing the students using a pre-designed, semi-structured questionnaire and an examination

of the condition of the teeth was done by dentist.

A significance level of 0.05 was used in all analyses. Information was analysed by using the Microsoft Excel and SPSS ( Version 20 , IBM , USA ) . Chi square test was used to test the statistical significance.

**RESULTS**

Majority of the students were 13 years and 14 years old . 56.14% students were male and 43.86% were female. 99 % students belonged to Hindu religion and the rest students were Muslims. As far as socio-economic status is considered, using modified Prasad scale, majority belonged to lower middle and upper lower socioeconomic class (22.81% and 33.33% respectively). Only 7.89% students belonged to upper class. 49.12% students had one sibling, 22.81% had two siblings and 28.07% students were the only child of their parents

According to physical examination, 82 (72%) students had dental caries. Prevalence of dental caries was assessed according to different socio-demographic parameters. It is seen that 61.2% of the students aged 13 years, and 80% of the students aged more than 13 years had dental caries. So, prevalence of dental caries increased with increase in age and this difference is statistically significant (p=0.027). It was seen that 68.8% of boys had dental caries as compared to 76% girls having the same problem. However, this difference is not significant statistically. Hindu students as compared to Muslim students had dental caries though the difference is not significant statistically. Median per capita income of the family of the students was found to be Rs. 1700/- and the students were grouped into two categories based on this median per capita income. It is seen that 84.2% of the students belonging to the less income group had dental caries in comparison to 59.65% students in higher income group and this difference is statistically significant.

Students were asked about their habit of brushing the teeth. It is seen that 47.4% of the students who used to brush twice a day had dental caries as compared to 76.84% of the students having habit of brushing the teeth either once daily or not every-day suffered from dental caries. This difference is

statistically significant. 56.41% of the students having habit of washing mouth after taking food always or most of the time had presence of dental caries. The prevalence is 80% among students who rarely used to wash mouth after taking food. This difference is again statistically significant. 95.5% of the students having toothache were suffering from dental caries; on the other hand those did not have toothache, 39.6% of them were suffering from dental caries and this difference is again statistically significant.

### DISCUSSION

Dental caries is one of the leading problems in school going children as well as in adults. The World Health Organization (WHO) has recognized dental caries as a pandemic and reported its prevalence among school children to range from 60-90%<sup>1</sup>. Present study has found out the prevalence of dental caries to be as high as 72% in the rural adolescents in India. Another study by Shingare et al.<sup>2</sup> in Maharashtra, India reported the prevalence of dental caries among 3-14 years old children to be 80.92% which is higher than reported in the present study. Dixit et al.<sup>3</sup> conducted a study among school children in Nepal and they found that the prevalence of dental caries among the school children aged 12-13 years was 41% which is far below the prevalence in the present study. In Kenya, Ng'ang'a and Valderhaug<sup>4</sup> reported a prevalence of 40-50% among children aged 13-15 years. Another study was conducted by Kassim et al.<sup>5</sup> in Nairobi in 2006 which revealed that the prevalence to be 43% among rural adults however as it investigated prevalence among adults, its prevalence should not be compared with the prevalence of the present study. In our study, the prevalence of dental caries was higher in girls (76%) than in boys (68.8%). Dixit et al.<sup>3</sup> also reported a higher prevalence among girls (48.4%) than in boys (32%) although the overall prevalence in their study was lower than in present study. Similar to our findings, there was no significant difference in prevalence between girls and boys. Gathecha et al.<sup>6</sup> revealed that the difference of prevalence of dental caries between boys and girls are not significant. Contrary to our report and the report of Dixit et al.<sup>3</sup>, Natapov et al.<sup>7</sup> reported a higher prevalence among 5 years old boys than girls.

Rao and Bharambe<sup>8</sup> in their study found that 60.8% children were habituated to clean their teeth with toothpaste.

The present study found that prevalence of dental caries was significantly higher in lower income group as compared to upper income group. Usually people belonging to lower income group are devoid of hygienic practice and they live in unhygienic environment. These factors often lead to dental caries

### CONCLUSION:

Dental caries is not only a medical problem but also a social problem. Awareness among students can be generated by the school teachers because they are the role model for the students. Parents should be aware of the dental health of their children. Parent/teacher meetings should be regularly organized during which parents are educated on the importance of good hygiene practices in disease prevention. Health education should be incorporated within the regular activities of the school. Overall education, particularly female education can help to solve the problems in future.

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