

Prevalence of Dental Caries in 6 To 11 Years of Children Living in and Around Kotputli, Rajasthan



Dentistry

KEYWORDS : Dental caries, Prevalence, School children

Dr. Vikram Jhamb	Sr. Lecturer, Department of Pedodontics and Preventive dentistry, Kotputli, Rajasthan
Dr. Vivek Chaturvedy	Prof. & H.O.D, Department of Periodontics, Kotputli, Rajasthan
Dr. Neetu Dabla	Prof. & H.O.D, Department of Orthodontics, Kotputli, Rajasthan
Dr. Yoginder Yadav	Sr. Lecturer, Department of Orthodontics, Kotputli, Rajasthan

ABSTRACT

Background : Dental caries is an important oral health issue. Finding it's prevalence would predict the need for oral health promotion programmes for specific age groups.

Purpose : The aim of this study is to assess the caries experience of children living in Kotputli, Rajasthan.

Materials and Method : This epidemiological study was based upon sampling method. Samples size consisted of 870 children aged 6 to 11 years old registered in Kotputli schools. Children were divided into 2 groups. Group 1 consisted of 400 children 6-8 years of age and group 2 consisted of 470 children 9-11years of age. All children were examined for oral health status.

Result : 620 out of 870 children showed caries prevalence and 250 children were caries free. Result of the study highlighted the need for comprehensive oral health promotion programmes for this age group.

Introduction

Dental caries is a multifactorial infectious disease caused by plaque bacteria. These bacteria metabolize carbohydrate, producing acids which diffuses into hard tissue and demineralize the tooth enamel.

⁽¹⁾ dental caries is influenced by number of risk factors such as age, sex and dietary habits. Sugar containing diet is main cause of dental caries.⁽²⁾ These dietary and oral hygiene habits are affected by economical status, education and social environment.⁽³⁾

Materials and Method

A study of prevalence of dental caries of school going children of kotputli was undertaken by department of Pedodontics and Preventive dentistry, Eklavya dental college, Kotputli. Study was carried out in villages of in and around Kotputli. 870 children from 7 schools were selected randomly and categorized in two groups.

Group 1 consisted of 400 children 6-8 years of age.

Group 2 consisted of 470 children 9-11years of age.

All children were examined for oral health status with the consent of teachers and parents. The instruments used for examination were mouth mirror and explorer. Number of decayed, missing and filled teeth were recorded.⁽⁴⁾

Result

In group 1, 320 students showed caries prevalence and 80 students were caries free. In group II, 300 students showed caries prevalence and 170 students were caries free (Figure 1). In total, 620 out of 870 children showed caries prevalence and 250 children were caries free. Mean dmf and DMFT score in first group was 3.1 and 1.0 respectively and mean dmf and DMFT score in second group was 1.1 and 2.8 respectively (Figure 2).

Figure 1 – Prevalence of dental caries

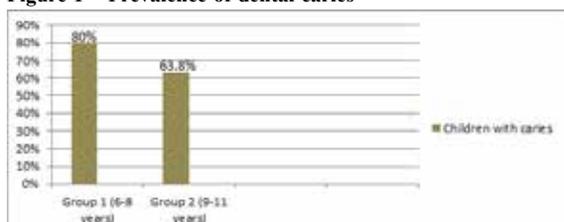
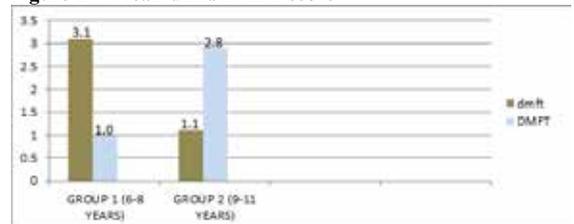


Figure 2 – Mean dmft/DMFT score



Discussion

Dental caries is most prevalent chronic infectious disease.

⁽⁵⁾ Dental caries is defined as a 'progressive', microbial disease affecting the hard structures of the tooth exposed to the oral environment resulting in demineralization of the inorganic constituents and dissolution of the organic constituents, thereby leading to a cavity formation.⁽⁶⁾ The major oral health problems around world are generally considered to be dental caries and periodontal problems. The prevalence of dental caries increasing with changing lifestyle and dietary patterns.⁽⁷⁾ Studies also showed that there is positive association between caries experience and salivary *Streptococcus mutans* scores.⁽⁸⁾ *Streptococcus mutans* has been implicated as one of the major etiological factor of dental caries. Tooth surfaces colonized with *Streptococcus mutans* are at a higher risk for developing caries.^(9,10) children acquire new strain of *Streptococcus mutans* as they grow older and new teeth emerge into the oral cavity.⁽¹¹⁾ The present study was conducted to provide baseline data on prevalence of dental caries and treatment needs among school children aged 6-8 and 9-11 years of age group. In the present study, 870 children were examined and it was found that caries prevalence in first group was 80% and in second group was 63.8%. Similar result was reported by Rao et al in which dental caries status among school children was 76.9%.⁽¹²⁾ Shenoy R et al reported 81% caries experience in school children.⁽¹³⁾ Wyne A reported 74.8% caries experience in school children.⁽¹⁴⁾ Age is an important factor to be regarded in order to better understand oral health. Children suffer from many infectious diseases around the time of eruption of teeth.⁽¹⁵⁾ In the present also it was seen that there was increase in dental caries as increasing the age.

Conclusion

Results of study indicates caries prevalence was high among school going children of Kotputli, district Jaipur. So preventive efforts and implementation of community based oral health programmes are required.

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