

Prevalence Of Dental Caries And Dental Calculus In 8 -14 Years Old Children In Rural Area

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Abstract

National Programme for Nutrition Support for Primary Education was initiated with an idea of universalisation of primary education and improving the nutritional status of primary school children. Oral health is an integral part of overall health.

Aim

The aim of this study is to assess the dental caries status and treatment needs of children in rural government primary school having mid day meal in Uttar Pradesh.

Materials and Methods

Government primary school children who were examined for face to face interview followed by oral examination by trained dental experts using the WHO survey methodology 1997. Descriptive statistics was

calculated and *t*-test, chi square test and ANOVA was used for group comparisons.

Results

The mean *m* and *dmft* was significantly more among girls. Mean *dmft* value was 0.73 for boys (S.D. =1.291) and 1.04 for girls (SD= 1.45) and mean DMFT value was 0.29(S.D. =0.61) for boys and 0.13(S.D. 0.39) for girls.

Keywords

Dmft index, DMFT index, Dental caries Background.

Introduction

In rural areas oral health care awareness is limited due to shortage of dental manpower, financial constraints and the lack of perceived need for dental care among rural masses.¹ On 15th August 1995 the National Programme for Nutrition Support for Primary Education was

initiated with two major objectives of universalisation of primary education and improving the nutritional status of primary school children.²

The prevalence of dental caries, missing teeth and other oral health morbidities in school children are high in the lower socio-economic background because of their poor oral hygiene practice, lack of awareness, improper food intake and family status.

Schools can provide a healthy environment not only for promoting comprehensive oral health but can also be extremely helpful in spreading right message to rural community⁴ In developing countries children have a higher prevalence of dental caries affecting primary dentition than permanent dentition. The localized prevalence data is essential not only to understand the disease, but also plays a pivotal role in dental caries prevention and treatment planning.⁵

Materials and Methodology

Clinical examination was carried out in the field setting to assess caries experience, which was diagnosed visually and recorded using World Health Organization (WHO) criteria, with an additional code for non cavitated lesions. The clinical examination process was visual (i.e. no examination explorer) and appropriate infection control by use of new gloves for each subject, new barrier sleeves for mouth mirror handles for each participant, new mouth mirror heads for each participant, ice cream sticks and hand disinfectant. The dental caries status was assessed by Decayed/missed filled tooth (DMFT)/deft index using WHO criteria 1997. All the recordings were done in the daylight and the child was made to sit in ordinary chair facing away from a direct sunlight.

Permanent teeth were recorded as follows: sound, dental caries, filled, or not erupted.. According to the WHO criteria, only the cavitation is inspected and recorded as

a carious lesion and noncavitation carious lesions are not included.

Statistical tools like mean, median, t test, ANOVA and chi-square used as appropriate. A brief questionnaire about oral health behaviour was framed where each child was asked about past dental history and brushing instructions provided by any dentist in past and scored as Yes and No.

Result

The prevalence of dental caries in boys is 36% (n=54) and girls (n=96) is 64% (**Table 1**). Dental caries was more among 9 years(32 %) old children in the mixed dentition stage and less in 13 years (4 %) old children because the permanent dentition has replaced the primary teeth **Discussion**

Latin American countries.⁶ According to an extensive National Health Survey carried out in 2004 in India dental caries was seen to be in 51.9% of 5 year old children and 53.8% of 12 year-old children⁷

The higher prevalence of dental caries among females might be due to early eruption of teeth among girls thereby teeth being exposed for a longer time to the oral environment when compared to boys.⁹ However in our study no significant association between boys and girls was seen.

This analysis the definition of caries included all lesions from the initial white spot disease presentation to cavitation, as this captures the progressive nature of the disease.

The “M” component is used to describe missing teeth due to dental caries. We did consider the “m” component for the missing teeth due to caries in the deciduous dentition but not the tooth missing due exfoliation according to age of the child. The “f/F” component is used to describe filled teeth due to caries when one or more permanent restorations are present

and there is no recurrent caries or any part of the tooth with primary caries.

Pessimistic approach and attitude of parents toward dental treatment of their children, financial difficulties due to low monthly household income and other shortfalls within the health care delivery system leading to less access to dental services and oral hygiene products.

Being a multi-factorial disease the specific risk factor for dental caries is very difficult but the socioeconomic status has been identified as a significant factor associated with occurrence of dental caries in population.¹⁰

So a number of developing countries have introduced school-based oral health education and preventive programs which aim at improving oral health behavior and status of the child population. The initial evaluations was conducted in Indonesia, Brazil, Madagascar, and China have shown positive results.¹⁴ One goal of the WHO is to reduce the DMFT index in 2020, and in particular, the D component, in high-risk groups¹⁵

Limitations: The initial, advanced, cavitated and non-cavitated dental caries were not classified which could have given a detailed information. The use of visual only (no examination explorer) examination for dental caries resulted in an increased false-negative rate and an underestimation of the true population caries estimate.

Conclusion

The burden of caries in this highly vulnerable population. Inculcating good oral hygiene habits like regular brushing twice a day, less sugar intake, mouth rinsing after meals, fluoride applications, and atraumatic restorative treatment, regular dental health examination in school through active involvement of parents and teachers can go a long way in reducing dental caries by

school-based community-oriented oral healthcare services.

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