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Original Research

Evaluation of assess oral health status among rural children: An observational study

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ABSTRACT:

Background: The present study was conducted for assessing the oral health status among rural children. **Materials & methods:** A total of 200 school children were included. The study consisted of close-ended questions comprising sociodemographic variables of age, gender, type of school, parent's education, occupation, and income. All the children were examined under adequate illumination in the school premises. The examination was conducted with a plain mouth mirror and CPI probe as given by the WHO 1997. Oral hygiene status was assessed using Simplified Oral Hygiene Index (OHI-S) were assessed based on WHO proforma 1997. All the results were recorded and analysed by SPSS Software. **Results:** It was observed that the good oral hygiene was present in 68 study subjects, average oral hygiene was present in 72 study subjects, poor oral hygiene was present in 60 study subjects and mean OHI-S was 1.63. **Conclusion:** There is a need of dental health education program including proper oral hygiene instruction which helps children.

Key words: Oral Health status, Rural Children

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INTRODUCTION

Dental caries is one of the most prevalent diseases among children. Major complications associated with dental caries are dentoalveolar infection and pain. These complications can adversely affect the quality of life in children and can place undue financial burden on their families. Studies have clearly established that dental caries is not a static process but instead dynamic process where demineralization and remineralization of tooth go side by side.Investigators are constantly reporting regional and international differences in the incidence and prevalence of dental caries. One consistent finding reported by all studies is that the prevalence of dental caries is decreasing in developed countries whereas there is an increase in the developing countries. Decreased prevalence of dental caries in developed countries can be attributed to changing lifestyle and behavior patterns, fewer intakes of refined sugars, and widespread use of fluoridated toothpaste and utilization of the dental care services. Contrary to this, increase dental caries in developing countries can be related to factors, such as economic development, changing living standards, rapid urbanization, and changing of dietary patterns to more refined carbohydrates. In India, oral health status of children has been documented by various investigators. National oral health survey, 2003 reported a prevalence of 53.8% caries experience in 12-year-old, mean Decayed, missing, and filled teeth (DMFT) and SiC of 1.8 and 3, respectively. The majority of children aged 12 years had experienced caries in one or more of their total number of teeth.[1-3]The changing living condition, adoption of healthy lifestyle, improved self-care practices, effective use of fluorides, and establishment of preventive oral care programs which have improved oral health status among adults in developed countries are dominantly deficient in developing countries with worse scenarios in rural areas.[4, 5] Hence; the present study was conducted for assessing the oral health status among rural children.

MATERIAL AND METHODS

The present study was conducted among 5-12-year old children of rural children. All examination was carried out by single examiner. A total of 200 school children were included. The study consisted of close-ended questions comprising sociodemographic variables of age, gender, type of school, parent's education, occupation, and income. All the children were examined under adequate illumination in the school premises. The examination was conducted with a plain mouth mirror and CPI probe as given by the WHO 1997. Oral hygiene status was assessed using Simplified Oral Hygiene Index (OHI-S) were assessed based on WHO proforma 1997. All the results were recorded and analysed by SPSS Software.

RESULTS

Mean age of the subjects was 9.4 years. Out of 200 subjects, 52 percent (104 subjects) were males while the remaining were females. While assessing the decayed (d/D), missing (e/M), and filled (f/F) teeth and the total deft/DMFT, it was seen that the decayed teeth (d/D) were present in 112 study subjects (56 percent subjects), missing teeth (e/M) were present in 22 study subjects (11 subjects), filled teeth (f/F) were present in 4 percent (8study subjects) and deft/DMFT was 136.It was observed that the good oral hygiene was present in 68 study subjects, average oral hygiene was present in 72 study subjects, poor oral hygiene was present in 60 study subjects and mean OHI-S was 1.63.

Table 1: Deft/DMFT among the study subjects

Variables	Present	
	N	%
d/D	112	56
e/M	22	11
f/F	8	4
deft/DMFT	142	71

d/D=Decayed, e/E=missing teeth, f/F=filled, deft/DMFT=decayed, missing, filled teeth

Table 2: OHI-S among the study subjects

Oral hygiene	N	%
Good	68	34
Average	72	36
Poor	60	30

DISCUSSION

Oral health has always been an inseparable part of general health and affects the total well-being of the individuals. An individual obtains essential nutrients necessary for his/her body only by chewing and swallowing food, which is a critical function and provides the building blocks for the overall health. The unique characteristic of oral and dental diseases is that they are universally prevalent, do not undergo remission or termination if untreated or require technically demanding expertise and time-consuming professional treatment. Dental caries and periodontal diseases are the two globally leading oral afflictions, according to the World Oral Health Report 2003. However, millions of individuals suffer from dental caries and periodontal diseases, resulting in unnecessary pain; difficulty in chewing, swallowing, and speaking; and increased medical costs.[6- 9]Hence; the present study was conducted for assessing the oral health status among rural children.

Mean age of the subjects was 9.4 years. Out of 200 subjects, 52 percent (104 subjects) were males while the remaining were females. While assessing the decayed (d/D), missing (e/M), and filled (f/F) teeth and the total deft/DMFT, it was seen that the decayed teeth (d/D) were present in 112 study subjects (56 percent subjects), missing teeth (e/M) were present in 22 study subjects (11 subjects), filled teeth (f/F) were present in 4 percent (8 study subjects) and deft/DMFT was 136.Clemencia M Vargas et al documented the oral health status and dental care utilization of US children by place of residence. Data from National Health Interview Surveys for 1995, 1997, and 1998, and from the third National Health and Nutrition Examination Survey (1988-1994) were analyzed.Children residing in rural areas were more likely to be uninsured for dental care than were children from urban areas (41.1% versus 34.7%). A greater percentage of rural than urban children reported unmet dental needs (7.5% versus 5.6%); there was no difference in self-reported poor dental status. Urban children were more likely than rural children to have visited the dentist in the past year (73.6% versus 69.9%) and were also more likely to be regular users of dental care (61.7% versus 51.4%). Differences in percentage of rural and urban children with caries lesions and caries experience were not significant.Children residing in rural areas have less access to and utilization of dental care compared to children residing in urban areas.[10]Chinna SK et al assessed oral health status and treatment needs of 12-year-old school children among urban and rural areas of Raichur Taluk, Karnataka, India.A cross-sectional study was conducted on 1240 school children in the age group of 12 years from urban (620) and rural (620) areas of Raichur Taluk, Karnataka, India. Oral health status was assessed using the World Oral Health assessment form 1997.The prevalence of caries in urban and rural areas of school children was 63.5% and 64.5%, respectively. The mean decayed teeth, missing teeth, filled teeth, and decay, missing, filled teeth of school children in Raichur Taluk were 1.15 ± 1.20, 0.0, 0.03 ± 0.23, and 1.19 ± 1.21, respectively.This study highlights the need for preventive and curative oral health services and should be made integral to other health programs.[11]

In the present study, it was observed that the good oral hygiene was present in 68 study subjects, average oral hygiene was present in 72 study subjects, poor oral hygiene was present in 60 study subjects and mean OHI-S was 1.63. Jianghong Gao et

al analyzed the possible risk factors for the oral health status in their population.The structured questionnaires were provided to the 12- to 15-year-olds and to the caregivers of the 4- to 6-year-olds to collect information on the subjects' oral health knowledge, attitudes and behavior. A clinical examination was performed to assess dental caries and gingival bleeding (only 12- to 15-year-olds). The decayed, missing, filled teeth (DMFT) index scores of 12- to 15-year-olds and 4-to 6-year-olds averaged 0.45 and 3.05, respectively. The caries prevalence was 23.9% in 12- to 15-year-olds and 67% in 4-to 6-year-olds. Additionally, 45.2% of the 12- to 15-year-olds had gingival bleeding and 62.8% had calculus. The oral health knowledge of the subjects was generally poor, whereas they held very positive attitudes toward oral health. A low number of participants reported that they brushed their teeth at least twice daily. Moreover, a statistically significant relationship was found between oral health knowledge scores, tooth brushing frequency and DMFT scores as well as gingival bleeding in the 12- to 15-year-olds. Frequency of sweets consumption was strongly related to dmft scores in the 4- to 6-year-olds.[12]

CONCLUSION

From the above results, the authors conclude that there is a need of dental health education program including proper oral hygiene instruction which helps children.

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