

ORIGINAL ARTICLE

Assessment of prevalence of dental caries in a known population

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ABSTRACT:

Background: Dental caries is defined as a multi-factorial infectious disease caused by plaque bacteria. The globalization in turn, is bound to increase the availability of processed food items as well as sweets. Hence; the present study was conducted for assessing the prevalence of dental caries in a known population. **Materials & methods:** The present study was conducted for assessing the prevalence of dental caries in a known population. A total of 300 subjects who reported for routine dental checkup were evaluated. Complete oral examination was done using mouth mirror and tweezers. Complete demographic and clinical details of all the subjects were obtained. **Results:** Dental caries was present in 41 percent of the subjects. Out of 123 subjects with dental caries, 59.35 percent were of less than 40 years of age. 50.41 percent of the subjects were males. Majority of dental caries was encountered among subjects of rural residence. **Conclusion:** Dental caries represents a major problem in Indian subcontinent and needs serious attention and preventive measures to be carried out to enhance peoples' referral to dental service and improve medical educational background of the population.

Key words: Dental caries, Prevalence

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INTRODUCTION

Dental caries is defined as a multi-factorial infectious disease caused by plaque bacteria. When food enters the mouth, bacteria metabolize fermentable carbohydrates, producing acids, which diffuse into hard dental tissue, and demineralize tooth enamel. In the absence of proper dental hygiene, this process has an increased likelihood of resulting in dental caries. Dental caries currently represents the most common chronic disease among children; it is five times more common than asthma, and seven times more common than seasonal allergies.¹⁻³

Over the last few decades, a trend of declining caries in developed countries and an increasing caries experience in developing countries has been reported. India, too, has seen the increasing trend similar to that in the latter group of countries, and the trend may continue in the future due to growing globalization. The globalization in turn, is bound to increase the availability of processed food items as well as sweets. The association between diet, particularly sucrose, and dental caries has been well-documented in cross-sectional, longitudinal and ecological studies. Based on these findings, researchers have advocated limiting the annual sugar consumption to 15 kg per

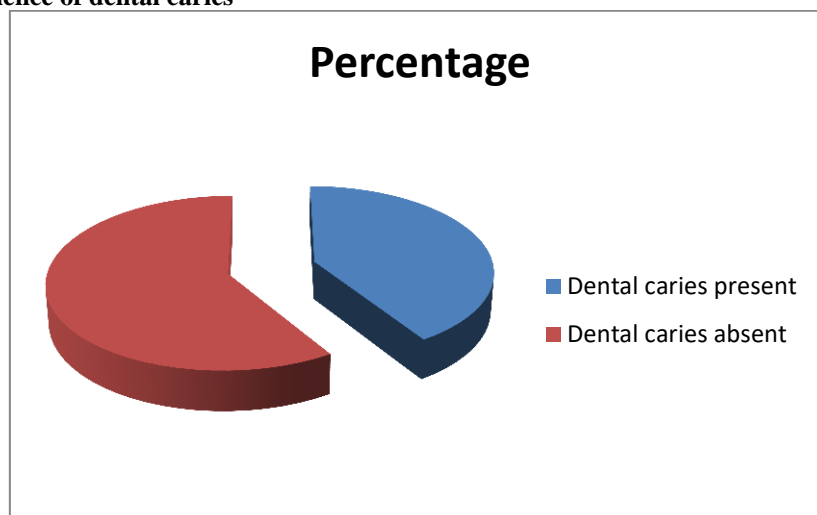
person, both in developing and developed countries.⁴ Hence; the present study was conducted for assessing the prevalence of dental caries in a known population.

MATERIALS & METHODS

The present study was conducted for assessing the prevalence of dental caries in a known population. A total of 300 subjects who reported for routine dental checkup were evaluated. Complete oral examination was done using mouth mirror and tweezers. Complete demographic and clinical details of all the subjects were obtained. Non-cooperative subjects were excluded from the present study. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software. Chi-square test was used for evaluation of level of significance.

RESULTS

A total of 300 subjects were analyzed. Dental caries was present in 41 percent of the subjects. Out of 123 subjects with dental caries, 59.35 percent were of less than 40 years of age. 50.41 percent of the subjects were males. Majority of dental caries was encountered among subjects of rural residence.

Graph 1: Prevalence of dental caries**Table 1: Details of subjects with dental caries**

Variable		Number of subjects	Percentage
Age group (years)	Less than 40	73	59.35
	More than 40	50	40.65
Gender	Males	62	50.41
	Females	61	49.59
Residence	Rural	84	68.29
	Urban	39	31.71

DISCUSSION

Aging population is a major challenge for social and economic development and sustainability worldwide. This is particularly true in India which has approximately one fifth of the global aged population. Dental caries is a common disease among the adult population, which can result in pain and chewing difficulties, thus decreasing their overall health and quality of life. Epidemiological studies show that the prevalence of dental caries is low among children, adolescents, and middle-aged adults in countries where easy access to health care, preventive measures, and medical insurance system are available. However, dental caries in elderly population, with a prevalence rate from 49.3% to 78.6%, still remain a major concern.⁶⁻⁸

A total of 300 subjects were analyzed. Dental caries was present in 41 percent of the subjects. Out of 123 subjects with dental caries, 59.35 percent were of less than 40 years of age. 50.41 percent of the subjects were mesmerism et al assessed the oral health status and dental treatment needs of a rural Indian population. The study population consisted of 189 volunteer subjects with a mean age of 34.9 ± 14.2 years and 54% males. Decayed, missing due to caries and filled teeth (DMFT) and tooth surfaces (DMFS) assessed the dental caries experience. While only 38.1% perceived themselves to be in good or very good dental health, nearly 85% felt the same about general health. The most common sugar exposure was sweetened tea; 75% consumed the beverage at least once a day. More than 80% of the subjects had

untreated caries with mean DMFT and DMFS scores of 5.1 ± 3.9 and 13.8 ± 17.8 , which lacked any gender differences. Dental treatment needs ranged from 16.9% two-surface fillings to 60.8% one-surface fillings; 23.8% crowns or bridges and 37.6% extractions. Those who perceived themselves to be in better oral health had significantly lower DMFT and DMFS scores ($p < 0.05$). A similar trend was observed between perception of general health and DMFT scores. Results indicate high levels of dental caries as well as dental treatment needs among the study participants.¹⁰

Majority of dental caries was encountered among subjects of rural residence. Khan AA et al analyzed the role of different factors in the occurrence of dental caries including dietary habit. Persons suffering with dental caries were examined for the type of dental caries in relation to different factors. Dental examination was performed and patients were asked a questionnaire and the data was recorded and analyzed. Incidence of dental caries was higher in female. High number of dental caries patients was observed among vegetarian population. 21–30-year age group was found to be most infected with dental caries. Their study can be helpful to analyze respective role of different dietary factors including protein rich diet, age, gender etc. on the prevalence of dental caries, which can be helpful to counteract the potential increase in the cases of dental caries and to design and plan preventive strategies for the persons at greatest risk.¹¹

CONCLUSION

Dental caries represents a major problem in Indian subcontinent and needs serious attention and preventive measures to be carried out to enhance peoples' referral to dental service and improve medical educational background of the population.

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