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*Original Article*

# Assessment of Dental Caries in subject's age ranged 20- 60 years

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**ABSTRACT**

**Background:** Dental caries is the most prevalent and chronic oral disease in children. The present study was conducted to determine dental caries status among patients ranged from 20- 60 years. **Materials & Methods:** The present study was conducted on 380subjects between 20-40 years of age of both genders. Careful oral examination was done to detect dental caries. Dental caries was recorded when a lesion in a pit or fissure or on smooth tooth surface had a detectable softened floor, undermined enamel or softened wall. **Results:** Age group 20-40 years had 84.5% males and 82.6% females and 40-60 years had 95% males and 92% females had dental caries. Subject parents were illiterate (males- 37%, females- 31%), upto high school education (males- 55%, females- 47%) and senior secondary education (males- 8%, females- 12%). The difference was significant (P<0.05). Parents were smokers (males- 54%, females- 22%) and non- smokers (males- 46%, females- 78%). **Conclusion:** Dental caries is highly prevalent in all age groups. Family education, income and smoking habit plays an important role.

**Key words:** Children, Dental caries, Smoking.

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## INTRODUCTION

Dental caries and gingivitis are the most common dental diseases encountered in children. Dental caries is a progressive infectious process with a multifactorial etiology characterized by destruction of organic and inorganic portion of tooth. Approximately 5% of adults age 20 to 64 have no teeth.[1]This survey applies only to those adults who have teeth. Dental caries, both treated and untreated, in all adults age 20 to 64 declined from the early 1970s until the most recent (1999-2004) National Health and Nutrition Examination Survey. The decrease was significant in all population subgroups. In spite of this decline, significant disparities are still found in some population groups.[2]

Dietary habits, oral microorganisms that ferment sugars, and host susceptibility have to coexist for dental caries to initiate and develop.[1]Dental caries has high morbidity potential. Thus, it has been the main focus of dental health professionals.Dental caries is measured by a dentist examining a person's teeth, and recording the ones with untreated tooth decay and the ones with fillings.[3]This provides three important numbers. FT (filled teeth): this is the number of decayed teeth that have been treated, which indicates access to dental care; DMT (decayed and missing teeth): this is the number decayed and missing teeth that have not been treated, which measures unmet need; and DMFT (decayed, missing, and filled teeth): this is the sum of DMT and FT, and is the measure of person's total lifetime tooth decay.[4] The present study was conducted to determine dental caries status among patients ranged from 20- 60 years.

## MATERIALS & METHODS

The present study was conducted on 380subjects between 20-60 years of both genders (males- 200, females- 180). Parents were informed regarding the study and written consent was obtained. Ethical clearance was obtained prior to the study.

General information such as name, age, gender etc. was recorded. Careful oral examination was done to detect dental caries. Dental caries was recorded when a lesion in a

pit or fissure or on smooth tooth surface had a detectable softened floor, undermined enamel or softened wall. The use of probe with explorer was done.

DMFT score was recorded depending upon number of decayed teeth, missing teeth and filled teeth. Results thus obtained were subjected to statistical analysis using chi-square test. P value less than 0.05 was considered significant.

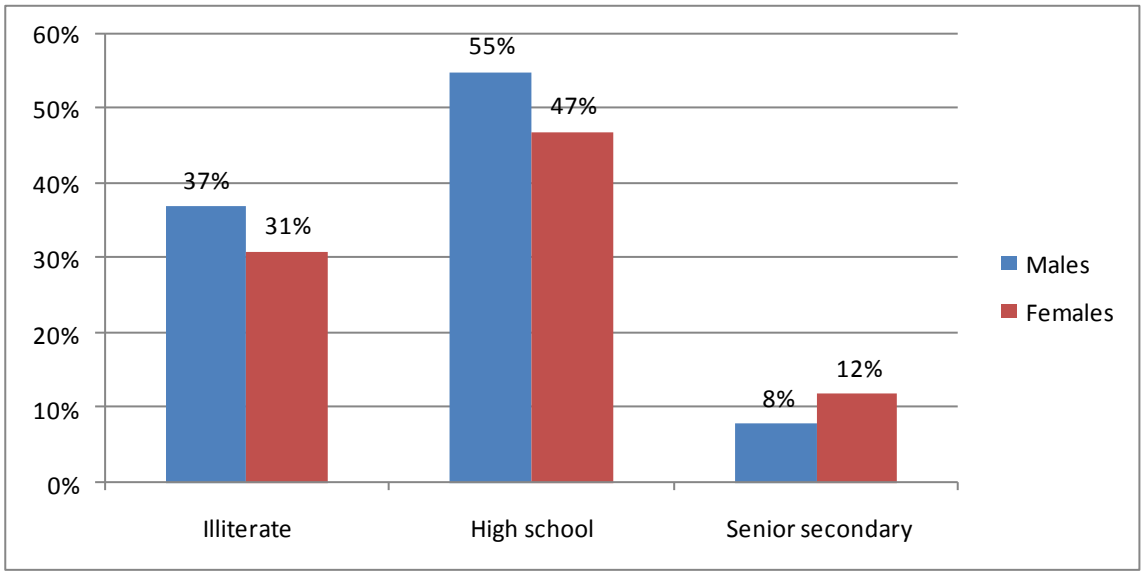
**RESULTS**

Age group 20-40 years had 84.5% males and 82.6% females and 40-60 years had 95% males and 92% females had dental caries.Subject parents were illiterate (males- 37%, females- 31%), upto high school education (males- 55%, females- 47%) and senior secondary education (males- 8%, females- 12%). The difference was significant (P<0.05).Parents were smokers (males- 54%, females- 22%) and non- smokers (males- 46%, females- 78%).

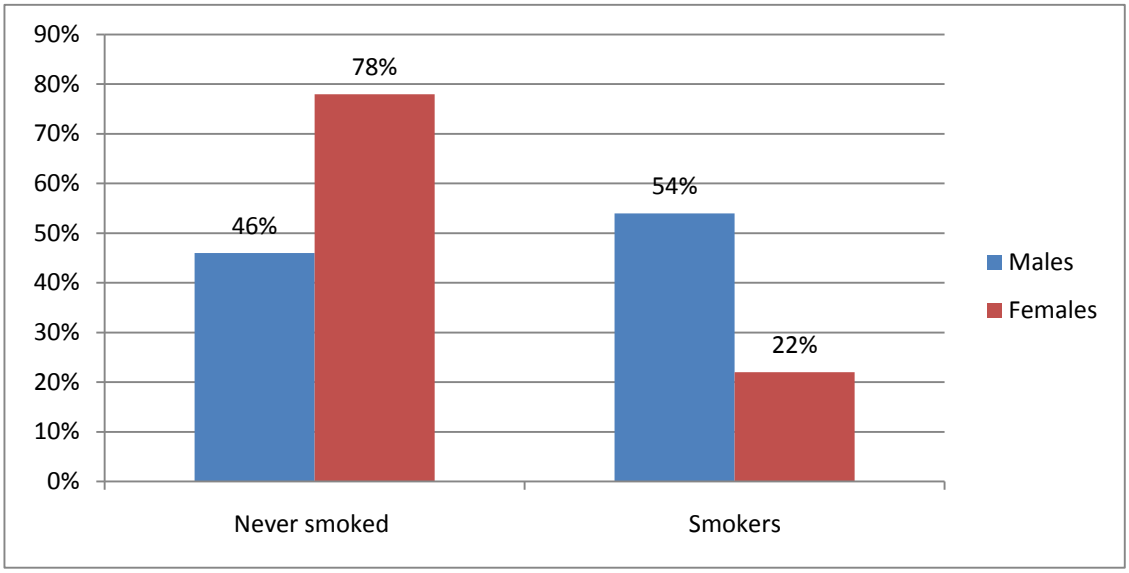
**Table I Prevalence of dental caries according to age group**

| Age group | Males | Females |
|---|---|---|
| 20-40 years | 84.5% | 82.6% |
| 40-60 years | 95% | 92% |

**Graph I Education level**




**Graph II Smoking history**



## DISCUSSION

Dental caries is caused by dental plaque deposits on the tooth surface. After intake of fermentable carbohydrates, streptococcus mutans undergo fermentation and produce copious amount of acid and lowers the local pH to a level where the minerals of enamel and dentine dissolve. The frequent intake of sweets, dry mouth, and poor oral hygiene increase the chances for cavities.[5] Information on the global level of dental caries has been recorded through the World Health Organization (WHO) oral disease surveillance systems, in addition to information acquired from other oral epidemiological studies applying WHO methodology.

In present study, age group 20-40 years had 84.5% males and 82.6% females and 40-60 years had 95% males and 92% females had dental caries. This is in agreement with Shah et al.[6]In the developed countries, decline in dental caries prevalence has been attributed to population-based preventive programmes with use of fluoride, improved participation in oral health programmes and changes in oral hygiene and sugar intake habits. On the other hand, in many developing countries an increase in dental caries has resulted from unhealthy dietary habits, limited use of fluoride and poor access to oral health services. In many developing countries, most oral health services provide symptomatic treatment with little priority given to restoration and prevention.[7]

We observed that subject parents were illiterate (males- 37%, females- 31%), upto high school education (males- 55%, females- 47%) and senior secondary education (males- 8%, females- 12%). Parents were smokers (males- 54%, females- 22%) and non- smokers (males- 46%, females- 78%). This is in accordance to Ashwaniet al.[8]

Dental caries might be associated with copious acid production by cariogenic bacteria like Streptococcus mutans that are adherent to teeth as a result of fermentation of the sweet foods. Later the enamel of the tooth went into tooth decay. Moreover, poor habit of tooth cleaning is associated with dental caries. Streptococcus mutans cannot get enough nutrient and time for growth and no acid production that causes dental caries development.[9]

Ratuet al[10] found that of the 252 children, 62.6% were girls. Majority of the children (72.6%) cleaned their teeth using traditional method. The proportion of children having dental caries was 48 (28.4%). Primary tooth decay accounted for 36 (71%) of dental caries. The proportion of missed teeth was 12 (5.4%). The overall proportion of toothache and dental plaque among school children were 44 (29.2%) and 102 (68.3%), respectively. Grade level, poor habit of tooth cleaning, dental plaque and toothache were significantly associated with dental caries.

## CONCLUSION

Dental caries is highly prevalent in all age groups. Family education, income and smoking habit plays an important role.

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