

## A Study of Prevalence of Dental Caries and Some Factors Related to it

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### Abstract

A study of prevalence of dental caries in rural area (Talegaon) was carried out in the month of March 2000. The area is located just 34 kms away from Pune, Maharashtra. The permission for carrying out the study was taken from the Head-mistress of the school. Entire population of the school was covered. It was observed that prevalence of dental caries was 38%. It was observed that prevalence was more in females. It was observed that Dental caries was more in those who were eating chocolates in fact there was statistically significant difference between the two at 95% confidence limit. It was also observed that Dental caries was more in those who were having mixed diet. It was observed that there was statistically significant difference between the gargling of mouth and dental caries.

**KEYWORDS:** Dental caries, gargling of mouth, chocolates

### INTRODUCTION

Oral diseases such as dental caries and periodontal disease are among the widespread disease in the country. Dental caries primarily the disease of childhood and adolescence is often neglected. Diet and oral hygiene are important factors for dental caries.<sup>1</sup>

Dental caries occur everywhere, though the severity of problems vary from states to states. It can be prevented or at least markedly reduced by changes in the food quality, diet, oral hygiene and by the use of fluorides.<sup>2</sup>

Keeping this in mind the present study was carried out in one of the schools to study of prevalence of dental caries and some factors related to it.

### MATERIAL & METHODS

The study was carried out in the month of March 2000 at Saraswati Vidyamandir, Talegaon Dabhade, one of the schools in rural areas, situated 34 kms from Pune in Maharashtra. The permission for study was taken from head mistress of the school to carry out oral examination of all the students.

A detailed pro-forma was prepared which consisted of questions related to use of chocolates, use of tooth powder, tooth paste for brushing the tooth, mouth washing after eating the food, diet whether vegetarian or mixed, and personal hygiene. Dental examination was carried out for dental caries.

Total students examined were 240. We could not examine 5 students as they were absent.

**RESULTS**

**TABLE 1**

It can be observed from table 1 that there were 91 cases of dental caries i.e. 38% though it was more in females the difference between the two was not found statistically significant.  $\chi^2 = 1.68$  at  $p < 0.05$

**TABLE 2**

Table 2 shows the relation of diet and dental caries. It was observed that that Dental caries was more in those who were having mixed diet.

**TABLE 3**

It was observed that that 83 persons, who had habit of chocolate eating, had dental caries. In fact there was statistically significant difference between the two at 95% confidence limit.  $\chi^2 = 51.84$

**TABLE 4**

It was observed that that Dental caries was more in those who do not gargle the mouth after eating food in fact there was no statistically significant difference between the two at 95% confidence limit.

**TABLE 5**

Table 5 shows the relation of using charcoal and dental caries. It was observed that that Dental caries was more in those who were using charcoal for cleaning teeth. Fisher's exact test was applied it was not found significant

**TABLE 6**

It can be observed from the table that when personal hygiene was correlated with dental caries there was statistically significant difference between the two at 95% confidence limit.  $\chi^2 = 12.97$

**TABLE 7**

Table 7 shows that there was statistically significant difference between those who brush teeth daily and those who do not brush teeth frequently .75% of those who brush the teeth infrequently had dental caries.  $\chi^2 = 20.53$

**TABLE 1**

**DENTAL CARIES ACCORDING TO SEX DISTRIBUTION**

Sex	dental caries		total
	yes	no	
male	41	80	121
female	50	69	119
total	91	149	240

TABLE 2

DENTAL CARIES AND DIET

Type of diet	dental caries		total
	yes	no	
vegetarian	21	97	118
mixed	70	52	132
total	91	149	240

TABLE 3

DENTAL CARIES AND EATING OF CHOCKLATES

use of chocolate	dental caries		total
	yes	no	
frequent	83	67	150
occasional	08	82	90
total	91	149	240

TABLE 4

RELATION OF DENTAL CARIES AND MOUTH GARGLING

gargling	dental caries		total
	yes	no	
yes	27	16	41
no	64	133	199
total	91	149	240

**TABLE 5**  
**DENTAL CARIES AND DENTAL CLEANING**

dental cleaning method	dental caries		total
	yes	no	
toothpaste	76	143	219
tooth powder	11	06	17
Charcoal total	04	00	04

**TABLE 6**  
**RELATION OF PERSONAL HYGIENE TO DENTAL CARIES**

personal hygiene sex	dental caries		total
	yes	no	
good	04	148	140
bad	87	01	100
total	91	149	240

**TABLE 7**  
**RELATION OF DAILY BRUSHING TO DENTAL CARIES**

brushing	dental caries		total
	yes	no	
daily male	70	143	213
infrequent female	21	6	27
total	91	149	240

### **DISCUSSION**

As mentioned in material and methods, some aspects of dental caries were covered. In our study, we observed that prevalence of dental caries was 38%. T Venugopal et al <sup>3</sup>in their study, reported prevalence of dental caries as 35.6%. Chakraborty et al <sup>4</sup>reported similar findings .Sharma K.L.<sup>5</sup> reported 71% as prevalence in 3-20 years of age group.

Prevalence was more in females .There was no statistically significant difference between male and female at 95% confidence limit.. However Valish et al <sup>6</sup>reported that Prevalence was more in males. Chaudharin et al <sup>7</sup>reported similar observations

It was observed that that Dental caries was more in those who were having mixed diet. Chandra et al <sup>8</sup> reported similar observations. There was statistically significant difference between the use of chocolates and dental caries at 95% confidence limit. T Venugopal <sup>3</sup> et al, Khan et al<sup>9</sup> have reported the same findings

Also it was observed that there was statistically significant difference between gargling of mouth after food and dental caries. Similar results were reported by T.Venugopal in their study. In our study it was observed that dental caries was less in those who use tooth paste for cleaning the teeth. Khan M.U. et al have also observed that incidence of dental caries was less in those who were using tooth paste.

When dental caries was correlated with brushing of teeth, it was found that there was statistically significant difference between the two, 75% of those who brush the teeth infrequently had dental caries, Khan et al <sup>9</sup> have reported low incidence of dental caries in those who brush the teeth regularly.

#### **CONCLUSION:**

Thus it was a worth-while attempt to study various factors related to dental caries like daily brushing of teeth, eating chocolates gargling the mouth after food. A talk was given to all the parents, teachers, children as teachers along with parents can play a useful role. So also pediatrician can play an important role in identifying and treating dental caries because availability of dentist is minimum in our country. Children usually see pediatrician before dentist. Definitely he can detect dental caries earlier counsel the children regarding its prevention. In our country with limited dental facilities, multipurpose health workers in the community should be trained about the basic aspect of dental caries.

#### **REFERENCES**

1. Park K. Park's Textbook Of Preventive And Social Medicine 17<sup>th</sup> Edition, Banarsidas Bhanot Publications.2004.319-21
2. A study of food handlers in hotel establishment in Pune A desertation submitted for MD PSM 1982 University Of Pune personal communication
3. T Venugopal Vs Kulkarni,Rajsri et al ---Epidemiological Study Of Dental Caries . Indian Journal Of Pediatrics 1998.5.883-889
4. Chakraborty M J.B Shah R,N Bhattacharya-Epidemiological correlates of dental caries in urban slums of West Bengal Indian Journal Of Public Health, April June 1997.41.
5. Sharma V Sharma R A longitudinal study of morbidity of children up to 5 years in urban community Indian Journal Of Medical Research, 1979 69,457.
6. Valish, Ramprasad Mds, M Prevalence Of Caries, among School Going Tribal Children In Gangam District, Journal Indian Dental Association1982. 54.375-77.
7. Chadhari K.P., Chawlat.N. Bhargav PS and Nanda R.S. Dental Health Survey in Lukhnow School Going Children Journal Indian Dental Association1957.29.199-205.
8. Chandra S. Chawala T.N., Incidence of Caries among Lukhnow School going children Journal Indian Dental Association1979. 51.109-110.
9. Khan M.U., Hassan A.H., Abu Zaid, Teething pattern And prevalence of dental caries, Factors Influencing Development of Caries tooth Indian Journal of Pediatrics 1990. 57.108-113.