



Original Research Article

Prevalence of Dental Problems and Its Association with Dental Awareness in School Children of Ahmedabad City

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ABSTRACT

Background: Dental caries continues to be one of the most important dental health problems. Oral health care is generally a neglected health aspect in India. Most of the dental problems are preventable so It's important to focus and implement preventive strategies for oral health care. For planning necessary preventive strategies it is necessary to identify the magnitude of the problem and the needs of the people and current levels of awareness.

Objectives: To evaluate the dental hygiene knowledge, practice and its association with dental problems.

Materials and Methods: A cross sectional based study was carried out on a total of 500 students, studying in different higher secondary schools of Ahmedabad. Oral hygiene awareness and practices were noted as verbal responses to a questionnaire. The oral examination was done and oral health status recorded by expert. The results were statistically analysed in EPI info 7.

Results: Of the 500 students, 23.2% dental problems. All the dental problems were more among male students compared to female students but this difference was not statistically significant. On dental examination by expert 19.6% students had good dental hygiene condition. Knowledge about dental hygiene shows the statistically significant relationship with the dental hygiene status observed by expert. A statistically significant co-relation was found between two time brushing habits and proper dental hygiene.

Conclusion: Significant differences were observed in terms of oral health status, oral hygiene practices and dental hygiene awareness. There is need to generate awareness about basic oral hygiene practices and providing basic dental care services at a primary level.

Key Words: Oral health problem, Oral hygiene practices, Oral hygiene Knowledge.

INTRODUCTION

Oral health is an essential component of the overall wellbeing of individuals. The two globally leading oral problems are Dental caries and periodontal diseases. ^[1] Most of the Dental problems are totally preventable and treatable, if detected at the early stages. These diseases are highly

irreversible, once occur and also have complex aetiology. ^[2] Although primary preventive techniques exist to total protection. In India, the prevalence of dental caries is reported to be 50-60%. ^[3] Most of the dental and mouth problems may be avoided just by maintaining good oral hygiene. ^[4] Daily preventive oral care, like

brushing, flossing and rinsing mouth could maintain good oral hygiene. [5,6] Brushing clears the teeth of food particles. Plaque & bacteria. If proper oral hygiene habits are cultivated during adolescent period; habits will go a long way in maintaining the oral health of a child throughout the life. [7] Regular dental check-up, diet and habits are also important in the prevention of dental caries. [8] So, RBSK programme emphasize that a school health program should have provision for dental examination at least once a year and the success of the school health program depends largely on the community health nurse plans the health education in the school provides guidance to the teachers and parents in the matters of oral health. [9]

Oral health care is generally a neglected health aspect in India. Priority to oral health care is low, because of lower proper knowledge by population and also due to lower finance allocations and preference in dealing with other health problems over oral problems by public health system. The failure to provide quality oral health care has been further aggravated by lack or limited access to oral health care by the government. It becomes important to focus and implement preventive strategies for oral health care. For planning necessary preventive strategies it is necessary to identify the magnitude of the problem and the needs of the people and current levels of awareness. This study aimed to assess the oral hygiene awareness, practices and the oral hygiene status of the students of Ahmedabad city.

MATERIALS AND METHODS

Cross sectional study design was adopted to assess the knowledge regarding oral hygiene among the school children. The sample comprised of 200 school children in selected schools in Ahmedabad. The ethical clearance was obtained from concerned

authorities from selected schools. The samples were selected using the convenience sampling technique. The reliability coefficient was calculated by using Karl Pearson's co-relation co-efficient and spilt half method. The participants were explained about study objectives and consent was obtained from the study participants. The participants were assured about the confidentiality of their responses. Data was collected using structured knowledge questionnaire. A pre tested questionnaire adapted from the WHO format 2004 was used in the survey. The questionnaire was followed by basic oral examination with mirror and probe to record the oral findings. Dental examination was collected by dental expert.

Statistical Analysis: Data was entered in Microsoft Excel and data analysis done using Epi Info 7.1 software. Data was analysed using descriptive and inferential statistics. Chi square and z tests were used to check statistical significance level.

RESULTS

Table 1 - Age wise distribution of individuals with and without dental caries

Age (In completed years)	Students with dental caries	Students without dental caries	Total
14	29 (17.16)	140 (82.84)	169
15	32 (19.16)	135 (80.84)	167
16	34 (20.73)	130 (79.27)	164
Total	95 (19)	405 (81)	500
Chi square = 0.6943 p=0.706			

Table 2 - Distribution of individuals' dental problems by sex

Dental problem	Boys (n=262)	Girls (n=238)	
Carries	54 (20.61)	41 (17.23)	P = 0.337
Sign of any Vitamin deficiency	12 (4.58)	8 (3.36)	P = 0.490
Signs of Minerals abnormality	15 (5.72)	10 (4.20)	P = 0.435
Total	65 (24.81)	51 (21.98)	P=0.459

*Total is less than summation of all individual value as some participants may have more than one dental problem

In this study out of five hundred participant two hundred and sixty two (52.4%) participants were boys. Mean age of participants were 15 ± 1.67 years. Mean dental hygiene awareness score was $18.12 \pm$

2.78, it was lower in male (17.89 ± 2.98) compared to female (19.24 ± 2.87) participants. Overall one hundred and sixteen (23.2%) participants had dental problem on examination. Boys had more (24.81%) dental problem compared to girls (21.98%) but this difference is not significant. (Table-2) Dental carries is most common problem among boys and girls. Out of all the participants 19% participants had dental carries. Other than dental carries some students also show the signs of any vitamins deficiency (4.0%) and minerals abnormalities (5.0%). All the dental problems were more among male students compared to female students but this difference was not statistically significant.

Only 19.26% of students who had habit of twice daily brushing had dental problem which is less (35.54%) compared to students who didn't have this good habit. This difference is statistically significant. (Table-3)

Table 3 - Association between dental problem and habit of twice daily brushing

Twice daily brushing	Dental problem present	Dental problem absent
Yes	73 (19.26)	306 (80.74)
No	43 (35.54)	78 (64.46)
Chi-square = 13.63, p = 0.00022		

On dental examination by expert 19.6% students had good dental hygiene condition. 53.6% participants had bad dental condition while 26.8% participants had poor dental hygiene condition. Dental hygiene status did not show any gender difference. (Table-4) Data on Table 5 depicts that; the majority (59.00%) of school children had moderate level of knowledge of oral hygiene, and only two hundred and five (41%) had adequate knowledge of oral hygiene and none of them had inadequate knowledge regarding oral hygiene. Knowledge about dental hygiene shows the statistically significant relationship with the dental hygiene status observed by expert.

Table 4: Association of oral hygiene status and gender

Dental hygiene status by expert	Boys (n=262)	Girls (n=238)	Total
Good	56 (21.37)	42 (17.65)	98 (19.6)
Bad	136 (51.91)	132 (55.46)	268 (53.6)
Poor	70 (26.72)	64 (26.89)	134 (26.8)
Chi-square = 1.179, p = 0.55458			

Table 5: Association of oral hygiene status and awareness status of participants

Dental hygiene status by expert	Adequate knowledge (n=205)	Moderate knowledge (n=295)
Good	53 (25.85)	45 (15.25)
Bad	107 (52.19)	161 (54.58)
Poor	45 (21.96)	89 (30.16)
Chi-square = 10.109 p=0.0064		

DISCUSSION

In this study out of five hundred participant two hundred and sixty two (52.4%) participants were boys. This may be due to fewer females per thousand male in population. Mean age of participants were 15 ± 1.67 years. This is because we only conducted the present study in higher secondary students. Mean dental hygiene awareness score was 18.12 ± 2.78 , it was lower in male (17.89 ± 2.98) compared to female (19.24 ± 2.87) participants. These findings are similar to study done by Umarani. *J et. al.* [10]

Boys had more (24.81%) dental problem compared to girls (21.98%) in our study but this finding is contradictory to finding in study done in Satara district of Maharashtra. [11] This difference may be due to different study population in both studies. In this study we observed that nineteen percent children had dental caries while study in Mumbai observed that 35.6% children had dental caries. [12] This difference is may be due to other risk factors and lack of knowledge about dental hygiene which leads to higher number of dental caries in other study. In present study on dental examination by expert 19.6% students had good dental hygiene condition while 53.6% participants had bad and 26.8% participants had poor dental hygiene condition? These findings are almost similar to study done by Nitin Mohire *et. al.*

Findings of study show most of the student's brush once a day (78.99%) while only 19.99% brush twice a day. It means that majority of population not following good oral hygiene practices. These findings are similar to the study by Nitin Mohire *et al.* Practice of twice daily brushing is helpful in preventing dental problem. Dental hygiene status of girls is better than boys because more number of girls have adequate knowledge of dental hygiene. Knowledge about dental hygiene shows the statistically significant positive relationship with the dental hygiene status.

CONCLUSION

An oral hygiene practice differs state to state and community to community and depends on various factors. This study will provide some sort of data regarding epidemiology of oral hygiene problems in students. Patient awareness regarding routine oral hygiene practices definitely helps to reduce incidences of oral problems. Thus it is necessary to have national health policy for good oral hygiene.

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