

# EVALUATION OF DENTAL AWARENESS AMONG FIRST YEAR DENTAL PROFESSIONAL STUDENTS OF CSMSS DENTAL COLLEGE, AURANGABAD

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## ABSTRACT:

The oral health awareness among the first year dental students, C. S. M. S. S. Dental College, Aurangabad, was studied. Eighty-three subjects underwent questionnaire assessing oral health awareness. More than 76% of the subjects were reported to brush their teeth twice or more daily and 57.6% used supplemental cleaning tools. According to 94% student, teeth are very important. But most of them did not know the various causes and prevention of tooth decay and gum diseases. Although 39.8% felt they need dental treatment, the majority (66.3%) visited the dentist for check-up and cleaning. More than 50% were aware about dental implants and that of 61% about risk of systemic diseases through oral diseases. Less awareness was observed about precancerous lesions (42.2%) and its etiology. These findings suggest that the subjects have lack of oral health awareness and measures should be taken to improve it.

**Key words:** Oral health awareness, dental students.



## INTRODUCTION:

Dental health is a highly individualized concept, the perception of which is very much affected by an individual's culture and socio-economic status. The attitude of people towards their own health and the attitude of dentist who provide dental care, play an important role in determining the oral health condition of the population.<sup>[1]</sup> Good oral health knowledge and awareness contributes to good oral health behavior, which in turn results in good oral health status.<sup>[2,3,4]</sup>

The dental education system in India accepts candidates from various parts of the country and state with varied socioeconomic background who become eligible to study dentistry based on their score in entrance exams. So the first year dental student's study population represents most part of the state. The students were called on very first day of beginning of their session before orientation lecture. So the subjects represent general population without any professional dental training.

Dental caries and periodontal disease are known to be the most common oral diseases worldwide. Dental caries or tooth decay is described as a progressive damage to tooth surface caused by acid produced by bacteria. The damage is through decalcification of the enamel matrix, which later moves into other tissue structures [5]. Meanwhile, periodontal disease is an inflammatory condition caused by bacterial infection in the periodontium. Therefore it is not surprising that maintaining good oral hygiene, by means of personal and professional care, is considered to be the best prevention for both dental caries and periodontal diseases.[6]

Based on this, there is a need to understand which of the many aspects that interplay in maintaining healthy oral environment that needs to be improved. Other studies have suggested that this could be due to lack of knowledge or awareness,[7,8,9] attitude [10,11] or faulty oral hygiene practices/behavior.[9,12, 13]

The aims of this cross-sectional study are to obtain basic information on oral health awareness, attitude and behavior among first year dental students of C.S.M.S.S. Dental College, Aurangabad.

## **MATERIAL AND METHODS:**

The survey was conducted among first year dental students from CSMSS dental college and hospital, Aurangabad. Ethical clearance was obtained from 'Ethical committee for Research' from CSMSSDC.

A self administered questionnaire containing 22 multiple choice questions

was distributed among 83 first year undergraduate dental students during the academic year 2012 -13. The response rate was 100% (n= 83). The questions consisted information on dental hygiene habits and oral health knowledge. The age group of the study population was average 19 years. Participation in the study was voluntary. The study was completed anonymously and no student personal, demographic or academic information was collected.

## **SURVEY PROCEDURE AND DESCRIPTION**

There is no universally accepted or recommended index or inventory to measure dental health attitude and behavior. The questionnaire was developed to gain information on (i) oral health behavior, (ii) dental service utilization and (iii) oral health awareness. It was a close-ended questionnaire, with some of the questions permitted the subjects to choose more than one answer. It was pre-tested and revised on an appropriate sample of 10 subjects of non-dental related background. Each subject took an average of 15 minutes to complete the self-administered questionnaire prior to clinical examination.

## **DATA ANALYSIS:**

Frequency distributions of the subjects from the questionnaire data were analyzed.

## **RESULTS:**

Most subjects reported that they brushed their teeth twice (76%) or more (2.3%) a

day, compared to 21.7% who brushed once a day. 38.6 were not using any supplemental cleaning tools. Mouthwash was the second highest method of teeth cleaning (33.8%), followed by toothpicks (19.2%), flossing and others (2.3% each). The reasons cited for cleaning their teeth daily include to prevent tooth decay (48.2%), while preventing gum disease (20.5%) and as routine were accounted for 13.3% of the subjects. 12 % said they did it to prevent bad breath.

The frequency of sweets consumption appeared to be quite high, with more than half (53.1%) of the subjects took sweets either daily or several times a week. Some 32.5% consumed it once a week, 12% once a month and only 2.3% said they never took sweets. Majority of the subjects, in which accounted for 81.9%, admitted they visited the dental clinics only when 'they feel it is necessary to do so'. Only 7.2% made it a habit to do yearly check up, while the rest 7.2% had never been to the dental clinic before. Of those who made dental visits, 31.2% said their last visit was less than 6 months before this study was carried out, 23.4% made their last dental visit around 6-12 months ago and 44.2% admitted their last visit was more than a year ago.

Majority (71.4%) made the dental visits for routine check-up or cleaning. Other purposes of the visits included for tooth filling or extraction (11.7%), dental emergency such as dental pain (6.5%), appliances such as dentures and braces (1.3%) with other services (0%).

Oral health awareness of the study subjects was assessed by several questions, including their knowledge on causes and prevention of dental decay; causes, signs and treatment of gum disease and their views on the condition of their own teeth. More than 48% of the subjects thought that food causes dental decay and only 20.5% knew that bacteria is the main cause of it. However, a small number of them (2.3%) thought that genetic factor plays a role in dental decay. Good oral health knowledge is also reflected in the next question of what the subjects think on how to prevent dental decay. More than 68% of the subjects said that tooth brushing and practicing good oral hygiene are the two most effective ways of preventing dental decay (68.7% and 79.6%, respectively), followed by regular dental checkups (18.1%) avoiding sweet foods (1.2%).

Among the causes of gum disease, bacterial infection was the most frequently cited cause by the subjects (30.1%), while only 2.3% thought that genetic factor has a role in causing gum disease. Other etiological factors as thought by the students were calculus (6%), food (19.3%), systemic disease (9.6%) and smoking (5%). Most of the subjects recognized bleeding gum (56.6%) and painful gum (39.8%) as the signs of gum disease. Nobody recognized teeth starting to fall out as one of the signs of gum disease. Antibiotics seem to be the treatment of choice for gum disease, where 42.2% of the subjects thought so, compared to self healing (12%) and scaling (13.3%).

Only 31.3% practices scientific brushing technique and 60.2% were unaware of it. When asked what they thought of their own teeth, almost all of the subjects (94.0%) felt that their teeth were very important asset. However, when asked of their opinion on the present condition of their teeth, 60.2% thought that theirs were in 'good condition', 36.1% as 'average', followed by 1.2% as 'not in good condition'.

Our study also found that about 40% subjects felt they need dental treatment in the near future and out of those, about 50% cited teeth cleaning as the needed dental treatment, followed by tooth filling (13.3%), treatment of the gums (6%) and tooth extraction (2.3%).

Out of these 83 subjects, 43 (51.9%) were aware about dental implants, 51 (61.4%) about periodontal medicine and 35 (42.2%) about red and white lesions of the oral cavity. For precancerous lesions 36.1% felt that tobacco chewing can be a causative factor followed by hot and spicy food (9.6%), smoking (2.3%), autoimmune (2.3%), alcohol and chronic irritation (1.2% each).

## DISCUSSION:

The present study was targeted at the first year dental students by taking into consideration that they could play an active role in dental public health. These future dentists represent the young adult population, who has yet to receive formal university level dental health education.

Our questionnaire found that 78% of the subjects allegedly practice good oral

hygiene habits, brushing teeth twice or more daily and 57.6% using additional cleaning tools, mostly toothpicks and mouthwash. Majority of the subjects also indicated that they have good oral health awareness but very few knew that bacteria and food are the main causes of dental decay. Although, majority of them aware that it can be prevented through good oral hygiene care, regular check-up and avoiding sweets. Although good number of them knew the causes and signs of gum disease, not many were aware of the treatment for the disease. This is supported by the findings that 42.2% of the subjects chose antibiotics as the treatment of choice for gum disease while 13.3% thought that the disease was self-healed. It is obvious that all subjects regarded their teeth as a very important asset, and about 60% thought that their teeth are in good condition and only 39.8% felt a need of dental treatment in future (Table 1). Despite this perception, near about 82% of them admitted only going to the dental clinic when 'it is necessary to do so' while 7.2% never had been to a dental clinic before.

Our findings were in accordance with the similar survey carried out in first year Malaysian dental student by Zamirah ZA et al (2005)<sup>14</sup>, with respect to importance of oral hygiene. However awareness regarding etiology and prevention of dental caries and periodontal disease (gum disease) was much more less in present study as compared to previous study. Poor oral health awareness was also observed in a survey carried out in Chennai in students of non-professional

college, which is in accordance with the present survey. Most of the studies in non-Asian countries show the excellent oral health awareness as that of Asian countries especially India. However, our questionnaire did not pursue the reasons so. Our findings did not come as a surprise to us as it is generally accepted that dental visit is not a popular health-related activity for the Indian adults.

The other important finding that we found in our study was the awareness about the dental implants, which was not included in previous oral health awareness questionnaire. Subjects of the present survey were also well aware about the fact that oral diseases could be risk of factor of systemic diseases. These findings indicate the improved knowledge of the advancements in the dental field. Similarly, knowledge about precancerous lesions and its etiology and malignant potential was considerably good in present population which can be helpful in lowering the incidence of oral cancer in future to some extent. Only 31.3% were using scientific brushing technique and those learnt it either from parents, teachers or their family dentist. So the role of parents, teachers and family dentist in educating students on oral health care is important, than that of the mass media. Our findings agree with the suggestion that schools provide the most

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suitable environment to promote health education programs<sup>7,10</sup> and suggest the need to inculcate better dental health education among schools as one of the strategies to improve oral health care in the country. We also feel that these can be achieved through appropriate training, good relationship and co-operation between many parties.

#### CONCLUSION:

The above study shows that there is lack in appropriate oral health education even among the students seeking the professional dental education. This pilot study gives information regarding the present scenario prevailing in Aurangabad (Maharashtra). There are still some areas that need to be improved in terms of awareness and attitude on oral health care. Further investigations are required in large quantity for understand more accurately and employ in the public health education for the welfare of the people. Also, it is suggested that further study should be conducted to see any changes in their awareness, behavior and status of the oral health after they have received formal dental education in the faculty of dentistry.

**LIMITATIONS:** This study consists of self-reporting data which depends upon varying level of language ability and familiarity.

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**TABLES:****TABLE 1:** Frequency distribution of the subjects on questions regarding oral health behavior

Questions	% of subjects (n=83)
<b>1. Daily tooth-brushing frequency</b>	
Once	21.7 (18)
Twice	76.0 (63)
More than twice	2.3 (2)
<b>2. Supplemental cleaning tools</b>	
Floss	2.3(2)
Mouthwash	33.8 (28)
Toothpicks	19.2 (16)
Other tools	2.3 (2)
Nothing	38.6 (32)
<b>3. Frequency of using supplemental tools</b>	
Once/day	27.7 (23)
Occasionally	24.1(20)
After every meal	12.0 (10)
<b>4. Objective of teeth cleaning</b>	
Prevent tooth decay	48.2 (40)
Prevent gum disease	20.5 (17)
Prevent bad breath	12 (10)
Routine	13.3 (11)
<b>5. Frequency of sweets consumption</b>	
Daily	14.5(12)
Several times a week	38.6 (32)
Once a week	32.5 (27)
Once a month	12.0 (10)
Never	2.3 (2)
<b>6. Frequency of dental visits</b>	
Never	7.2 (6)
When necessary	81.9 (68)
Yearly	7.2 (6)
<b>7. Last dental visit (persons visited dentist =77)</b>	
Less than 6 months ago	31.2 (24/77)
6-12 months ago	23.4 (18/77)
More than 12 months ago	44.2 (34/77)
<b>8. Purpose of last dental visit (persons visited dentist =77)</b>	
Check up/cleaning	71.4 (55/77)
Filling/extraction	11.7 (9/77)
Dental emergency	6.5 (5/77)
Denture/appliance	1.3 (1/77)
Scaling/others	0 (0)

<b>9. Causes of dental decay</b>	
Bacteria	20.5 (17)
Calculus	4.8 (4)
Food	48.2 (40)
Systemic disease	4.8 (4)
Smoking	4.8 (4)
Genetic factor	2.3 (2)
<b>10. How to prevent dental decay</b>	
Good oral hygiene	68.7 (57)
Tooth brushing	10.9 (9)
Regular dental check-up	18.1 (15)
Avoid sweets	1.2 (1)
<b>11. Causes of gum disease</b>	
Bacteria	30.1 (25)
Calculus	6.0 (5)
Food	19.3 (16)
Systemic disease	9.6 (8)
Smoking	6.0 (5)
Genetic factor	2.3 (2)
<b>12. Signs of gum disease</b>	
Teeth fall out	0 (0)
Painful gum	39.8 (33)
Bleeding gum	56.6 (47)
<b>13. How to treat gum disease</b>	
Antibiotic	42.2 (35)
Self-heal	13.3 (11)
Scaling	12.0 (10)
<b>14. Knowledge of scientific brushing technique</b>	
Yes	31.3 (26)
No	60.2 (50)
<b>15. Importance of your teeth</b>	
Very important	94.0 (78)
Important	6.0 (5)
<b>16. General condition of your teeth</b>	
Good	60.2 (50)
Average	15.7 (13)
Not good	1.3 (1)
<b>17. Need any dental treatment in near future?</b>	
Yes	39.8 (33)
Do not need treatment	15.7 (13)
Don't know	37.3 (31)
<b>18. If needed, what kind of treatment?</b>	
Teeth cleaning	49.4 (41)
Tooth filling	13.3 (11)



Gum treatment	6.0 (5)
Tooth extraction	2.3 (2)

**19. Knowledge of Dental Implants**

Yes	51.9 (43)
No	36.1 (30)

**20. Knowledge of the fact that oral disease as a risk factor for systemic disease**

Yes	61.4 (51)
No	22.9 (19)

**21. Knowledge of the red and white lesions of the oral cavity**

Yes	42.2 (35)
No	44.6 (37)

**22. Risk factors for lesions mentioned in above said lesions**

Tobacco chewing	36.1 (30)
Alcohol	11.2 (1)
Smoking	2.3 (2)
Chronic irritation	1.2 (1)
UV radiation	0 (0)
Hot and spicy food	9.6 (8)
Autoimmune	2.3 (2)