

# Knowledge, Attitude and Practice of Oral Health among First Year Undergraduate Medical Students in a Tertiary Care Centre in Western India

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## Abstract

According to World health organization (WHO), the oral health is considered as an integral part of the general health of an individual. In India, oral health care services have limited access in rural as well as urban population with vast differences in oral health status. The knowledge of oral health in medical graduates has more opportunities to spread in our rural and urban community. Present study was conducted with an aim to evaluate knowledge, attitude, and practice of oral health among first professional under graduate medical students of tertiary care teaching hospital in India. An observational, descriptive, cross-sectional study was conducted at GMERS medical college, Dharpur, Patan, Gujarat among first professional medical students. A self-structured, pre validated, close ended questionnaire consists of total 15 multiple choice questions. Out of this total, 6 questions are on knowledge of oral health, 5 questions on attitude of oral health and 4 questions on practice of oral health was used for this study. A total of 62.16% of first professional students knew the different techniques for teeth brushing. A total of 8.78 % of students knew about halitosis. A total of 97.97 % of students believed that brushing teeth in morning and night to keep them healthy. A total of 73.65% of students believed that using fluoride toothpaste strengthen the teeth. A total of 56.08% of students brush their teeth once daily. A total of 15.45 % of students had visited dentist at least once in a year. There is need of further exposure of dental knowledge among first professional medical students, so they can serve community in better ways.

**Keywords:** First professional medical students, Oral health.

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## INTRODUCTION

According to World health organization (WHO), the oral health is considered as an integral part of the general health of an individual [1]. Quality of life is associated with poor oral health and many systemic chronic conditions like stroke, heart disease and diabetes are associated with it [2]. In developing country like India, oral problems are still considered as one of the major public health problems [3].

In India, oral health care services have limited access in rural as well as urban population with vast differences in oral health status [4]. In urban part of India, the dentist population ratio is 1:8,000 compared with medical doctor population ratio of 1:1,800. This ratio in rural parts of India is respectively 1:50,000 and 1:10,000 indicating better availability of medical graduates in Urban and rural parts of India [5].

Therefore, the knowledge of oral health in medical graduates has more opportunities to spread in our rural and urban community.

Proper knowledge of oral diseases is significant in medical field due to the following reasons [6, 7]:

- Periodontal diseases have significant relationship with multiple systemic conditions of medical interest.
- Many systemic diseases have oral manifestations.
- Many drugs are associated with adverse drug reactions of oral cavity like oral ulcer, gingivitis, and gum hypertrophy.
- Majority of population consult medical practitioners for their oral health problems.

So the present study was conducted with an aim to evaluate knowledge, attitude, and practice of oral

health among first professional under graduate medical students of tertiary care teaching hospital in India.

**MATERIAL AND METHODS:**

An observational, descriptive, cross-sectional study was conducted at GMERS medical college, Dharpur, Patan, Gujarat. The written informed consent of participation and approval of institutional ethics committee were obtained. The study was planned for first professional medical students (total 150). A self-structured, pre validated, close ended questionnaire was used for this study. The subject expert prepared questionnaire consists of total 15 multiple choice questions. Out of this total, 6 questions are on knowledge of oral health, 5 questions on attitude of oral health and 4 questions on practice of oral health. The questionnaire was sent to ten subject experts for validation. Seven members responded and their suggestions were incorporated to finalize the questionnaire. All the students were explained regarding the nature and purpose of the study. The data was entered into Microsoft office excels and analyzed by epiinfo software. Qualitative variables was described using the absolute (N) and relative (%) frequencies.

**RESULTS**

One hundred and forty eight completely filled questionnaires from first year medical students were collected. Table-1 shows that gender and age distribution of students (Mean age: 18.31± 0.82).

**Table-1: Distribution of the students according to demographic data of first year medical students**

Variables	Medical students	
	N (148)	%
<b>Gender</b>		
Female	53	35.81
Male	95	64.19
<b>Age</b>		
16-18 years	99	66.89
19-21 years	49	33.11
Mean age	18.31	
± SD	0.82	

Table-2 shows that level of knowledge about oral health among first professional medical students. A total of 62.16% of first professional students knew the different techniques for teeth brushing. A total of 8.78 % of students knew about halitosis.

**Table-2: Knowledge of oral health among first year medical students**

Questions	Yes		No	
	N (148)	%	N (148)	%
Regarding aetiology of dental caries and gum bleeding	89	60.14	59	39.86
Regarding the different techniques for teeth brushing	92	62.16	56	37.84
Regarding different types of floss	26	17.57	122	82.43
Regarding any idea about halitosis	13	8.78	135	91.22
Regarding any idea about oral thrush	35	23.65	113	76.35
Regarding any idea about stomatitis	46	31.08	102	68.92

Table-3 shows that level of attitude about oral health among first professional medical students. A total of 97.97 % of students believed that brushing teeth

in morning and night to keep them healthy. A total of 73.65% of students believed that using fluoride toothpaste strengthen the teeth.

**Table-3: Attitude of oral health among first year medical students**

Questions	Strongly agree		Agree		Disagree		Strongly disagree	
	N(148)	%	N(148)	%	N(148)	%	N(148)	%
regarding to brush your teeth in the morning and night to keep them healthy	95	64.19	50	33.78	3	2.03	0	0
regarding to rinse your mouth with water after every meal to remove accumulated food debris	80	54.05	66	44.60	2	1.35	0	0
regarding sugar, sweet, cold drinks can cause tooth decay	53	35.81	86	58.11	9	6.08	0	0
regarding fluoride toothpaste strengthen your teeth	30	20.27	79	53.38	39	26.35	0	0
regarding to have dental check-up at least once each year	42	28.38	92	62.16	14	9.46	0	0

Table-4 shows that level of practice about oral health among first professional medical students. A total of 56.08% of students brush their teeth once daily.

A total of 15.45 % of students had visited dentist at least once in a year.

**Table-4: Practice of oral health among first year medical students**

Questions	N(148)	%
<b>Brushing teeth in day</b>		
Three times	0	0
Two times	64	43.24
One time	83	56.08
Not at all	1	0.68
<b>Rinsing teeth in a day</b>		
Three times	50	33.78
Two times	53	35.81
One time	33	22.30
Not at all	12	8.11
<b>Flossing teeth in week</b>		
Everyday	49	33.11
four to six times a week	19	12.84
two to three times a week	27	18.24
less than two times a week	53	35.81
<b>Frequency of dental check-up per year</b>		
Two times a year	10	6.76
Once in a year	23	15.45
only when necessary	61	41.22
not at all	54	36.49

## DISCUSSION

Good oral hygiene practices can be linked to general awareness regarding healthy habits.<sup>8</sup> Research also suggest that oral and systemic health are closely associated with each other and oral diseases, if are not treated timely may exaggerate some systemic diseases [9]. As the ratio of medical doctors to population is more in rural of India compared to dental doctors [10], medical doctors have more chances of interacting with larger population. So medical doctors plays a pivotal role in providing knowledge regarding oral health and its significance among general public [11]. Medical students should possess high level of awareness of self-oral health care so that this attitude can be instilled among patients and community as a large. So this study is conducted to assess knowledge, attitude and practices about dental health in medical undergraduate students.

Data from total 148 first professional medical students was collected out of which 53 were female students and 95 were male students with the mean age of  $18.31 \pm 0.82$ . In the present study most of the students knew about the basic causes of dental caries and gum diseases. About 62.16% students knew about the different techniques of tooth brushing. But the knowledge regarding fluoride and interdental aids was low. These results were in agreement with other studies [8, 12].

Flossing of teeth is as much required as brushing for complete cleanliness of teeth. But about 82.43% students do not have knowledge about flossing. This shows that students are not well educated regarding the benefits of flossing. These results are similar to the findings of some other studies [13-17].

Similarly the knowledge about different oral conditions like halitosis, oral thrush and stomatitis is very poor among the medical graduates. An about 91.22% student does not know about halitosis and about 76.35% and 68.92% does not have knowledge about oral thrush and stomatitis respectively. Further emphasis on oral health is necessary in undergraduate training to improve oral health knowledge among the students.

The frequency of brushing is linked to oral hygiene. Many studies have shown that less frequent tooth brushing was associated with high probability of having poor oral hygiene [8].

In the present study conducted about 64.19% students strongly agree that they should brush twice daily to maintain the oral hygiene these results are similar to the studies [8, 11].

About 54.05% students feel the need to rinse their mouth with water after every meal to remove the accumulated food debris. Only 35.81% of our study participants strongly agree to the fact that there was a role of sugary foods in causing tooth decay, whereas Ansari *et al.*, in his study found that it to be 93.8%; thus, showing higher level of awareness compared to our study participants.

Fluoride is necessary for mineralization of teeth. Many Studies have shown that fluorides prevent and arrest dental caries [18]. In our study 53.38% students agree and 20.27% students strongly agree to the fact that fluoridated tooth paste is necessary to strengthen the teeth. These results are in accordance to the other studies [12].

In the present study approximately 56.08% students brush their teeth once daily and about 43.24% students brush their teeth twice daily. The results are in accordance with the study done by Kamble *et al.*, who demonstrated that 79% medical students brush daily [8]. These findings suggest that medical undergraduate students should be encouraged to brush their teeth twice daily.

Among the medical students 22.30%, 35.81% and 33.78% students rinse their mouth one, two and three times in a day respectively. About 33.11% students use floss as an additional cleaning aid every day and 35.81% students do flossing less than two times in a week. This shows that students are not well educated regarding the benefits of flossing.

Regular dental visit is an important aspect of maintaining good oral health. In our study almost 36.49% students never visited dentist in a year and 41.22% students visit the dentist only when it is necessary. These findings are consistent with the other studies [5, 8, 12].

## CONCLUSION

There is need of further exposure of dental knowledge among first professional medical students, so they can serve community in better ways.

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