

# Oral Health Awareness amongst MBBS, Dental, Nursing First Year Students in an Institution at Udaipur, India: A Cross Sectional Study

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## Abstract

**Introduction:** Oral health is significantly related to knowledge about maintaining a good oral hygiene. Poor oral hygiene can have a deep-rooted effect on the quality of life. Oral hygiene practices involve measures taken to ensure that the oral cavity is clean. Oral hygiene practices are necessary for the prevention of dental and other associated systemic diseases.

**Aim:** The aim was to assess oral health awareness, knowledge, attitude, and practices among 1<sup>st</sup> year students of medical, dental & nursing profession.

**Methods:** A self-administered structured questionnaire with 15 questions was designed based on oral health knowledge, behaviour and status and a cross-sectional study was conducted among the 1<sup>st</sup> year students. Result: We concluded that dental students are more aware as compared to the medical and nursing profession students. This may also be due to their professional knowledge.

**Key words-** Oral Health Awareness, Oral Hygiene, Prevention

## Introduction

Health is a basic need for all cultural groups. Health is a valuable asset not only for an individual but also for any country. A nation progresses rapidly only when its people are healthy and lead a productive life. Oral health is therefore undoubtedly an important aspect and essential component of one's life.<sup>1,2</sup>

General health is not ideally possible without maintaining oral health. Thereby, oral health is an important aspect of general health and wellbeing.<sup>1</sup> "The mouth is regarded as the mirror of the body and the gateway to good health." In the developing countries,

the most concerning oral disease is dental caries. The increase in the prevalence of dental caries is due to factors such as high sugar consumption, a shift to westernized diet, socioeconomic status, the rate of urbanization, and the level of education, unhealthy habits like tobacco chewing or cigarette smoking and lack of dental specialist care.<sup>3</sup>

The main objectives of our study are:

To evaluate and assess the knowledge of oral health in the educated strata which forms the foundation of society.

To compare the oral health awareness among the students of medical, dental and nursing college.

Oral hygiene if properly administered helps to get rid of certain oral diseases.<sup>4</sup>

Many studies have successfully proved that better knowledge about oral health practices are linked to

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healthier oral cavity.<sup>5-8</sup> Oral diseases are of major public health concern due to their high prevalence rate and their impact on quality of life.<sup>9</sup> Also, many studies have shown that lack of knowledge among rural people and negligence among urban people are causes of dental diseases.<sup>10,11</sup> The attainment of good oral health is based upon the awareness about good dietary habits and proper ways to maintain good oral hygiene,<sup>12</sup> which involves prevention of oral diseases can be achieved by proper tooth brushing, use of interdental aids, flossing, proper dietary practice, and regular visit to dentist.<sup>13</sup>

Hence, the primary concern of dental professionals and oral health educators is to introduce a positive oral health knowledge and behaviour in the society.<sup>14</sup>

Periodontitis<sup>15,16</sup> contributes to a major part of the worldwide oral health problems and is one of the most concerning reasons of tooth loss, representing complete and partial edentulism in 5%–20% of the global adult population. Any person regardless of age, gender, ethnic group, and residing area can get affected by the periodontal disease to a wavering extent and severity.<sup>17,18</sup>

Good oral hygiene being the foundation of a healthy mouth prevents 80% of all dental problems.<sup>19</sup> Primary prevention through proper tooth brushing has significant importance in the prevention of dental health problems.<sup>20</sup> Oral disease incidences are higher among the poor population with a major hike among the developing countries.<sup>21</sup>

The behaviour of a dentist and their attitudes toward their own health reflect their understanding toward the importance of preventive dental procedure and improving the oral health of patients.

Hence the present study was conducted to evaluate oral hygiene awareness in 1<sup>st</sup> year students.

## Materials and Method

This is a professional colleges-based survey conducted in December 2019 to find the oral hygiene awareness among students of professional colleges in Udaipur.

The study was conducted at Pacific University, Udaipur. Only those students who were willing to participate were included in the study while the rest were excluded from study. After taking their informed consent total of 200 students present on the day of data collection were included in the study. Data was collected by a self-

prepared questionnaire and analysed using percentages.

### Inclusion criteria:

- Student between age group of 18 and 21
- Only 1st year students
- Systemically healthy participants.

A self-structured valid questionnaire was prepared in English. This questionnaire was not previously used for another research. The questionnaire comprised 15 questions about oral hygiene practices.

The nature and purpose of the study was explained to the students before the survey. The questionnaire was distributed in their respective classrooms and once answered it was collected. Incompletely filled questionnaires were discarded.

## Results

Questionnaire was as follows:

1. Do you think oral hygiene is mandatory to overall health of the body?
  2. Frequency of brushing in a day?
  3. Do you clean your tongue?
  4. Do you use an interdental aid?
  5. Gargling mouth after eating?
  6. How much time you take for cleaning your teeth?
  7. Frequency of snacking habits?
  8. Habits of using tobacco products?
  9. Causes of bad breath?
  10. What is the purpose of cleaning teeth?
  11. Which is more important for oral health?
- More than 90% individuals of all 3 professions know about the importance of oral hygiene while remaining 10% needed proper guidance and education.
  - 81.25%, 72.5% and 57.33% of dental, medical and nursing students respectively brush twice a day.

- 32.5%, 29.1% and 16% of dental, medical and nursing students respectively brush for 1-2 mins.
- 88.7%, 51.6% and 76% of dental, medical and nursing students respectively clean tongue.
- 72.5%, 77.5% and 74.66% of dental, medical and nursing students respectively do not use interdental aids while only 27.5%, 22.5% and 25.33% of dental, medical and nursing students respectively use them.
- 80%, 78.33% and 74.66% dental, medical and nursing students gargle after eating.
- 38.75%, 36.6% and 29.33% of dental, medical and nursing students change brush in every 3 months.
- 22.5%, 14.1% and 20% of dental, medical and nursing students visited in every <6 months while 28.7%, 15%, 12% visited for regular dental check –up.
- 61.25%, 56.6% and 58.66% dental, medical and nursing students considered improper brushing as major cause.
- 72.5%, 65.8% and 16% of dental, medical and nursing students respectively have never consumed tobacco products.
- 70%, 45% and 57.33% of dental, medical and nursing students respectively consider lack of proper brushing and flossing as the prime reason.
- 73.7% 70.8% and 58.66% of dental, medical and nursing students respectively consider prevention of dental disease as major purpose of cleaning tooth.
- 88%, 32.5% and 38.66% of dental, medical and nursing students think that regular dental visit is essential.

Above data shows that dental students are more aware about frequency of duration of proper brushing techniques as compared to medical and nursing.

A chi-square test was done and level of significance was set at the p value < 0.05 which came as significant.

## Discussion

William Osler said, the mouth is the mirror of general health; poor oral conditions may adversely affect the general health, and certain medical conditions may have a negative impact on oral health.<sup>22,23</sup>

Various studies have been conducted to assess the knowledge, attitude, and practices on oral hygiene in students with a background of health sciences.<sup>4,25</sup> Student community all together play a vital role in bringing about a behavioural change in the society.<sup>26</sup> With this in view, the present study was conducted to assess oral hygiene awareness.

Maintenance of oral hygiene is undoubtedly utmost important for overall health of body. Underestimation of oral health may lead to outbreak of various oral problems like halitosis, dental caries and periodontal conditions. Frequency of brushing must be twice a day for 1-2 mins. Brushing thrice a day without any professional advice may lead to abrasion/ tooth wear; also brushing once a day increases chances for oral health disorders, excessive brushing may lead to tooth wear. Brushing for >5min increases the probability of tooth wear exponentially. Cleaning the tongue helps to get rid of biofilm which form over the tongue because of bacteria it also dulls the taste buds. These bacteria's if not removed leads to bad odour and dental decay. Interdental aids are important as they can remove food trapped between the teeth. Interdental aids include floss, interdental brushes etc. but these must be used cautiously as, if not used properly they can lacerate the gingiva. Students are still unaware about importance of such aids. A quick rinse with water boosts body's natural ability to clean itself after a meal. Rinsing with H<sub>2</sub>O protects enamel by removing food and sugar and about 30% of oral bacteria without brushing. Brush must be changed in every 3 months, changing too early or too late may have harmful effects. Periodic dental check-ups must be done in every 6-month interval visiting dentists for consultation, pain or treatments denotes carelessness of patient and lack of awareness one's own health. Improper brushing is the primary reason for tooth decay while gutkha chewing and smoking also contributes to tooth decay. Having chewing gum does not cause any tooth decay. Tobacco products like cigarette, gutkha etc. leads to various premalignant lesions within the oral cavity therefore, consumption of such products must be avoided. Halitosis is a multifactorial disease and has both psychological as well as physiological

impacts on one's life. Its primary causes include lack of proper brushing and flossing while food such as garlic and onion as well as hormonal fluctuation also leads to halitosis. The frequency of brushing is linked to oral hygiene. Many studies have shown that either side fluctuation in frequency of tooth brushing is associated with high probability of having poor oral hygiene.<sup>27</sup> A higher percentage (67%) of students cleaned teeth two times a day in studies done by Kakkad et al<sup>28</sup> and Peltzer and Pengpid<sup>29</sup> in comparison to our study. Few studies also reported similar observation to ours.<sup>30-32</sup>

Interdental aids are useful aids designed specifically to clean the interdental areas. Approximately 70% of students did not use interdental aids which was in contrast with the study done in San Francisco, North-East Ontario, and Iraq<sup>18</sup>. Nevertheless, many studies showed that use of dental floss was not very popular.<sup>25,32</sup>

Oral health is always a last priority unless it troubles the patient in the form of pain, caries or gum problems etc. People visit dentist only when there is a problem. In our study also toothache was the most common reason for visit to dentist. A study conducted in Norway among adults by Sarah et al was in contrast with our study as it showed that only 28% visited a dentist when in pain or lost a filling and 51% visited a dentist regularly. While a similar study was conducted in Southern Poland among adults by Wojciech et al, its observation were similar to our study as only 8% visited a dentist for regular check-up and 53% visited a dentist in case of a tooth ache.

The results of our survey revealed that the well-educated professional course students who are going to become the foundation of our future stands nowhere better the general population, whereas some results might be given intentionally by the students. But the level of awareness and knowledge about the oral health in these professionals is not very encouraging.

### Conclusion

Oral health attitude, knowledge, and behaviour were high among the dental students as it is a part of their professional education but students of medical and nursing profession comparatively showed poor oral health awareness. There was lack of exposure in medical and nursing faculty regarding oral health. Hence, provision for oral health education must be implemented in their curriculum. Oral health knowledge is not only gained from institutions/text books but learnt from social interactions. Parents and teachers should take the

responsibility to teach their children about oral health starting from a very young age. The medical, nursing and dental professional students must be encouraged to be a role model in promoting oral health education for their families, friends, patients, and ultimately for the society.

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