

Assessment of oral health attitude and behavior among a group of dental students in Tumkur, India: A cross- sectional study

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Abstract

Background: Dental health is highly an individualized concept. Comprehensive programs in preventive care, including oral self-care regimens should be an essential part of undergraduate dental education. Professional under-graduation course is package of acquiring attitudes, skills and knowledge. This survey was done with an aim to assess oral health attitudes and behavior among a group of dental students in Tumkur, Karnataka using HUDBI. **Materials and methods:** A self-administered questionnaire modified Hiroshima University-Dental Behavioural Inventory (HU-DBI) was distributed among 186 undergraduate dental students with Yes and No options. Data was analysed using SPSS version PASW 18 (SPSS, Inc., Chicago, IL, USA) for Windows. Descriptive statistics and Chi Square tests were applied. p value was set at < 0.05 as statistically significant. **Results:** A total of 186 dental students from the 1st, 2nd, 3rd, 4th and Interns participated in the study. 1st & 2nd year students grouped as preclinical and 3rd, 4th & interns as clinical students group. Mean HU-DBI score was 7.6 ± 2.0 . There was statistical significant difference was present between the preclinical and clinical student's HU-DBI Scores ($p < 0.05$). **Conclusion:** Oral health attitude and behavior increased with

the increasing levels of dental education & statistical significant difference was present between the preclinical and clinical student's HU-DBI Scores

Key words: Dental students, HU-DBI inventory, oral health attitude, oral health behavior

Background: According to World Health Organization (WHO), definition of Health is changing from the existing disease- centric, pain relieving notion of healthcare to promote a health centric and well being concept. There by shifting the onus of public health from the shoulder of health care personnel to "people's own hands".^[1]

Prevention is the better option than cure. People need to be very much attentive and meticulous to maintain oral health for the prevention of oral disease. Oral behavior reflects individual perception on oral health. Dental health is highly an individualized concept. Comprehensive programs in preventive care, including oral self-care regimens should be an essential part of undergraduate dental education.^[2]

Students get exposed to varied kind of people and patients with different social, cultural and economical backgrounds. Hence the student's attitude and behaviors play important role in treating any kind of patients. The under-graduation acts as root for the students, which help them to understand, imbibe the understood knowledge to become professional. Professional under-graduation course is package of acquiring attitudes, skills and knowledge. Later these qualities help the professional to become role models for these patients and community at large. Hence present survey was done with an aim to assess oral health attitudes and behavior among a group of dental students in Tumkur, Karnataka using HUDBI

Hiroshima University Dental Behavior Inventory (HU-DBI)^[3,4] was developed by Kawamura to investigate dental health behavior, attitudes and perceptions. The original questionnaire was written in Japanese and translated in many languages.^[5] All items have dichotomous responses format (agree/disagree). higher scores indicate better oral health attitude and behavior.^[3,4]

Materials and Methods: This study was conducted at the Sri Siddhartha Dental College and Hospital, Tumkur, India during the academic year March-May 2015 with due permission from the institutional ethical committee and Principal. Around 186 dental students participated in this study. Participation was voluntary, and all the participants were queried anonymously. A modified English version of the HU-DBI^[6] survey, [Table 1] which consists of fifteen dichotomous responses (yes-no) was used in this study. The questionnaires were collected in person immediately after completion.

Table 1: HU-DBI - Inventory

HUDBI- Questions
1. I worry about the color of my teeth.
2. I had been to a dentist office before.
3. My gums tend to bleed when I brush my teeth.
4. I brush my teeth twice daily.
5. I am bothered by the color of my gums.
6. I brush each of my teeth carefully.
7. I have noticed some white sticky deposits on my teeth.
8. I am satisfied with the appearance of my teeth.
9. I think I can clean my teeth well without using toothpaste.
10. I put off going to the dentist until I have toothache.
11. I feel I sometimes take too much time to brush my teeth.
12. I don't feel I have brushed well unless I brush with strong strokes.
13. I do use tooth floss on regular basis.
14. I worry about having bad breath.
15. I do use mouthwash on regular basis.

The data were tabulated and analyzed using SPSS version PASW 18 (SPSS, Inc., Chicago, IL, USA) for Windows. Descriptive statistics and Chi Square tests were applied. p value was set at < 0.05 as statistically significant.

Results: A total of 186 dental students from the 1st, 2nd, 3rd, 4th and Interns participated in the study. 1st & 2nd year students grouped as preclinical and 3rd, 4th & interns as clinical students group. Response rate was observed 100%.

A total of 186 dental students from the 1st, 2nd, 3rd, 4th and Interns participated in the study. Distribution of students according to their academic year shown in Graph 1.

Graph 1: Distribution of dental students according to year of study.

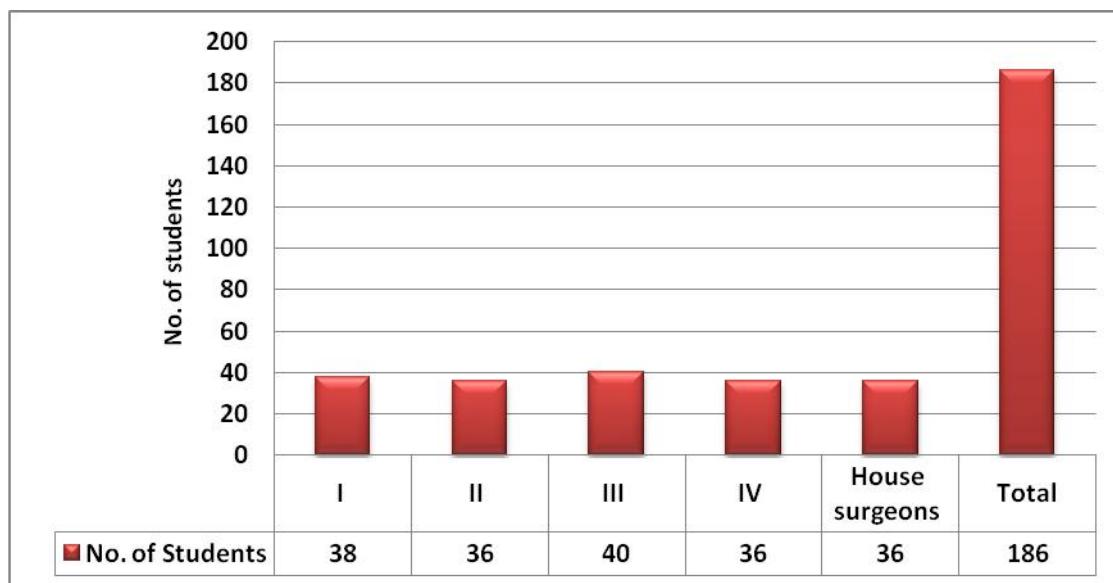


Table 2 shows that only 5% (n=9) (Question no-6) students brush their carefully & none of them even think they can clean their teeth without toothpaste (Question no-9) and

don't use any interdental aids on regular basis. (Question no-13).

Table 2: Student's responses for HU-DBI questionnaire in percentages

HUDBI- Questions	Preclinical students % (n)	Clinical Students % (n)	Total Yes Responses- Total % (n)
1. I worry about the color of my teeth.	83.7(n=62)	82.1(n=92)	83 (n=154)
2. I had been to a dentist office before.	23(n=17)	36.6(n=41)	31 (n=58)
3. My gums tend to bleed when I brush my teeth.	87.8(n=65)	39.28(n=44)	59 (n=109)
4. I brush my teeth twice daily.	12.1(n=9)	33.92(n=38)	25 (n=47)
5. I am bothered by the color of my gums.	23 (n=17)	20.53 (n=23)	21.5 (n=40)
6. I brush each of my teeth carefully.	2.7(n=2)	6.25(n=7)	5 (n=9)
7. I have noticed some white sticky deposits on my teeth.	9.4(n=7)	6.25(n=7)	8 (n=14)
8. I am satisfied with the appearance of my teeth.	70.2(n=52)	51.7(n=58)	59 (n=110)
9. I think I can clean my teeth well without using toothpaste.	0(n=0)	0(n=0)	0 (n=0)
10. I put off going to the dentist until I have toothache.	97.2(n=72)	48.2(n=54)	68 (n=126)
11. I feel I sometimes take too much time to brush my teeth.	80(n=54)	26.78(n=30)	45 (n=84)
12. I don't feel I have brushed well unless I brush with strong strokes.	56.7(n=42)	56.25(n=63)	57 (n=105)
13. I do use tooth floss on regular basis.	0(n=0)	0(n=0)	0 (n=0)
14. I worry about having bad breath.	70.27(n=52)	26.78(n=30)	44 (n=82)
15. I do use mouthwash on regular basis.	31.08(n=23)	16.07(n=18)	22 (n=41)

Only 5% (n=9) students brush their carefully & none of them even think they can clean their teeth without toothpaste and don't use any interdental aids on regular basis. Mean HU-DBI score was 7.6 ± 2.0 . There was statistical significant difference was present between the preclinical and clinical student's HU-DBI Scores ($p < 0.05$). (Table 3)

Table 3: Mean scores of HU-DBI questionnaire among preclinical and clinical students

Category	Mean scores of HU-DBI
Preclinical Students	7.3 ± 2.1

Clinical	7.9± 1.9
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Discussion: Dental students should be a good example of positive oral health attitudes and behavior to their families, patients and friends. The term “Dental Neglect can be defined as the behaviour and attitudes which are likely to have detrimental consequences for the individual’s oral health”. In other words Dental Neglect is the failure to fulfill the known knowledge of oral health care for proper maintenance of oral cavity.^[7]

The present study identified significant differences in oral health attitudes and behavior between students from different years of dental study. It was found that the overall mean HUDBI score of the clinical students was higher than that of preclinical students. Similar to study finding reported by Dagli et al.^[2] and Neeraja et al.^[8]

29% (n=40) dental students were concerned about the colour of teeth where as higher trend was seen among dental students of Bangalore ^[8] and Jordon. ^[9] Study showed higher trend (59% (n=109)) of bleeding gums was seen among study group whereas lower proportion of dental students with bleeding gums was seen in Bangalore (14%), ^[8] Finnish (45%),^[10] Australia (6%) and Japan (25%)^[11] had with bleeding gums. Majority of the students were satisfied with their appearance This showed that the students in this study paid good attention to their oral hygiene maintenance and were also very much concerned about esthetics. .

Most of the clinical students were brushing twice daily and carefully. This might be due to the fact that students get exposed to plaque control measure (Periodontics). But failed to practice interdental dental aids – dental floss. This might be their negligence/not enough skills/time factor. Few dental students (II BDS) were using mouthrinses on regular basis. Most of dental students taking much time for brushing and giving strong strokes for brushing. This showed that preclinical dental students are not well aware about the oral hygiene care and method of aids to be used. So self care improves with their increase in academic course level.

Most of the students postpone their postpose going to the dentist until they had a toothache. Similar observation was seen among study ^[3] done among dental students in

Japan, Korea and China. Thus, it is necessary for oral health professionals to recognize the significant and importance of preventive activities to make their patients aware. Thus, an organized intervention leading toward an improved dental status by increasing the population's knowledge, attitude, and behavior can be achieved.

Preclinical dental students were more concerned about the color of their teeth and bad breath than clinical students, a finding also reported by Dumitrescu et al. [12]

The overall mean HUDBI score among dental students in this study was lower than reported from studies [3,13] performed in other countries- Japan, China and Turkey,

Conclusion: Students have knowledge but attitudes have to be trained to bring that knowledge into practice. Oral health education needs to be provided in these areas.

Limitation: This report is about one dental college and it was cross section study. So further it has to be carried out to assess the relationships among the caries experience, gingival health, and self-reported oral health behaviors and attitudes between students at different academic levels. Comprehensive programs aiming to promote students' dental hygiene practices and preventive oral health knowledge and should start from the beginning of dental training which should include reinforcements, updation with new concepts.

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