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Original Research Article

Assessment of oral health attitudes and behavior among undergraduate medical students using Hiroshima *University Dental Behavioral Inventory HU-DBI*

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Abstract: Medical students are the future health professionals and are expected to be teachers of hygiene as well as role models of self-care regimens for their patients. The objective was to assess self-reported oral health attitude and behavior among undergraduate medical students. A self-administered questionnaire based on the Hiroshima University-Dental Behavioral Inventory (HU‑DBI) was distributed among 421 undergraduate medical students which consisted of 20 dichotomous responses (Agree- Disagree). Data were analyzed. Mean HU‑DBI scores among nursing students is 5.62 (Average) which shows students have average attitudes towards oral health. This study did not show any statistical difference between male and female students ($p>0.05$). Furthermore, second, third and final year students had better oral health attitude and behavior especially towards gingival health, oral hygiene practices and visiting the dentist.

Keywords: Attitude, HU‑DBI, Oral health behavior, Medical students.

INTRODUCTION

Health is a universal human need for all cultural groups. General health cannot be attained or maintained without oral health. The mouth is regarded as the mirror of the body and the gateway to good health.

Steptoe et al. defined health behavior as "the activities undertaken by people in order to protect, promote or maintain health and to prevent disease [1]. The broad categories of factors influencing health behavior at individual as well as community level include: Knowledge, beliefs, values, attitudes, skills, finance, materials, time and the influence of family members, friends, co‑workers, opinion leaders, and even health workers themselves [2].

Health professional come across many patients in their day today practice regarding many problems. Many oral conditions are intimately related to systemic diseases. Optimally, total health care requires the combined efforts of the medical and dental professions [3]. With proper knowledge and oral health behavior, they can play an important role in the oral health education of individuals and groups and act as role models for patients, friends, families and the community at large. In this regard not many studies have been conducted among medical students. Hence an effort has been made.

AIM AND OBJECTIVES:

Identify oral health attitudes and behaviors among medical students of Siddhartha University, Tumkur, India..

MATERIALS AND METHODS

This study was conducted by adopting English version of Hiroshima University‑Dental Behavior Inventory (HU‑DBI). The inventory is designed with a simple dichotomous response format (Agree/ Disagree) and it is developed by Kawamura will be used to examine oral health attitudes and behavior of the students. The HU-DBI has good test/retest reliability when it was tested in different languages and cross cultural groups. It comprises of 20 items. When calculating the HU-DBI scores; one point was given for each of agree responses to the items 4, 9, 11, 12, 16, 19 and one point was given for each of disagree response to the items 2, 6, 8, 10, 14, 15. Maximum HU-DBI score was 12. Higher scores signify better oral behavior [4-9].

This study was conducted in Sri Siddhartha Medical College and Research Institute, Tumkur, India

with their prior permission. Ethical clearance was obtained from institutional ethical committee review board. The study sample included all the medical students from the four academic years. A total of 412 medical students, 43% (n= 180) male and 57% (n=241) female students participated in the study (Fig-1). Participation in this study was voluntary. All participants were informed about the purpose of the study and how to fill the inventory. They were asked to answer all the items of the inventory and an investigator was available to answer any enquiry regarding the inventory. The null hypothesis in this study was that there is no gender and academic year of studying based difference in oral health attitudes/behavior among medical students. The collected data was analysed in percentages and frequencies.

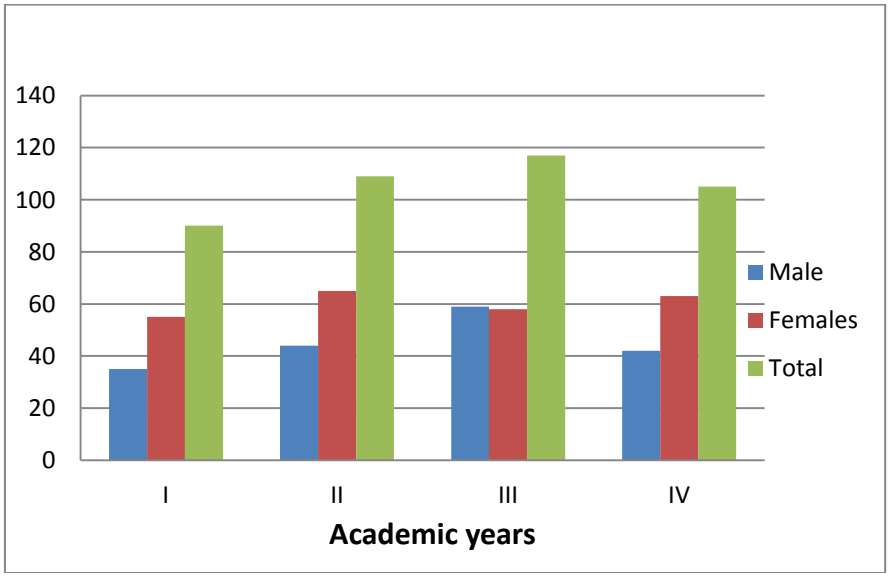

Fig-1: Distribution of students according to gender and academic years

RESULTS

This study was conducted among 412 medical students of Sri Siddhartha Medical College and Research Institute, Tumkur, India. The study sample included all the medical students from the four academic years.

All participants were between 18-25 years of age. Table 1 shows "Agree" responses by medical Students. Most of the students (303(72%)) not worried about visiting dentist but 312(74.1%) put off going to dentist unless they get toothache. 288 (68.4%) students worried about the color of their teeth and 233 (55.3%) for bad odour. 265(63%) students brush carefully and 296 (70.3%) check their teeth after brushing as well. But only 215(51.06%) students have been taught brushing technique by professionals

Mean HU‑DBI scores among medical students is 5.62 (Average) which shows students have average attitudes towards oral health, where as third year medical students have got better score i.e., 7.02 compared to other academic medical students. That shows third year medical students have better attitude and behavior towards oral health. This study did not show any statistical difference between male and female students (Fig-2)

DISCUSSION

Joint effort from different sectors of health professionals able to provide best quality of health care to individual patient and community at large. Oral health related attitude and behaviors shows their knowledge and understanding of the same. Hence the study was conducted to assess the oral health-related knowledge, attitude and practices of undergraduate medical students of SSMC, Karnataka, India. This study might help us to guide these students in their ignorant areas. This study presented an overview of oral health knowledge, attitude and practices of undergraduate medical students of Sri Siddhartha Medical College, Tumkur, India. which provides new insights into the impact of curricula on student outcomes, such as their attitudes toward prevention and oral self-care. High awareness of self‑oral health in a medical student may have a direct impact on his attitude for patient education and may help to create oral awareness in the general population [10].

Second, third and final year medical students had better HU ‑ DBI scores this shows their understanding of oral care. But most of the students put off going to dentists. Similar findings were observed in studies [11, 12] conducted among medical students. The reasons might be higher cost, anxiety, multiple visits, extra time etc.

Table-1: Percentage of "Agree" Responses by Medical Students.

Sl. No.	Questions	No. of Medical students with agree responses (%)				Total (%)
		I	II	III	IV	
1	I don't worry much about visiting the dentist.	58(64.4%)	81(74.3%)	93(79.4%)	71(68%)	303 (72%)
2	My gums tend to bleed when I brush my teeth.	17(19%)	23(21.1%)	28(24%)	18(17.14%)	86 (20.4%)
3	I worry about the color of my teeth	64(71.11%)	74(68%)	83(71%)	67(64%)	288 (68.4%)
4	I have noticed some white sticky deposits on my teeth.	31(34.4%)	44(40.3%)	30(26%)	28(27%)	133 (32%)
5	I use a child sized toothbrush.	1(1.1%)	8(0.73%)	9(8%)	16(15%)	34 (8.07%)
6	I think that I can't help having false teeth when I am old	37(41.1%)	45(41.2%)	32(27.3%)	37(35.2%)	151 (36%)
7	I am bothered by the color of my gums	41(46%)	42(39%)	49(42%)	44(42%)	176 (42%)
8	I think my teeth are getting worse despite my daily brushing	18(20%)	34(31.1%)	26(22.2%)	32(30.4%)	110(26.1%)
9	I brush each of my teeth carefully.	56(62.2%)	73(67%)	71(61%)	65(62%)	265(63%)
10	I have never been taught professionally how to brush.	48(53.3%)	59(54.1%)	63(54%)	45(43%)	215(51.06%)
11	I think I can clean my teeth without using toothpaste.	9(10%)	11(10.09%)	12(10.25%)	21(20%)	53(13%)
12	I often check my teeth in a mirror after brushing.	64(71.1%)	86(79%)	82(70.08%)	64(61%)	296 (70.3%)
13	I worry about having bad breath	49(54.4%)	53(49%)	66(56.4%)	65(62%)	233 (55.3%)
14	It is impossible to prevent gum disease with toothbrush alone	67(74.4%)	66(61%)	73(62.3%)	65(62%)	271(64.3%)
15	I put off going to the dentist until I have a toothache.	63(70%)	74(68%)	98(84%)	77(73.3%)	312 (74.1%)
16	I have used a dye to see how clean my teeth are.	4 (4.4%)	9(8.2%)	9(7.69%)	22(21%)	44 (11%)
17	I use a toothbrush which has hard bristles.	17 (19%)	23(21.1%)	32(27.3%)	29(28%)	101 (24%)
18	I don't feel I've brushed well unless I brush with strong strokes.	37 (41.11%)	44 (40.3%)	46 (39.3%)	53 (50.4%)	180 (43%)
19	I feel I sometimes take too much time to brush my teeth.	57 (63.3%)	53 (49%)	46 (39.3%)	40 (38.09%)	196 (47%)
20	I have had my dentist tell me that I brush very well.	40 (44.4%)	50(46%)	34(29.05%)	41(39.04%)	165(39.1%)

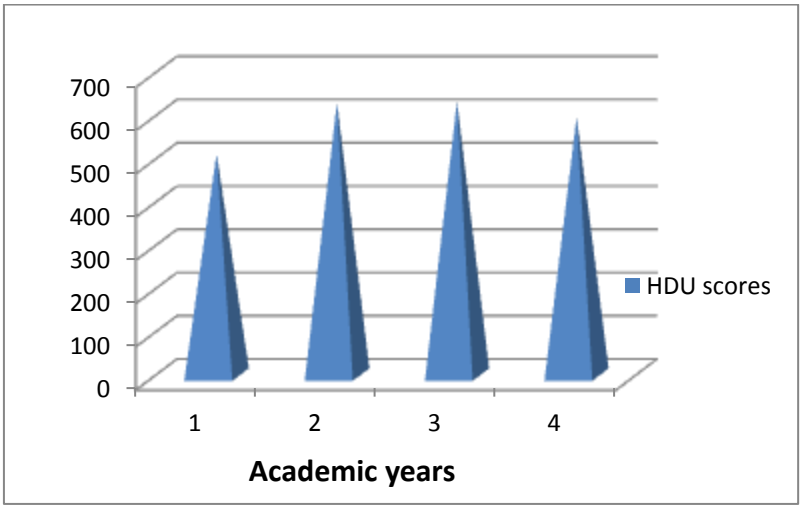

Fig-2: Distribution of medical students with respect to HU-DBI scores and academic years.

This study did not show any statistical difference between male and female students with respect to oral health attitude or behavior. Studies [13, 14] have shown that Females had better attitude and behavior regarding visiting the dentist and oral hygiene and health.

The study showed that the students in this study paid good attention to their oral hygiene maintenance and were also very much concerned about esthetics by concerning regarding colour of teeth, gums, bleeding etc

Some areas like brushing technique, type of brush and bristles should be used should be emphasized in preventive education as students lack knowledge in that. Not many studies have been conducted among medical students. We have not compared with other studies and as this study were conducted in only one medical college, limiting the generalizability of the results.

CONCLUSION

The results showed that the dental attitude and behavior among dental students significantly improved with the level of education. We also found no gender based difference among the students with regards to oral health attitude and behavior. Further studies have tobe conducted comparing with oral health status and their attitude and behavior related to oral health on larger population.

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