

# Comparison Of Oral Health-Related Awareness Among Dental Students And Students Of Other Disciplines – Survey Article

Bhaskaran Sathyapriya<sup>1</sup>, Chandrakala B<sup>2</sup>, Govindarajan Sumathy\* Naga Nandhini I.R.B<sup>3</sup>, Aishvarya.L<sup>3</sup>,

1. *Professor, Department of Anatomy, Sree Balaji Dental College & Hospital, Bharath Institute of Higher Education & Research, Chennai.*
  2. *Senior Lecturer, Department of Anatomy, Sree Balaji Dental College & Hospital, Bharath Institute of Higher Education & Research, Chennai.*
  3. *Graduate student, Sree Balaji Dental College and Hospital, Bharath Institute of Higher Education and Research*
- \* *Professor and Head, Department of Anatomy, Sree Balaji Dental College & Hospital, Bharath Institute of Higher Education & Research, Chennai.*

*Corresponding author*

Dr. G. Sumathy,  
*Professor and Head, Department of Anatomy,  
Sree Balaji Dental College & Hospital,  
Bharath Institute of Higher Education & Research,  
Chennai.*

## **ABSTRACT:**

*Oral health is a key indicator of overall health, well-being and quality of life. Awareness related to dental health is important to maintain optimum oral hygiene. The aim of the present study was to compare the oral health-related awareness among dental students and students of other disciplines. The survey comprised 20 questions which were asked using a web-based anonymous questionnaire. A total of 370 students (218 dental students and 152 students of other disciplines) were estimated for research. Dental students constitute a higher awareness of self-reliant oral hygiene than the students of other disciplines.*

**Keywords:** *Oral Health, Awareness, Dental Students, Non-Dental Students.*

## **INTRODUCTION:**

Like other areas of the body, your mouth teems with bacteria -mostly harmless. But your mouth is the entry point to your digestive and respiratory tracts, and some of these bacteria can cause disease.

Normally the body's natural defences and good oral health care, such as daily brushing, flossing and seeing the dentist regularly keep bacteria under control. However, without proper oral hygiene, bacteria can reach levels that might lead to oral infections, such as tooth decay and gum disease. Some have focused on the knowledge, attitude, and practices of <sup>[3-5], [8-10]</sup> health professionals (including medicine, dental, nursing, and pharmacy students) towards oral health, and others studied the <sup>[1], [2]</sup> awareness among dental students and students with non-medical

background. On the other hand, by using this test, the oral health behaviours were found to be marginally different when compared to <sup>[1-10]</sup> other articles.

The aim of this study was to assess the oral health-related awareness among dental students and students of other disciplines to know their perspectives on oral health and analyse the level of importance these two groups that is, the budding dentists and the non-dental students offer to their oral health in their day today life.

**MATERIALS AND METHODS:**

For the present scrutiny, a web-based anonymous questionnaire was used. The survey involved 20 questions. Overall 370 responses were collected which comprises records of 218 dental students and 152 non-dental students.

**RESULT:**

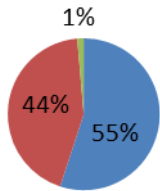
SURVEY QUESTIONS	DENTAL		NON-DENTAL	
	218 Participants		152 Participants	
1) Select your stream	Nos	%	Nos	%
2) How often per day do you clean your teeth?				
Once	120	55.05	82	53.95
Twice	95	43.58	68	44.74
More than twice	3	1.38	2	1.32
3) How long do you clean your teeth each time?				
less than 1 minute	28	12.84	17	11.18
1 minute to 2 minutes	131	60.09	85	55.92
more than 2 minutes	59	27.06	50	32.89
4) Do you use dental floss?				
Yes	28	12.84	6	3.95
No	156	71.56	123	80.92
Sometimes	34	15.60	23	15.13
5) Do you clean your tongue?				
Yes	124	56.88	78	51.32
No	34	15.60	36	23.68
Sometimes	60	27.52	38	25.00
6) Do you use tooth sticks?				
Yes	18	8.26	21	13.82
No	144	66.06	88	57.89
Sometimes	56	25.69	43	28.29
7) Do you use a mouthwash solution?				
Yes	43	19.72	22	14.47
No	131	60.09	96	63.16
Sometimes	44	20.18	34	22.37
8) Have you ever noticed bleeding in your gums?				
Yes	74	33.94	63	41.45
No	144	66.06	89	58.55
9) Do you go for regular dental checkups?				
Yes	34	15.60	7	4.61
No	86	39.45	50	32.89
When I have a problem	98	44.95	95	62.50
If yes how often do you visit in a year?	Twice, Once		Once, Twice	
10) Do you have dental caries?				
Yes	36	16.51	21	13.82
No	139	63.76	94	61.84
Never noticed	43	19.72	37	24.34

<b>11) Do you rinse your mouth after eating?</b>				
Yes	134	61.47	93	61.18
No	35	16.06	23	15.13
Sometimes	49	22.48	36	23.68
<b>12) Does your toothpaste contain fluoride?</b>				
Yes	77	35.32	29	19.08
No	37	16.97	23	15.13
Never noticed	104	47.71	100	65.79
<b>13) Bad breath or foul-smelling breath or halitosis</b>				
Yes	11	5.05	5	3.29
No	121	55.50	80	52.63
Sometimes	66	30.28	53	34.87
Never noticed	20	9.17	14	9.21
<b>14) Sensitivity to hot or cold</b>				
Yes	40	18.35	25	16.45
No	112	51.38	82	53.95
Sometimes	66	30.28	45	29.61
<b>15) Do you use tobacco products?</b>				
Yes	5	2.29	0	0.00
No	206	94.50	151	99.34
Sometimes	7	3.21	1	0.66
<b>16) Are you happy with your smile in photographs?</b>				
Yes	163	74.77	103	67.76
No	22	10.09	12	7.89
Not much	33	15.14	37	24.34
<b>17) How much will you rate your oral health?</b>				
very satisfactory	53	24.31	23	15.13
fair	143	65.60	116	76.32
disappointing	12	5.50	6	3.95
below average	10	4.59	7	4.61
<b>18) According to you how important is the oral hygiene</b>				
very essential	179	82.11	103	67.76
moderately important	35	16.06	42	27.63
not markedly	3	1.38	6	3.95
insignificant	1	0.46	1	0.66
<b>19) Brushing technique used</b>				
Vertical	18	8.26	5	3.29
Horizontal	19	8.72	19	12.50
Circular	25	11.47	12	7.89
Combination of above	136	62.39	105	69.08
Nondirected	20	9.17	11	7.24
<b>20) Do you check for toothpaste composition/ingredients?</b>				
Yes	66	30.28	32	21.05
Never noticed	89	40.83	73	48.03
Sometimes	63	28.90	47	30.92

**ANALYSIS:**

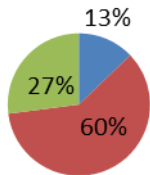
**DENTAL**

■ Once ■ Twice ■ More than twice



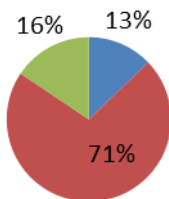
**Figure 2a**

■ Less than 1 minute  
 ■ 1 minute to 2 minutes  
 ■ More than two minutes



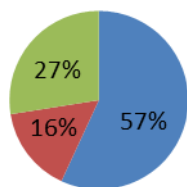
**Figure 3a**

■ Yes ■ No ■ Sometimes



**Figure 4a**

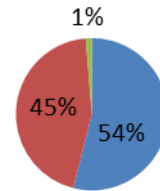
■ Yes ■ No ■ Sometimes



**Figure 5a**

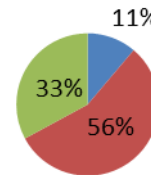
**NON-DENTAL**

■ Once ■ Twice ■ More than twice



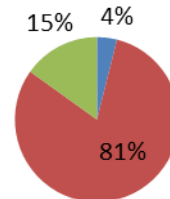
**Figure 2b**

■ Less than 1 minute  
 ■ 1 minute to 2 minutes  
 ■ More than 2 minutes



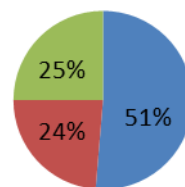
**Figure 3b**

■ Yes ■ No ■ Sometimes



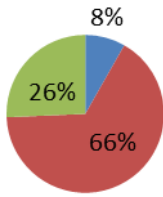
**Figure 4b**

■ Yes ■ No ■ Sometimes



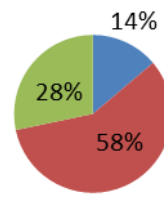
**Figure 5b**

■ Yes ■ No ■ Sometimes



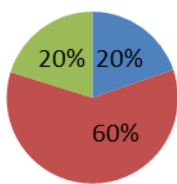
**Figure 6a**

■ Yes ■ No ■ Sometimes



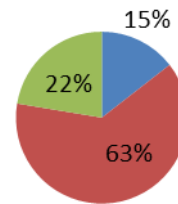
**Figure 6b**

■ Yes ■ No ■ Sometimes



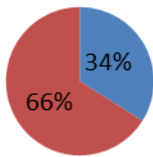
**Figure 7a**

■ Yes ■ No ■ Sometimes



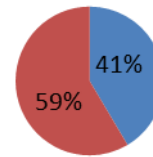
**Figure 7b**

■ Yes ■ No



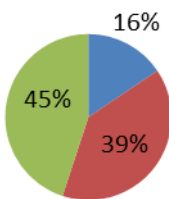
**Figure 8a**

■ Yes ■ No



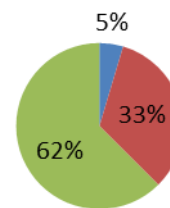
**Figure 8b**

■ Yes ■ No ■ When I have a problem



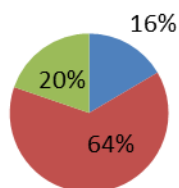
**Figure 9a**

■ Yes ■ No ■ When I have a problem



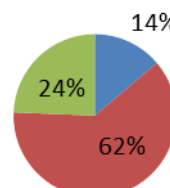
**Figure 9b**

■ Yes ■ No ■ Never noticed



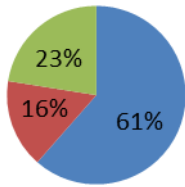
**Figure 10a**

■ Yes ■ No ■ Never noticed



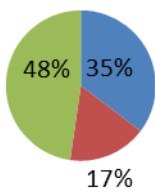
**Figure 10b**

■ Yes ■ No ■ Sometimes



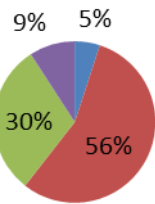
**Figure 11a**

■ Yes ■ No ■ Never noticed



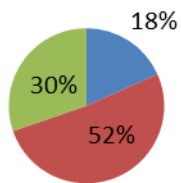
**Figure 12a**

■ Yes ■ No  
 ■ Sometimes ■ Never noticed



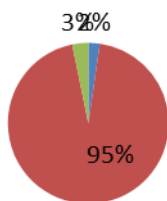
**Figure 13a**

■ Yes ■ No ■ Sometimes



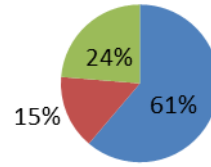
**Figure 14a**

■ Yes ■ No ■ Sometimes



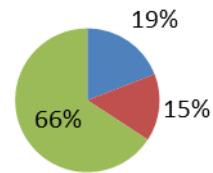
**Figure 15a**

■ Yes ■ No ■ Sometimes



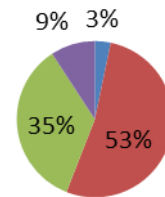
**Figure 11b**

■ Yes ■ No ■ Never noticed



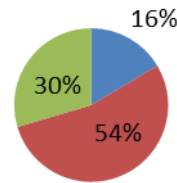
**Figure 12b**

■ Yes ■ No  
 ■ Sometimes ■ Never noticed



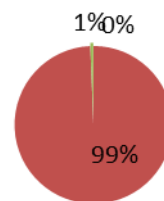
**Figure 13b**

■ Yes ■ No ■ Sometimes

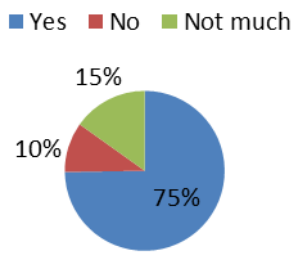


**Figure 14b**

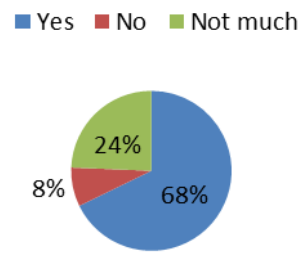
■ Yes ■ No ■ Sometimes



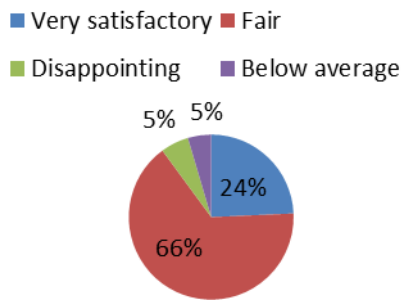
**Figure 15b**



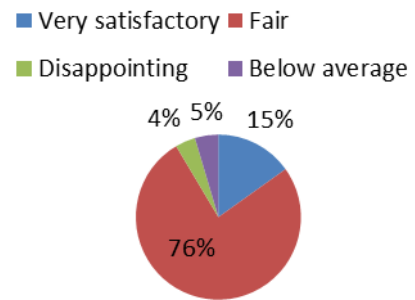
**Figure 16a**



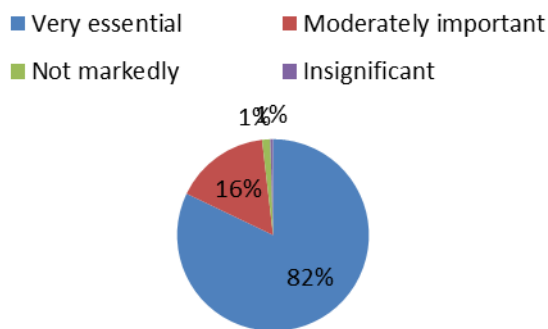
**Figure 16b**



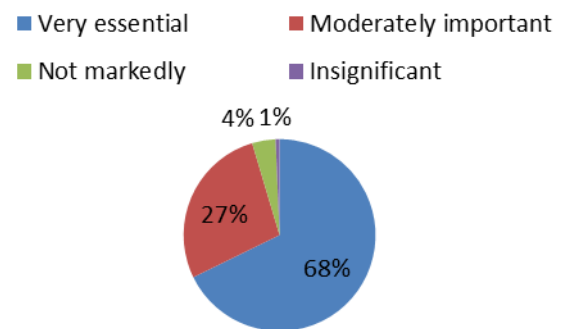
**Figure 17a**



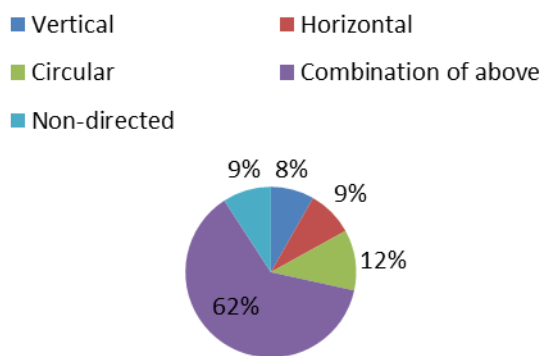
**Figure 17b**



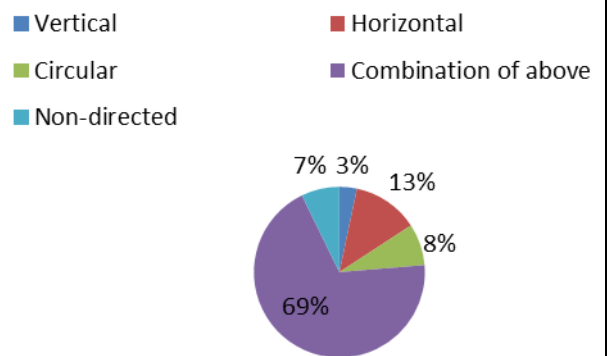
**Figure 18a**



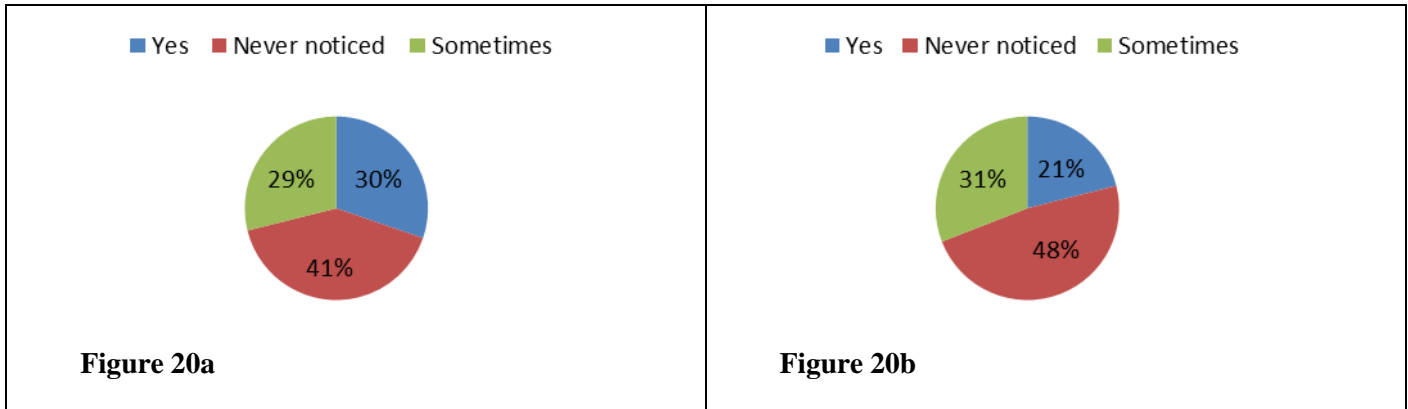
**Figure 18b**



**Figure 19a**



**Figure 19b**



**Figure 2a and Figure 2b:** Perceived almost similar census in both the categories in case of cleaning the teeth. It showed nearly the same extent of awareness towards teeth cleaning in both the categories. On the other hand, <sup>[4]</sup>Kumar H reported that a total of 77.33% of the dental students brushed twice a day compared to 53.33% of the medical students indicating better oral hygiene measures were adopted by dental students.

**Figure 3a and Figure 3b:** If we spend less than 1 minute of brushing, we won't remove as much plaque from our teeth. On the other hand, brushing longer than 2 minutes, can sometimes lead to your tooth enamel wearing down as well as cause damage to our gums. In a study conducted in <sup>[7]</sup>Darshan dental college and hospital, it was found that 47.2% of dental students felt that sometimes they took too much time to brush their teeth. In our study it is observed that slightly of more dental students (60%) followed the recommended time limit of 1 minute to 2 minutes when compared to the non-dental students (56%).

**Figure 4a and Figure 4b:** Observed remarkable difference in the usage of dental floss among the two group. Dental students (13% - yes and 16% - sometimes) clean their teeth considerably more than the non-dental students (4% - yes and 15% - sometimes) with dental floss which corresponds to the previous studies made by <sup>[1]</sup>Julien Kirchhoff , Andreas Filippi and <sup>[2]</sup>Rabia Zulfiqar.

**Figure 5a and Figure 5b:** Devised notable amount of dental students were aware of the importance of cleaning their tongue. 57% of dental students clean their tongue regularly and 27% of dental students were found to do it occasionally, whereas only 51% of non-dental students clean their tongue frequently and 25% of non-dental students at times clean their tongue which varies staggeringly from the study made by <sup>[10]</sup> Dr. O.O. Onigbinde, in which 95.8% of dental students clean their tongue.

**Figure 6a and Figure 6b:** Using tooth sticks can damage our teeth and gums, and lead to swallowing splinters and worse. Tooth sticks are not designed for dental cleaning and should not be substituted for flossing or brushing. Witnessed rather less consciousness among the non-dental students (14% use tooth sticks and 28% use it rarely) on the ill-effects of using tooth sticks. Some more previous studies showed compatibility with our results, <sup>[1]</sup>Julien Kirchhoff , Andreas Filippi and <sup>[2]</sup>Rabia Zulfiqar, Hafiza Ummara Rasheed and Syed Ali Haider.

**Figure 7a and Figure 7b:** Noticed faintly more dental students (20% - frequently and 20% - sometimes) utilized mouthwash solution than the non-dental students (15% - frequently and 22% - sometimes) that resembles the result derived by <sup>[2]</sup>Rabia Zulfiqar.

**Figure 8a and Figure 8b:** Measured more number of non-dental students (41%) than the dental students (34%) who noticed bleeding in gums. Similar kind of study which was conducted in Malaysian university showed a lower proportion (10.37%) <sup>[3]</sup> among Malaysian dental students. Both the categories must look after their gums but significantly more apprehension is necessary for non-dental students.

**Figure 9a and Figure 9b:** Students of both the categories mostly felt reluctant (Dental – 39% and Non-Dental – 33%) to visit dentist unless and until they had some problem. Only a small proportion of students (Dental – 16% and Non-Dental – 5%) visit the clinic regularly in both the



groups. Majority of the students (Dental – 45% and Non-Dental – 62%) visit the dental clinic only when they have some problem which is similar to frequencies stated among dental students in <sup>[6]</sup>Al-wesabi, A.A., Abdelgawad, F., Sasahara, H. Students who visited the clinic regularly were found to be undergoing some sort of dental treatment.

**Figure 10a and Figure 10b:** Estimated almost positive results from both the categories, only 16% and 14% of dental students and non-dental students respectively were found to have dental caries.

**Figure 11a and Figure 11b:** The survey revealed that large number of students (61%) in both the categories showed the desirable habit of rinsing their mouth after eating. Appreciated more or less the same enumeration in the both the categories.

**Figure 12a and Figure 12b:** Toothpastes containing fluoride help prevent cavities in both children and adults. Conspicuous level of awareness and usage of fluoride toothpaste is observed in dental students (35% use fluoride toothpaste and 48% have never noticed) rather than the non-dental students (only 19% use fluoride toothpaste and 66% have never noticed).

**Figure 13a and Figure 13b:** Maintenance of good oral health is necessary to avoid halitosis. The survey revealed reasonably positive results in both the categories. Yet found the dental students (overall only 35% were found to have felt foul-smelling breath at some point of time) to be better in managing the oral halitosis as compared to the non-dental students (overall 38% were found to have felt foul-smelling breath at some point of time). Study made by <sup>[9]</sup> Sadeq A. Al-Maweri also shows striking awareness about bad breath among the budding dentists.

**Figure 14a and Figure 14b:** Nearly half the proportions of students (Dental – 48%; 18% - yes, 30% - sometimes and Non-Dental – 46%; 16% - yes, 30% - sometimes) of both the categories have experienced sensitivity. Students of both the categories need to show some concern towards sensitivity, if ignored it can damage the enamel.

**Figure 15a and Figure 15b:** Both the categories showed very satisfactory outcome as maximal amount of students did not consume tobacco products. But disappointing to observe marginal ascend in the consumption among dental students (2% - yes and 3% - sometimes).

**Figure 16a and Figure 16b:** Overall, maximum levels of students were pleased with their smile, but dental students (75%) were more satisfied with their smile than the non-dental students (68%) which can be related to the results obtained by <sup>[1]</sup>Julien Kirchoff, Andreas Filippi.

**Figure 17a and Figure 17b:** Perceived more self-contented and modest responses from the dental (24% were very satisfied with their oral health and 66% rated their oral health to be fair) and non-dental students (15% were very satisfied with their oral health and 76% rated their oral health to be fair) respectively.

**Figure 18a and Figure 18b:** Hardly any wonder those dental students (82% have chosen the oral hygiene to be very essential) had very integral concern towards oral hygiene when compared to the non-dental students (only 68% have chosen the oral hygiene to be very essential).

**Figure 19a and Figure 19b:** Combination of vertical, horizontal and circular without any vigorous execution is recommended for brushing. Relatively most of the students (Dental - 62%, Figure 19a and Non-Dental – 69%) chose the preferable technique for brushing.

**Figure 20a and Figure 20b:** Observed dental students (59% look for the composition either habitually or at times and 41% have never noticed the composition) attention towards their toothpaste composition to be markedly higher than the non-dental students (52% look for the composition either habitually or at times and 48% have never noticed the composition).

## CONCLUSION:

The study reveals convincing responses on the awareness towards oral health from both dental and non-dental categories. Although students of other disciplines are characterized to have good awareness on the whole, dental students are found to have more knowledge about oral health behaviour in certain aspects like usage of dental floss instead of tooth-sticks to clean the interdental spaces and mouthwash solution to avoid halitosis and prevent dental plaque, their attention towards the composition and benefits of fluoride in the toothpaste, sticking on to the recommended time limit of 1 minute to 2 minutes of brushing and overall their self-confidence and maintenance of oral hygiene is significantly better than the students of other disciplines.

**REFERENCES:**

- 1) Julien Kirchhoff and Andreas Filippi – “Comparison of oral health behavior among dental students, Students of other disciplines, and fashion models in Switzerland”. *SWISS DENTAL JOURNAL* SSO 125:1337–1344 (2015) Accepted for publication: 27 may 2015.
- 2) Rabia Zulfiqar, Hafiza Ummara Rasheed and Syed Ali Haider – Citation: Rabia Zulfiqar., et al. “Comparison of Oral Health-Related Knowledge, Attitude and Behavior among Medical and Non-Medical Categories of Students of Lahore, Punjab-Pakistan”. *Acta Scientific Dental Sciences* 3.1 (2019): 154-158.
- 3) Kishor Tom - Tom K. Comparison of Oral Health Attitudes and Knowledge among Dental and Medical Students in a Malaysian University. *J Oral Health Comm Dent* 2020; 14(1):11–13.
- 4) Kumar H, Behura SS, Ramachandra S, Nishat R, Dash KC, Mohiddin G. Oral health knowledge, attitude, and practices among dental and medical students in Eastern India – a comparative study. *J Int Soc Prevent Communit Dent* 2017; 7:58-63.
- 5) Baseer MA, Alenazy MS, AlAsqah M, AlGabbani M, Mehkari A. Oral health knowledge, attitude and practices among health professionals in King Fahad Medical City, Riyadh. *Dent Res J* 2012;9:386-92.
- 6) Al-wesabi, A.A., Abdelgawad, F., Sasahara, H. *et al.* Oral health knowledge, attitude and behaviour of dental students in a private university. *BDJ Open* 5, 16 (2019).
- 7) Dagli RJ, Tadakamadla S, Dhanni C, Duraiswamy P, Kulkarni S. Self reported dental health attitude and behavior of dental students in India. *J Oral Sci.* 2008;50:267–72.
- 8) Başak Doğan - Differences in Oral Health Behavior and Attitudes Between Dental and Nursing Students - *Marmara Üniversitesi Sağlık Bilimleri Enstitüsü Dergisi* Cilt: 3, Sayı: 1, 2013 / *Journal of Marmara University Institute of Health Sciences* Volume: 3, Number: 1, 2013
- 9) Sadeq A. Al-Maweri, AL-Farabi colleges, 11691 Riyadh, Saudi Arabia - Self-Reported Oral Health Attitudes and Behavior of Dental and Medical students, Yemen - *Global Journal of Health Science*; Vol. 8, No. 10; 2016 ISSN 1916-9736 E-ISSN 1916-9744 Published by Canadian Center of Science and Education.
- 10) Onigbinde O. O, Adenuga-Taiwo O. A, Abah A. A, Awotile A. O - Oral Health Behaviour and its Determinants among Dental, Medical and Nursing Students in a Tertiary Institution in Lagos State, Nigeria - *Onigbinde O. O et al; Saudi J Oral Dent Res*, August, 2020; 5(8): 387-393.