



Original Article

Knowledge and Practice of Oral Hygiene Maintenance among Dental Students

Srivardhini Shanmugham, Divvi Anusha, Shivashankar Kengadaran

Department of Public Health Dentistry, Indira Gandhi Institute of Dental Sciences, SBV, Puducherry, India

How to cite: Shanmugham S, Anusha D, Kengadaran S. Knowledge and Practice of oral hygiene maintenance among Dental Students. *Int J Soc Rehab* 2024; 9(1): 19- 25. doi: <https://doi.org/10.56501/intjsocrehab.v9i1.1116>

Received: 06-03-2024

Accepted: 16-03-2024

Web Published:29-03-2024

Abstract

Background: Oral health awareness has an important role in general health and well-being of an individual. As dental students, we have an enormous role to play in maintaining public health. Hence, it is very important to have sound knowledge and importance of oral hygiene measures and their importance. The aim of the study was to evaluate the knowledge and practice of oral hygiene maintenance among dental students. **Materials and Methods:** A structured questionnaire was used to assess the knowledge and practice of oral hygiene of dental students. Seventy students were evaluated and their responses were recorded, tabulated, and analyzed. **Results:** 86% of the dental students had adequate knowledge about the common causes of oral diseases. 84% of the students responded that they prefer fluorinated toothpaste by considering design of the toothbrush. 84.7% of the students responded that they clean their tongue with tongue-cleaning aids and prefer to get treated at initial signs of caries. About 65.7% of the respondents control their mouth odor by regular rinse using plain water. **Conclusion:** It can be concluded from the study that the overall knowledge of oral hygiene among the dental students was good, but there were deficits in their oral hygiene practices in certain areas.

Keywords: Cross sectional study, Dental health, Oral Health

Address for correspondence:

Dr. Divvi Anusha

Department of Public Health Dentistry,

Indira Gandhi Institute of Dental Sciences, SBV, Puducherry, India

Email – anushadivvi1991@gmail.com

INTRODUCTION

The prevention of oral disease is the most acknowledged and efficient method of ensuring oral health.^[1-4] It is also important to know that general health cannot be achieved or maintained without good oral hygiene. The factors that generally affect the oral hygiene are lifestyle, culture, food habits, and location.^[5-11]

Oral health education begins with footsteps of awareness.^[3] Written, social media and dentists are the most common sources of receiving oral health information. Dental students have a major role in promoting and executing oral hygiene awareness.^[8] Dental students, in general, have been found to have a positive oral health attitude, but their own oral health behavior must improve if they are to serve as a positive model for their patients, family, and friends.^[12-14] Because health benefits and attitudes of a dentist will not only affect their own self-care habits but may also give motivation to their patients to maintain their oral hygiene. They serve as a role model for the population.^[4]

There are many factors that can influence attitude and behavior of an individual. One of the factors responsible for someone's attitude and behavior is knowledge.^[1] Knowledge that is associated to dental health during the studying period is important, especially for future dentists.^[12] This study was done to assess the knowledge and practice of dental students toward their self-oral hygiene maintenance as this will have a direct impact on the efficiency of their clinical practice.^[5]

MATERIALS AND METHODS

Study design

- A study based on questionnaire survey.

Study type

- Cross-sectional study.

Study area

- Indira Gandhi Institute of Dental Sciences (IGIDS), Pondicherry.

Study group

- Clinical undergraduate dental students.

Students who are dealing with patients are most likely to give oral hygiene education. Hence, it is important to evaluate the knowledge and practice of oral hygiene maintenance.

Inclusion criteria

- Clinical undergraduate students – 3rd-year and 4th-year students and interns.

Exclusion criteria

- Preclinical students – 1st-year and 2nd-year students and postgraduate.
- Students who are not willing to participate in the study.

Ethical clearance

Before the start of the study, ethical clearance was obtained from the institutional ethics committee, IGIDS, SBV University. Online informed consent was obtained from the study participants. The anonymity of the participants was maintained.

Scheduling

Data were collected in the month of July and August 2020.

Sample size

- Seventy clinical undergraduate dental students.

Sampling technique

- Convenient sampling.

Survey Instrument

A prestructured set of questionnaire was used for the study purpose. The first section collected demographic information of the participants such as name, age, and year of studying.

The second part of the questionnaire consisted of 12 questions to assess the knowledge and practice of oral hygiene maintenance among the students.

Survey methodology

A questionnaire was prepared regarding knowledge and practice of oral hygiene maintenance. The study was conducted at IGIDS, Pondicherry, with clinical undergraduate students. A Google Form containing 12 questions were circulated among all the students. The questionnaire included questions related to the age, gender, and year of study. It was further categorized to evaluate the knowledge and practice pattern related to oral hygiene. Before the distribution of questionnaire, informed consent was taken from all the participants. Only fully filled Google Forms were included in the study.

RESULTS

86% of the dental students have adequate knowledge about the common causes of oral diseases. 84% of the students responded that they prefer fluorinated toothpaste by considering design of the toothbrush. 84.7% of the students responded that they clean their tongue with tongue-cleaning aids and prefer to get treated at initial signs of caries. About 65.7% of the respondents control their mouth odor by regular rinse using plain water [Table 1].

Table 1: Questionnaire and its responses

Questions	Options	Respondents (total=70)
Do you think periodontal disease and dental caries are two common problems caused by inadequate oral hygiene	Yes	60
	No	7
	Maybe	3
What is your consideration when choosing a tooth brush?	Brand	7
	Design	63
	Price	0
What toothpaste do you use?	Fluorinated	60
	Nonfluorinated	8
	No idea	2
How long do you take to brush your teeth? (min)	1	5
	2	59
	3-5	6
Do you floss your teeth regularly?	Yes	17
	No	46
	Sometimes	7
Do you think cleaning your tongue is a part of oral hygiene instructions?	Yes	61
	No	6
	Maybe	3
If yes, with what aids?	Toothbrush	11
	Tongue-cleaning aids	54
	Others	0
Do you think frequent consumption of aerated drinks affect the teeth adversely	Yes	61
	No	5
	Maybe	4
Do you rinse your mouth after every meal	Yes	60
	No	6
	Sometimes	4
Do you think using mouthwash regularly is important for oral hygiene maintenance	Yes	22
	No	42
	Maybe	6
If you have initial signs of caries do you prefer to get treated immediately	Yes	58
	No	9
	Maybe	3
How do you control your mouth odor?	Regular rinse with water	44
	Rinse with salty water	9
	Using mouthwashes	17
Do you educate people about oral hygiene procedures	Yes	58
	No	7
	Sometimes	5

DISCUSSION

A cross-sectional study was done among 100 clinical undergraduate students of IGIDS to assess their knowledge and practice of oral hygiene maintenance. To achieve oral health benefits, toothbrush and other oral hygiene aids should be used daily in a correct manner.^[3] Oral health behavior of dental students has to be good as they should serve as a positive model for the patients.^[9]

Periodontal disease and dental caries are the common problems caused by inadequate oral hygiene.^[11] In our study, 86% of the students had good knowledge about the causes of common oral diseases and were aware of the importance of oral hygiene maintenance.

Dental students population most likely to change their toothbrush based on design, whereas brand and price had less influence.^[15] 84% of the students had knowledge on fluorinated toothpaste and preferred them. About 84.7% of the students were aware that prolonged brushing can damage the tooth and surrounding structure as the bristles can erode the tooth surface when used along chemicals (toothpaste).^[7] The usage of dental floss was limited to one-fourth of the students. Brushing the teeth using toothbrush and toothpaste alone without the use of floss or any interdental-cleaning aids is insufficient to prevent gingival diseases as well as periodontal disease since periodontal lesions are frequently formed in interdental location.^[4]

Majority of the students were aware that cleaning the tongue is a part of oral hygiene maintenance and they prefer to use tongue-cleaning aids. Tongue cleaning is important in maintaining good oral hygiene.^[9] About 87% of the students were aware that aerated drinks may affect the tooth structure. Erosion is one of the common problems caused by frequent consumption of aerated drinks.^[8]

Most of the students rinsed their mouth after a meal. This helps us arrive to a conclusion that the importance of mouth rinsing after every meal was known to the students to keep their oral cavity free of remnants of food particles.^[13] Only 58% of the students were aware that mouthwashes should not be used regularly since it may cause various damage to the teeth such as discoloration of the teeth.^[5] Moreover, three-fourth of the students prefer to rinse their mouth regularly with plain water to control mouth odor.

About 81.9% of the students prefer to get treated at the initial signs of dental caries. Getting treated at the initial signs helps us preserve more tooth structure than in later stages.^[3] Majority of the students educate patients about oral hygiene procedure.

Educating patients about oral hygiene maintenance is very important as they play a major role for the improvement of patients oral hygiene.^[1] Knowledge about oral health has an important role in maintaining oral hygiene and reducing the level of tooth caries and periodontal lesions among dental students.^[5] As knowledge and awareness increase, their oral health improves. The attitude and behavior toward oral health maintenance of dental professionals reflect their understanding of the preventive oral health measures.^[1]

Oral health is primarily considered as behavioral diseases, and thus, adopting healthy habits is essential to control oral diseases.^[4] Dental professionals are expected to be the role model for their patients and to the public, in general. Oral health knowledge and practice of dental professionals thus play a key role in the knowledge they impart to their community.^[10-15]

To summarize, 86.4% of the clinical undergraduate students of IGIDS have adequate knowledge about oral hygiene practices and common oral diseases caused by inadequate oral hygiene. The overall percentage of correct answers of our study participants was 86%, showing that dental students with adequate knowledge about oral hygiene maintenance. 84% of the students responded that they prefer fluorinated toothpaste by considering design of the toothbrush. 84.7% of the students responded that they clean their tongue with tongue-cleaning aids and prefer to get treated at initial signs of caries. About 65.7% of the respondents control their mouth odor by regular rinse using plain water.

CONCLUSION

From the study done, we can conclude that clinical undergraduate dental students from IGIDS showed adequate knowledge and practice of oral hygiene maintenance. They were very much concerned about the damages that were caused by their oral cavity. They were also aware of the need to maintain proper oral hygiene and the methods for the same. Dental students are the future dentists and have a major role in promoting and executing oral health in the community. A positive outcome about the knowledge and practice of oral hygiene of the students has been concluded from the study.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. Daya D, Teja U, Paturu DB, Reddy BV, Nagarakanti S, Chava VK. Evaluation of oral-hygiene awareness and practice among dental students. *J Dr NTR Univ Health Sci* 2017;6:24.
2. Subashri A, Maheshwari TN. Knowledge and attitude of oral hygiene practice among dental students. *Res J Pharm Technol* 2016;9:1840-2.
3. Andhare MG, Dhonge RP, Dhuldhwaj RM, Dede RA, Sayyad IF. A comparative evaluation of awareness regarding periodontal health and oral hygiene practices among dental and medical undergraduate students in Beed District of Maharashtra. *Indian J Dent Sci* 2017;9:215.
4. Doshi D, Baldava P, Anup N, Sequeira PS. A comparative evaluation of self-reported oral hygiene practices among medical and engineering university students with access to health-promotive dental care. *J Contemp Dent Pract* 2007;8:68-75.
5. Neeraja R, Kayalvizhi G, Sangeetha P. Oral health attitudes and behavior among a group of dental students in Bangalore, India. *Eur J Dent* 2011;5:163-7.
6. Bennadi D, Halappa M, Kshetrimayum N. Self reported knowledge and practice of inter dental aids among group of dental students, Tumkur, India. *J Interdiscip Dent* 2013;3:159.
7. Reddy RS, Reddy LR, Lavanya R, Saimadhavi N, Ramesh T, Jyothirmai K, *et al.* Oral hygiene practices and habits among dental students and staff in a dental college, India. *Cumhuriyet Dent J* 2014;17:7-13.
8. Vangipuram S, Rekha R, Radha G, Pallavi SK. Assessment of oral health attitudes and behavior among undergraduate dental students using Hiroshima University Dental Behavioral Inventory HU-DBI. *J Indian Assoc Public Health Dent* 2015;13:52.
9. Bashiru BO, Anthony IN. Oral self-care practices among university students in Port Harcourt, Rivers State. *Niger Med J* 2014;55:486-9.
10. Yao K, Yao Y, Shen X, Lu C, Guo Q. Assessment of the oral health behavior, knowledge and status among dental and medical undergraduate students: A cross-sectional study. *BMC Oral Health* 2019;19:26.
11. Naseem S, Fatima SH, Ghazanfar H, Haq S, Khan NA, Mehmood M, *et al.* Oral hygiene practices and teeth cleaning techniques among medical students. *Cureus* 2017;9:e1487.
12. Sowmya KR, Puranik MP, James JM, Sabbarwal B. Perceptions about toothbrush contamination and disinfection among dental students in Bengaluru City: A cross-sectional study. *Indian J Dent Res* 2017;28:646-9.

13. Prashanth ST, Bhatnagar S, Das UM, Gopu H. Oral health knowledge, practice, oral hygiene status, and dental caries prevalence among visually impaired children in Bangalore. *J Indian Soc Pedod Prev Dent* 2011;29:102-5.
14. Ahmad MS, Jindal MK, Khan S, Hashmi SH. Oral health knowledge, practice, oral hygiene status and dental caries prevalence among visually impaired students in residential institute of Aligarh. *J Dent Oral Hygiene* 2009;1:022-6.
15. Kaul V, Gupta N, Rathore PK, Kaul N. A comparative evaluation of oral hygiene practices and habits among medical & dental students in Ghaziabad district. *Med Res Chron* 2018;5:544-55.



Published by MM Publishers
<https://www.mmpubl.com/ijsr>

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.
To view a copy of this license, visit <http://creativecommons.org/licenses/by-nc/4.0/> or send a letter to Creative Commons, PO Box 1866, Mountain View, CA 94042, USA.

Copyright © 2024 Srivarshini Shanmugham, Divvi Anusha, Shivashankar Kengadaran