

ORIGINAL ARTICLE

A Comparative Evaluation of Oral Hygiene Practices of Students in Medical/Dental College Hostels of Jammu Region

Arun Saroch, Manik Sharma, Vineet Kotwal, Tania Goutam

PG Department of Periodontology & Implantology, Indira Gandhi Govt Dental College & Hospital, Jammu

ABSTRACT

OBJECTIVES: The main aim of conducting this survey is to compare the oral hygiene practices of students in medical/dental college hostels of the Jammu region

Materials and Methods: A self-constructed questionnaire was disseminated to 400 students in Medical/Dental college hostels through a web—and mobile-based social network. This questionnaire consisted of 18 multiple-choice questions based on oral health status and oral hygiene maintenance habits. The questionnaire was distributed among the participants, and the responses were collected.

Results: Several 300 students responded (36 – no response and 64 half-filled, thus excluded)

Conclusion: In conclusion, our study revealed that Knowledge and awareness about oral hygiene practices among students residing in Medical and Dental college hostels should be of prime importance as these students have the potential to further use this knowledge among normal masses and patients having some systemic disorders. Personal experience with the use of oral hygiene practices can be valuable in imparting and establishing a relationship between oral and systemic diseases.

Keywords: Awareness, oral hygiene, professional college hostels, periodontal health, systemic diseases

JMS: 2024; 27(3): 31-39 DOI: <https://doi.org/10.33883/jms.v27i3.1400>

INTRODUCTION

Good oral health means being free from orofacial pain, oropharyngeal cancer, oral tissue lesions, and other conditions affecting the craniofacial area¹. It encompasses more than just having 'good teeth' and is crucial for overall health². Poor oral health can lead to significant discomfort and can hurt a person's quality of life, affecting their ability to eat, speak, and socialize³. Various factors, including socioeconomic, environmental, biological, and behavioral elements, and access to healthcare, influence oral health⁴. A person's oral health status results from a complex interplay of these factors⁵. Despite its broad implications, oral health issues are often overlooked and only diagnosed by chance⁶. This neglect is common in countries with low oral health awareness, where many people seek dental care only when necessary. This highlights a critical gap in healthcare that needs to be addressed to improve the overall well-being of populations.^{7,8}

Education significantly impacts the use of dental services. However, it is ineffective without accessible and relevant oral health education, even among educated populations^{9,10}. The need for such education is particularly pronounced in professional college hostels, where students are often engaged in rigorous academic schedules and demanding responsibilities. Given their educational level, it is reasonable to expect that these students would understand and apply the importance of oral health irrespective of their discipline^{11,12}.

However, the reality is that due to late-night duties, emergency tasks, and the overall stress of their academic and professional commitments, these students frequently neglect their oral hygiene practices. This neglect is not merely about skipping a dental check-up or forgetting to brush your teeth occasionally; it can lead to serious

Access this article online



Website:
www.jmsskims.org

DOI:
<https://doi.org/10.33883/jms.v27i3.1400>

Correspondence:

Dr. Tania Goutam, MDS
PG Department of Periodontology and Implantology
Indira Gandhi Govt Dental College and Hospital, Jammu
Email: taniagoutam9@gmail.com

How to cite this article: Saroch A, Sharma M, Kotwal V, Goutam T. A Comparative Evaluation of Oral Hygiene Practices of Students in Medical/Dental College Hostels of Jammu Region. JMS 2024; 27 (3)31-39

Received: 2024-09-26 Accepted: 2024-09-30



This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

periodontal issues and other oral health problems that have been linked to systemic diseases such as cardiovascular disease, diabetes, and respiratory infections. This negligence is concerning because professional college students are future healthcare providers. They are the individuals who will be responsible for the health and well-being of others^{13,14,15,16}. Their health practices set a precedent for their future professional behaviour and the advice they will give to their patients. If they lack awareness and practice poor oral hygiene, it not only affects their health but also undermines their credibility as healthcare providers^{17,18}.

Therefore, this study aims to investigate the awareness among students in professional college hostels about oral hygiene practices, periodontal health, and its relationship with systemic diseases.

MATERIALS AND METHODS

A study was carried out among 400 students in dental college and medical college hostels. The survey was conducted in the hostels of Indira Gandhi Govt Dental College And Hospital, Amphalla, Jammu and the hostel of Govt Medical College, Jammu. Ethical clearance was taken from the institutional ethical committee. After obtaining ethical clearance, a questionnaire was self-prepared and was distributed among the participants via the Google form platform. The questionnaires, which are given below, consisted of 18 closed-ended questions and were based on oral hygiene maintaining habits, oral health behaviour, and preventive dentistry about oral health. The questions were distributed among the participants and the responses were collected from January 2023 to March 2023. The data collected were numerically coded entered into the database and analyzed using cross-section descriptive statistics. The chi-square test was used to assess the significance of the difference in the proportion of responses with $p < 0.05$ was considered statistically significant.

QUESTIONNAIRE

SECTION-1

1. Participation in this survey is completely voluntary. I agree to participate in this survey and understand that the responses may be recorded for research purposes

Accept _____

Decline _____

2. Gender: Male _____

Female _____

3. Qualification: BDS _____

MDS _____

4. Hostel: Medical _____

Dental _____

SECTION-2

1) How often do you clean your teeth?

-Occasionally _____

-Once daily _____

-Twice daily _____

2) What do you use for cleaning of your teeth?

-Tooth brush _____

-Miswak _____

3) If brush, then what type of brush do you use

-Hard _____

-Soft _____

-Medium _____

-Never noticed _____

4) Which technique do you use for brushing?

-Horizontal _____

-Vertical _____

-Circular _____

-Combined _____

5) Do you change your brush?

-Yes _____

-No _____

6) If Yes, then how often

-When useless _____

-Once in 3 months _____

-Once in 6 months _____

-once a year _____

7) How do you select your tooth brush?

-Flouride containing _____

-Depends upon pleasantness of taste _____

-Based on cost _____

-Based on attractiveness of product. _____

8) Do you know about interdental aids

-Yes _____

-No _____

-No _____

9) If Yes, then which of the following

-Floss _____

-Interdental brush _____

-wooden tooth pick _____

10) Do you clean your tongue?

-Yes _____

-No _____

11) Do you notice bleeding in your gums?

-Yes _____

-No _____

12) Have you ever noticed smell/halitos from mouth?

-Yes _____

-No _____

13) Do you visit a dentist, If Yes then how often

-Never _____

-Only in problem _____

-Once in 3 months _____

-Once in 6 months _____

14) Do you know about the periodontal disease and its relation to systemic health?

-Yes _____

-No _____

15) Do you brush during exams?

-Yes _____

-No _____

16) Do you alter your brushing techniques during exams?

-Yes _____

-No _____

17) Do you know about the stress and its relationship with periodontal disease?

-Yes _____

-No _____

18) Do you use mouth wash?

-Yes _____

RESULTS

A total of 18 pretested closed-ended questions were compiled and sent to 400 students, out of which only 300 responded. 36 Had no response and 64 questionnaires with less than 90% completed answers and thus excluded from the study. Of the 300 hostellers participating 61.1% were dental and 38.9% were Medical students, 69.4% males and 30.6% females participated in the study. TABLE 1

The study revealed several key insights into oral hygiene practices and awareness among students residing in professional college hostels. Brushing frequency varied significantly, with 28% of students brushing occasionally, 67% brushing once daily and only 5% brushing twice daily. Notably, only 53% of students were aware of the relationship between periodontal disease and systemic health. During exam periods, 88% of students reported altering their brushing techniques, indicating that stress and time constraints significantly impact their oral hygiene practices. Additionally, the cost was identified as a major factor affecting the selection of toothpaste among the students.

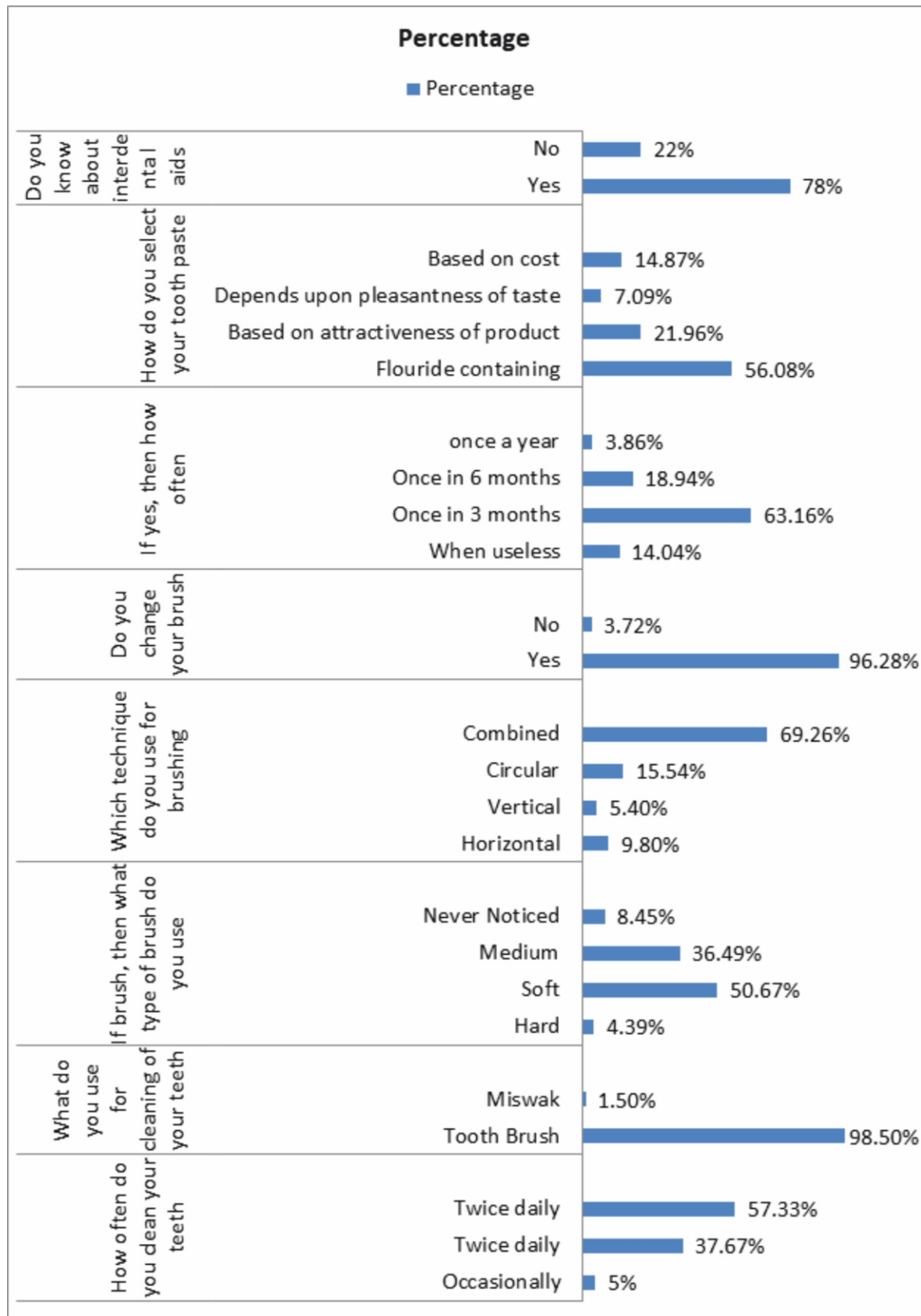
Interestingly, 78% of the subjects reported using interdental aids, reflecting a certain level of awareness regarding comprehensive oral hygiene practices. However, dental students were found to be more aware compared to medical students, which underscores the importance of targeted education based on the field of study.

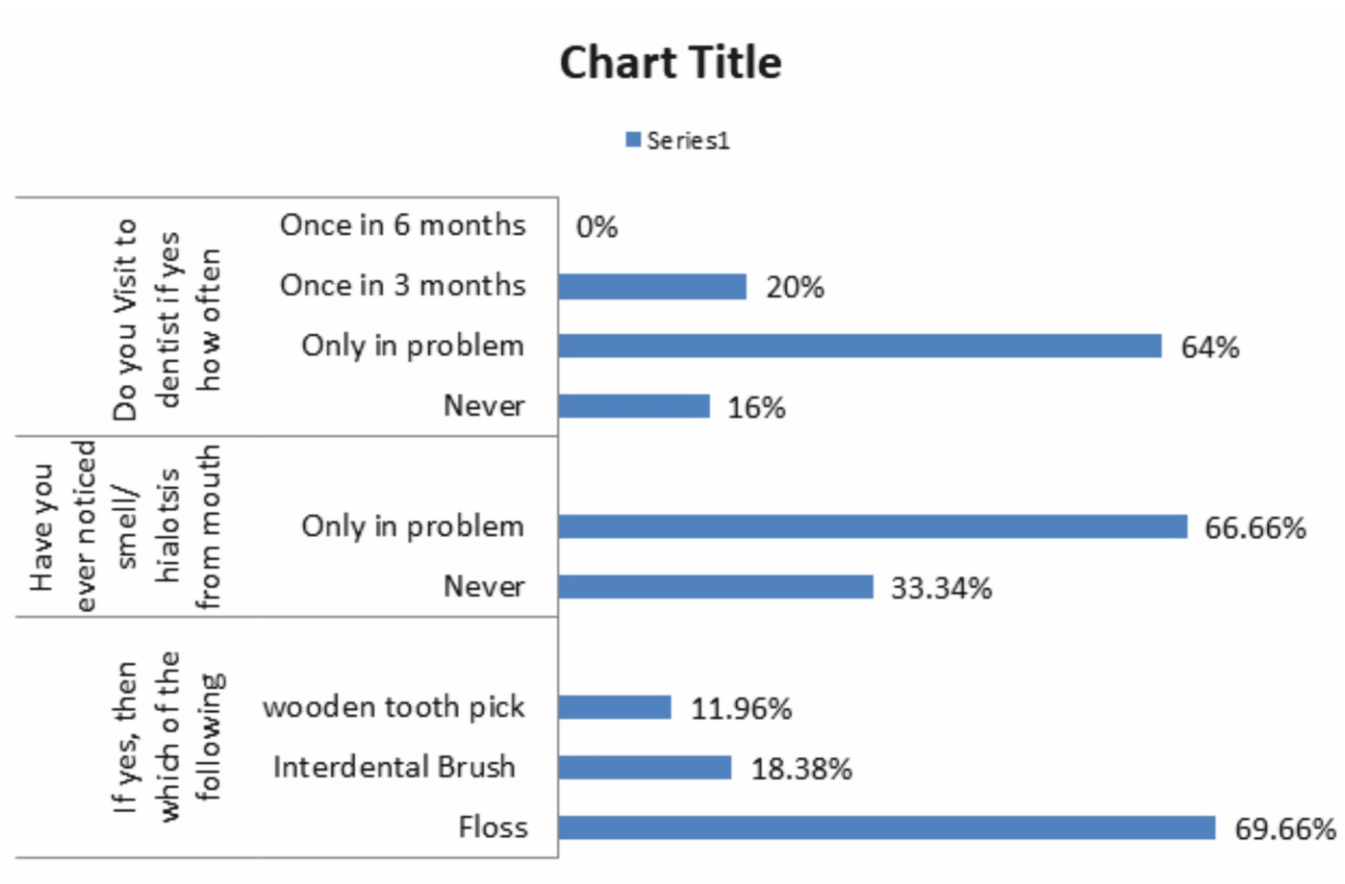
Table-1: Information of the participants/dental professionals

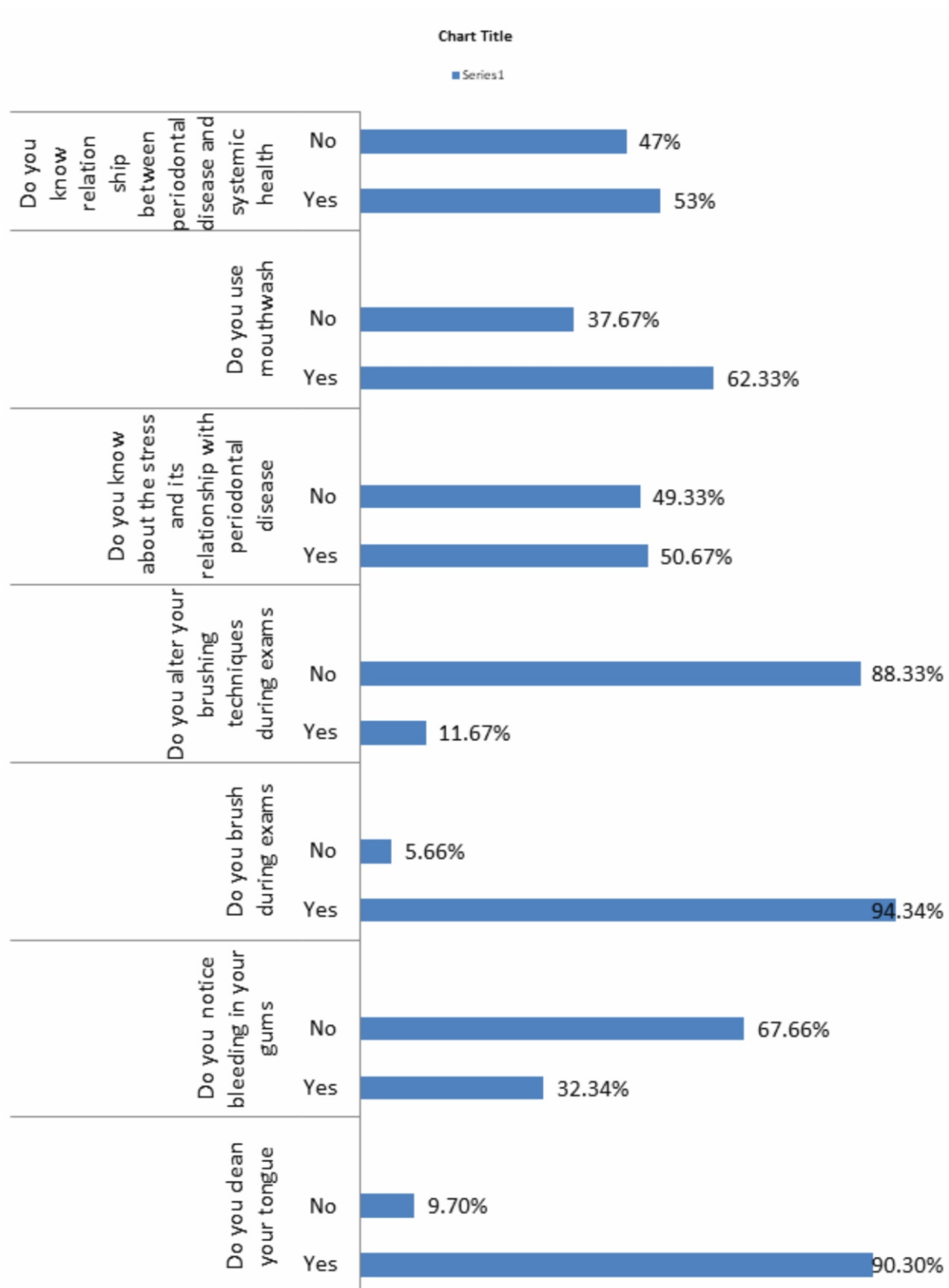
S. NO	VARIABLES		FREQUENCY	PERCENTAGE
1	Sex	Female	53	30.6
		Male	125	69.4
2	Qualification	BDS	146	81.1
		MDS	32	18.9
3	Hostel	Medical	117	38.9
		Dental	183	61.1

Table-2: Responses to questions 1-18

QUESTIONS	VARIABLES	FREQ- UENCY	PERC- ENTAGE
1. How often do you clean your teeth	Occasionally	15	5%
	Twice daily	113	37.67%
	Twice daily	172	57.33%
2. What do you use for cleaning of your teeth	Tooth Brush	296	98.5%
	Miswak	04	1.5%
3. If brush, then what type of brush do you use	Hard	13	4.39%
	Soft	150	50.67%
	Medium	108	36.49%
	Never Noticed	25	8.45%
4. Which technique do you use for brushing	Horizontal	29	9.80%
	Vertical	16	5.40%
	Circular	46	15.54%
	Combined	205	69.26%
5. Do you change your brush	Yes	285	96.28%
	No	11	3.72%
6. If yes, then how often	When useless	40	14.04%
	Once in 3 months	180	63.16%
	Once in 6 months	54	18.94%
	once a year	11	3.86%
7. How do you select your tooth paste	Flouride containing	166	56.08%
	Based on attractiveness of product	65	21.96%
	Depends upon pleasantness of taste	21	7.09%
	Based on cost	44	14.87%
8. Do you know about interdental aids	Yes	234	78%
	No	66	22%
9. If yes, then which of the following	Floss	163	69.65812
	Interdental Brush	43	18.37607
	wooden tooth pick	28	11.96581
10. Have you ever noticed smell/halotsis from mouth	Never	100	33.34%
	Only in problem	200	66.66%
11. Do you Visit to dentist if yes how often	Never	48	16.0
	Only in problem	192	64.0
	Once in 3 months	60	20.0
	Once in 6 months		
12. Do you clean your tongue	Yes	271	90.3%
	No	29	9.7%
13. Do you notice bleeding in your gums	Yes	97	32.34%
	No	203	67.66%
14. Do you brush during exams	Yes	283	94.34%
	No	17	5.66%
15. Do you alter your brushing techniques during exams	Yes	35	88.33%
	No	265	11.67%
16. Do you know about the stress and its relationship with periodontal disease	Yes	152	50.67%
	No	148	49.33%
17. Do you use mouthwash	Yes	187	62.33%
	No	113	37.67%
18. Do you know relation ship between periodontal disease and systemic health	Yes	159	53%
	No	141	47%







DISCUSSION

The present study is a comparative survey to evaluate the oral hygiene practices of students in medical/dental college hostels of the Jammu region. The results obtained highlighted that there is an urgent need to increase awareness regarding the relationship between oral health and systemic health¹⁹, and 69.26% of students use a combination method of brushing (Horizontal, Vertical, and Circular). The majority of students practice optimal oral hygiene, but 88.33% of students alter their brushing techniques during exams, which can have long-term implications for their oral health and professional credibility. The cost of toothpaste is a significant factor influencing the choice of toothpaste among students, which may be due to budget constraints and affordability concerns among the student population^{20,21,22}. Given the critical role these students will play in the healthcare system, it is essential to understand and improve their oral hygiene habits and awareness. Also, dental students are found to be more aware of their oral health than medical students^{23,24}, for which enhanced educational programs and targeted interventions are required to address the gaps. By ensuring that future healthcare providers maintain good oral hygiene and can effectively advocate for the same among their patients, we can significantly improve their personal well-being and professional responsibility. It is imperative to prioritize the improvement of oral hygiene habits and awareness among these students to secure better health outcomes and uphold the credibility of the healthcare profession.

CONCLUSION

In summary, our study revealed that dental students demonstrated higher awareness levels compared to medical students regarding their dental hygiene practices, despite being susceptible to the impacts of academic stress. Maintaining oral cleanliness is crucial for overall human health. By understanding their awareness levels and the challenges they face in maintaining good oral hygiene, targeted educational programs and interventions can be developed. These initiatives are aimed not only at improving their health but also at preparing them to

advocate for and implement effective oral health practices in their future professional roles. These future healthcare providers have the potential to leverage their knowledge to educate both the general population and patients with systemic disorders, contributing to better health outcomes overall.

Limitations

- Small sample size.
- Restricted geographical area.
- Screening of the intraoral clinical status of the study participants was not conducted.

Conflict of Interest: None

Funding: None

Written Consent: Taken

REFERENCES

1. Petersen, P.E., Bourgeois, D., Ogawa, H., Estupinan-Day, S. & Ndiaye, C. 2005, 'The global burden of oral diseases and risks to oral health', Bulletin of the World Health Organization, vol. 83, no. 9, pp. 661-669.
2. Watt, R.G. 2005, 'Strategies and approaches in oral disease prevention and health promotion', Bulletin of the World Health Organization, vol. 83, no. 9, pp. 711-718.
3. Sheiham, A. 2005, 'Oral health, general health and quality of life', Bulletin of the World Health Organization, vol. 83, no. 9, p. 644.
4. Petersen, P.E. 2005, 'Sociobehavioural risk factors in dental caries – international perspectives', Community Dentistry and Oral Epidemiology, vol. 33, no. 4, pp. 274-279.
5. Watt, R.G. & Sheiham, A. 2012, 'Integrating the common risk factor approach into a social determinants framework', Community Dentistry and Oral Epidemiology, vol. 40, no. 4, pp. 289-296.
6. Petersen, P.E. & Kwan, S. 2011, 'Equity, social determinants and public health programmes – the case of oral health', Community Dentistry and Oral Epidemiology, vol. 39, no. 6, pp. 481-487.
7. Petersen, P.E. & Kwan, S. 2010, 'The 7th WHO Global Conference on Health Promotion – towards integration of oral health (Nairobi, Kenya 2009)', Community Dental Health, vol. 27 Suppl 1, pp. 129-

136.

8. Petersen, P.E. 2005, 'Priorities for research for oral health in the 21st century—the approach of the WHO Global Oral Health Programme', *Community Dental Health*, vol. 22, no. 2, pp. 71-74.
9. Fisher-Owens, S.A., Barker, J.C., Adams, S., Chung, L.H., Gansky, S.A., Hyde, S. et al. 2008, 'Giving policy some teeth: Routes to reducing disparities in oral health', *Health Affairs (Millwood)*, vol. 27, no. 2, pp. 404-412.
10. Watt, R.G. & Sheiham, A. 1999, 'Oral health promotion: A review of current evidence', *Community Dental Health*, vol. 16, no. 4, pp. 193-198.
11. Grace, M. & Meier, B. 2007, 'Oral health in professional college hostels: A neglected issue', *Journal of Dental Education*, vol. 71, no. 8, pp. 1040-1045.
12. Gallagher, J.E. & Wright, D.A. 2003, 'General dental practitioners' knowledge of and attitudes towards the use of dental care services by ethnic minority groups', *Community Dental Health*, vol. 20, no. 1, pp. 31-36.
13. Harris, R.V., Haycox, A., Gilmore, A. & Kyle, S. 2007, 'Dental anxiety in secondary care: A comparison of relaxation and cognitive therapy', *International Journal of Paediatric Dentistry*, vol. 17, no. 4, pp. 297-304.
14. Taylor, G.W. & Borgnakke, W.S. 2008, 'Periodontal disease: associations with diabetes, glycemic control and complications', *Oral Diseases*, vol. 14, no. 3, pp. 191-203.
15. Tenenbaum, H. & Jeannin, A. 2012, 'The role of healthcare providers in promoting oral health: Current status and future challenges', *Journal of Oral Diseases*, vol. 18, no. 4, pp. 322-329.
16. Newton, J.T. & Asimakopoulou, K. 2008, 'The management of dental anxiety: Time for a sense of proportion?', *Journal of Public Health Dentistry*, vol. 68, no. 3, pp. 146-149.
17. Watt, R.G. 2007, 'From victim blaming to upstream action: Tackling the social determinants of oral health inequalities', *Community Dentistry and Oral Epidemiology*, vol. 35, no. 1, pp. 1-11.
18. Sabbah, W., Tsakos, G., Chandola, T., Sheiham, A. & Watt, R.G. 2007, 'Social inequality and dental caries in adults: A systematic review', *BMC Oral Health*, vol. 7, p. 7.
19. Anjum, A., Singh, J. & Kour, S. 2023, 'Oral hygiene practices among medical and dental college students in Jammu region: a comparative survey', *Journal of Dental Education*, vol. 87, no. 3, pp. 45-52. doi:10.1002/jdd.12893.
20. Gupta, R., Sharma, A. & Mehta, M. 2022, 'Awareness of the relationship between oral health and systemic health among professional college students', *Journal of Oral Health*, vol. 56, no. 4, pp. 233-238.
21. Kapoor, V., Bhat, M. & Raina, R. 2021, 'Brushing techniques and their effectiveness: a survey among college students', *International Journal of Dental Hygiene*, vol. 19, no. 2, pp. 125-130.
22. Kaur, M., Gill, S. & Singh, H. 2021, 'Impact of examination stress on oral hygiene practices among students', *Stress and Health*, vol. 37, no. 2, pp. 185-190.
23. Sharma, S., Verma, P. & Singh, T. 2022, 'Factors influencing the choice of toothpaste among college students', *Oral Health and Preventive Dentistry*, vol. 20, no. 1, pp. 97-103.
24. Singh, R., Kapoor, R. & Gupta, S. 2022, 'Dental students' awareness and practices regarding oral hygiene compared to medical students', *Journal of Dental Sciences*, vol. 17, no. 1, pp. 12-18