**RESEARCH**
O&G Forum 2024; 34 – 3s: 787-792

# KNOWLEDGE AND AWARENESS ON ORAL HYGIENE HABITS AMONG DENTAL STUDENTS

**Sneha Kannan[1], Dr. Rakshagan V[2*], Mahesh Ramakrishnan[3]**
[1] Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India. 151801046.sdc@saveetha.com
[2] Reader, Department of Prosthodontics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India. rakshagan.sdc@saveetha.com
[3] Professor, Department of Pedodontics and Preventive Dentistry, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences Saveetha University, Chennai, Tamil Nadu, India. mahesh@saveetha.com

**Abstract**
**Objectives:** Oral health is an essential component of general health in one's life. Oral self practices are very effective in keeping up one's good oral health from an individual's point of view. Such hygienic conditions prevent many oral diseases from happening or control them from damaging oral health adversely. To investigate the oral hygiene practices and habits among dental students in a dental college.
**Materials and Methods:** A survey with the aid of specially designed questionnaires was made anonymously, in order to assess the oral health behaviour among these people.
**Results:** A number of undergraduates and postgraduates were investigated. 50% undergraduates and 50% postgraduates were included in this survey. It was also observed that the postgraduates were very much concerned about oral hygiene rather than undergraduates.
**Conclusions:** Undergraduates showed lack of knowledge in their oral hygiene practices. The results show that undergraduates need a lot of awareness in their oral self hygiene. Awareness programmes must be conducted frequently to boost up the oral self hygiene practices among them for many good reasons.
Keyword: Oral health, dental students, oral hygiene practices and preventive care.

## INTRODUCTION

Oral health is an essential component of general health in one's life. Dental caries and periodontal diseases are the most common oral health problems in the world. Poor oral hygiene and untreated oral diseases and conditions can have a significant impact on the quality of life[1].The prevention of oral disease is the most acknowledged and efficient method of ensuring oral health.Oral health is now renowned to be equally important in relation to general health. Written and visual media and dentists are the most common sources of receiving oral health information[2]. An individual can get rid of oral ill-health with meticulous implementation of oral self care practices. To redirect the focus of oral-health professionals toward effective preventive interventions and to enable them to motivate their parents to adopt healthy behaviors, special educational programs need to be integrated into undergraduate training and made available to established clinicians are required[3]. Dental students, the future leaders in oral-health care, have a significant role to play in public oral health education and its promotion. 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 positive models for their patients, families, and friends[4]. Dental students' oral-health attitude reflects their understanding of the importance of disease prevention and their commitment to improve their patients' oral health; these attitudes should be developed and reinforced during undergraduate training[5]. Recommended oral self care includes tooth brushing more than once a day, taking food items which have less sugar content and regular use of fluoride toothpaste[6]. Dental students should propagate the importance of oral hygiene and be the model example to others with their oral health behavior in order to get the attention towards oral self hygiene practices. In this way, the health beliefs and attitudes of dental students will not only reflect their oral self-care habits but also influence their patient's ability drastically to take care of their teeth and shape the public's oral health education level. Globally, many studies have proved that people of different countries, having knowledge in oral health practices and their attitude, will surely adopt good habits for better oral hygiene[7]. However little attention has been paid to the context in which dental professionals undergo motivational and behavioural changes with respect to their oral self care regimens. Previous studies on dental students, which mostly majored on the comparison of the undergraduates and postgraduates, showed that postgraduate students had significant improvements in oral-hygiene practices, attitudes, and behavior.To the best of our knowledge, there are very few studies comparing preclinical and clinical students reporting inconsistent results[8].Our team has extensive knowledge and research experience that has translate into high quality publications. Therefore, the present research aims at investigating oral hygiene practices and habits among the dental students in a dental college.

## MATERIALS AND METHODS

The present study was a questionnaire based study. A 11-item questionnaire (Table 1) was formulated and circulated among

150 dental students of a private dental college. The responses were then collected and subjected to statistical analysis using SPSS Software (Version 23). Frequency distribution and percentage were calculated.

**Table 1: Questionnaire to assess the knowledge and awareness on oral hygiene habits among dental students**

| S.No | Questions | Options |
|---|---|---|
| 1 | How often do you clean your teeth? | ❖ Once a day<br>❖ Twice a day<br>❖ After every meal |
| 2 | What type of brush do you use? | ❖ Soft<br>❖ Hard<br>❖ Medium<br>❖ Never noticed |
| 3 | What type of Brushing technique do you use? | ❖ Horizontal<br>❖ Vertical<br>❖ Circular<br>❖ Bass |
| 4 | How often do you change your brush? | ❖ 3 months once<br>❖ 6 months once |
| 5 | Do you use fluoridated toothpaste while brushing? | ❖ Yes<br>❖ No |
| 6 | Do you know what interdental aids are? | ❖ Yes<br>❖ No |
| 7 | Do you clean your tongue? | ❖ Yes<br>❖ No |
| 8 | Do you use dental floss? | ❖ Yes<br>❖ No |
| 9 | Do you rinse your mouth after eating | ● Yes<br>● No |
| 10 | What is the most commonly using additional cleaning aid? | ● Twig<br>● Toothpick<br>● Mouthwash<br>● Floss |

## RESULTS AND DISCUSSION

The present study was to evaluate the knowledge and awareness on oral hygiene habits among dental students .A total of 150 dental students participated in the survey.

In the present study, 75% of them were postgraduates and 75% were undergraduates(Figure 1). 33% of the postgraduates brush twice daily and 35% of the undergraduates brush once daily(Figure 2). About 16.67% of postgraduates use the soft type of toothbrush and 30% of the undergraduates use the soft type of toothbrush(Figure 3). And 16.67% of postgraduates use the soft type of toothbrush and 30% of the undergraduates use the soft type of toothbrush(Figure 4) and 8.67% of the postgraduates changes the brush 3 months once and 35% of undergraduates changes the brush 3 months once (Figure 5). About 41.33% of the postgraduates know about the interdental aids and only 29% of the undergraduates know interdental aids(Figure 6).About 36% of the postgraduates use dental floss and only 20% of the undergraduates use dental floss(Figure 7). 32% of the postgraduates cleans the tongue and only 20% of the undergraduates cleans the tongue(Figure 8). About 36% of the postgraduates rinse their mouth after eating and only 14.67% of the undergraduates rinse their mouth after eating(Figure 9). About 39.53% of the postgraduates use fluoridated toothpaste while brushing and only 30% of the undergraduates use fluoridated toothpaste while brushing(Figure 10). About 24% of the postgraduates answered that floss is the most commonly used cleaning aid and 14.67% of the undergraduates answered that toothpick is the most commonly used additional cleaning aid(Figure 11).

The results of the present study indicated that the percentage score for oral-health knowledge, attitude, and behavior of undergraduates were significantly lower than that of the postgraduates, which agrees with the results of some previous studies by Kawamuraet al., Tseveenjavet al., and Ronget al.[11] There is a strong statistical significance difference between preclinical and clinical students regarding the brushing technique mainly regarding the bass technique (circular/roll — 22.6%, horizontal/scrub — 28.3%). The rate of the usage of dental floss among the preclinical students was 52.8% and among the clinical students was 71.1%.These rates are found in Neerajaet al study[12]. In another study by Rong et al., 4% of the undergraduates and 22% of the postgraduates used dental floss at least once in a week[13].

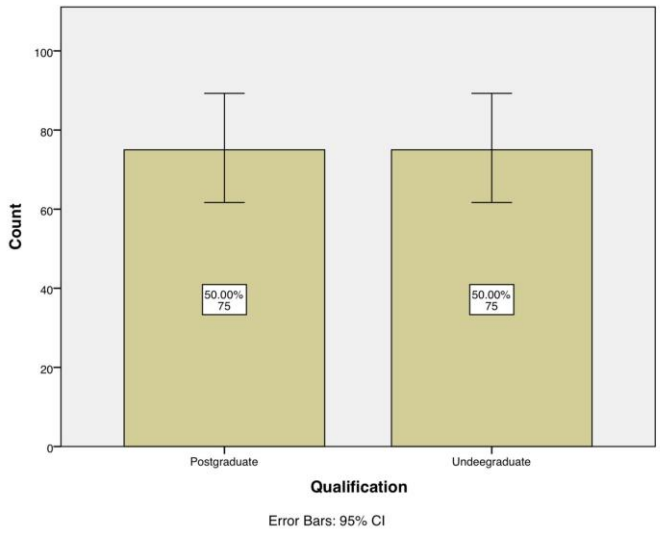


**Figure 1: Bar graph representing the participation of students in the study.About 50% of them are postgraduates and 50% of them are undergraduates.**

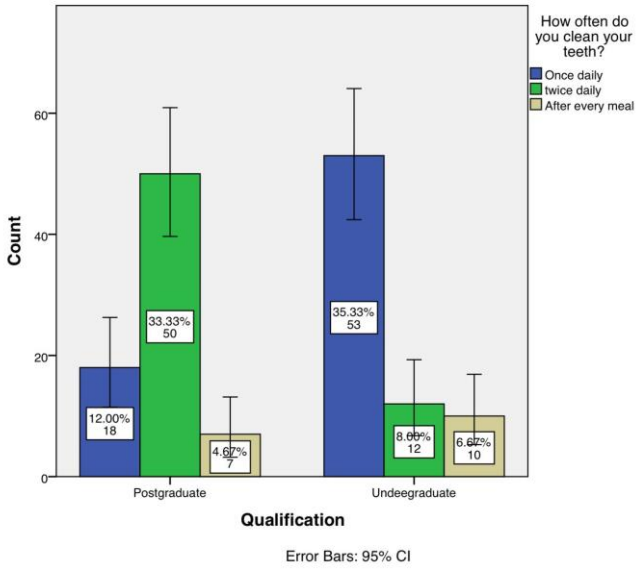


**Figure 2: Bar graph representing the frequency of cleaning the tooth among dental students in the study. About 33.3% of postgraduates cleans their teeth twice daily and only 8% of the undergraduates cleans twice daily. On the chi-square test, P value= 0.001 which is statistically significant(p<0.05).**

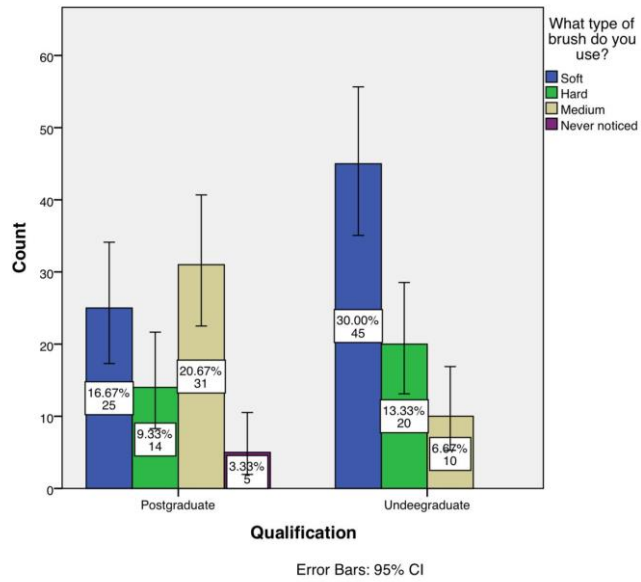


**Figure 3: Bar graph representing the type of brush used while brushing. About 16.67% of postgraduates use the soft type of toothbrush and 30% of the undergraduates use the soft type of toothbrush. It was found to be statistically not significant,Chi square test, P =0.137(p>0.05).**

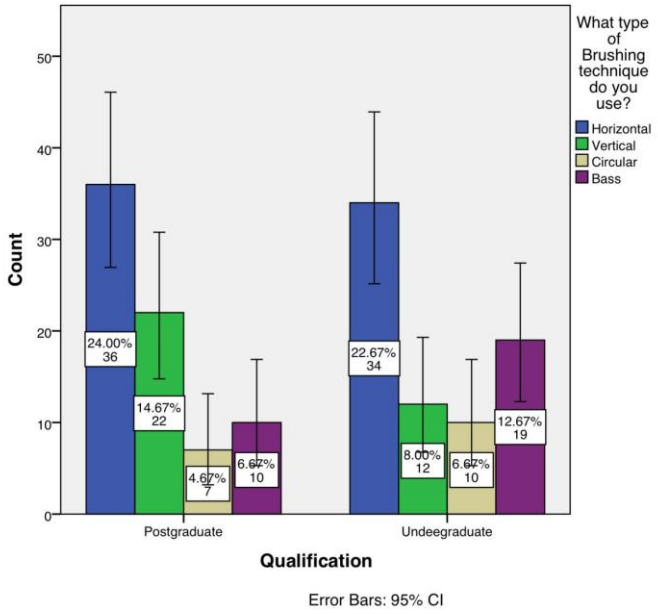


**Figure 4: Bar graph representing the type of brushing technique used among dental students in the study. About 24% of the postgraduates use horizontal brushing technique and 22% of the undergraduates use horizontal brushing technique.It was found to be statistically not significant,Chi square test, P =0.256(p>0.05).**

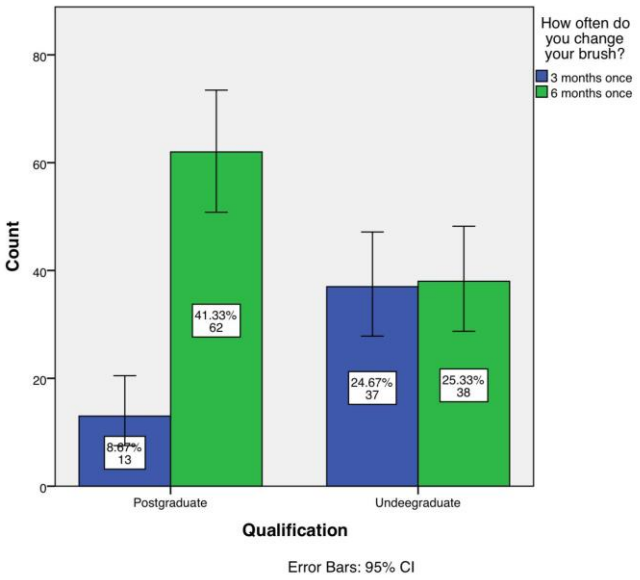


**Figure 5: Bar graph representing the duration of changing the toothbrush among dental students in the study. About 8.67% of the postgraduates change 3 months once and only 35% of undergraduates change 3 months onceOn the chi-square test, P value= 0.001 which is statistically significant(p<0.05).**

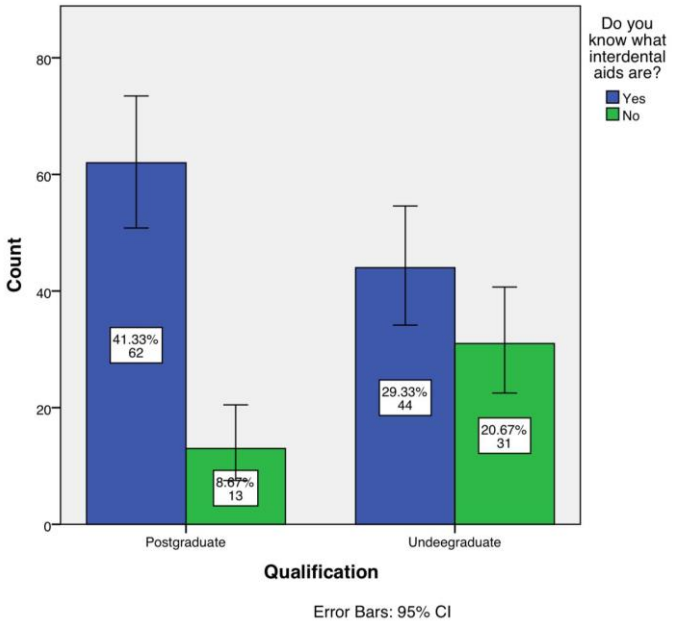


**Figure 6: Bar graph representing the awareness of interdental aids among dental students in the study. About 41.33% of the postgraduates know about the interdental aids and only 29% of the undergraduates know interdental aids. It was found to be statistically not significant,Chi square test, P =0.435(p>0.05).**

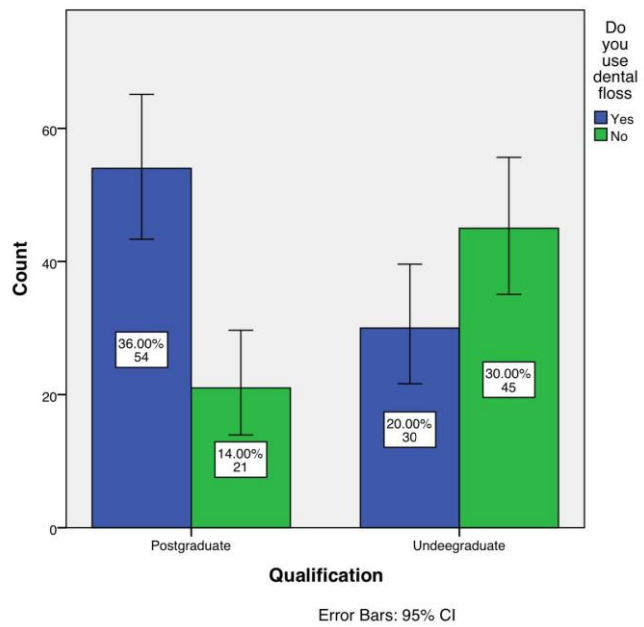


**Figure 7: Bar graph representing the use of dental floss among dental students in the study. About 36% of the postgraduates use dental floss and only 20% of the undergraduates use dental floss.It was found to be statistically not significant,Chi square test, P =0.322(p>0.05).**

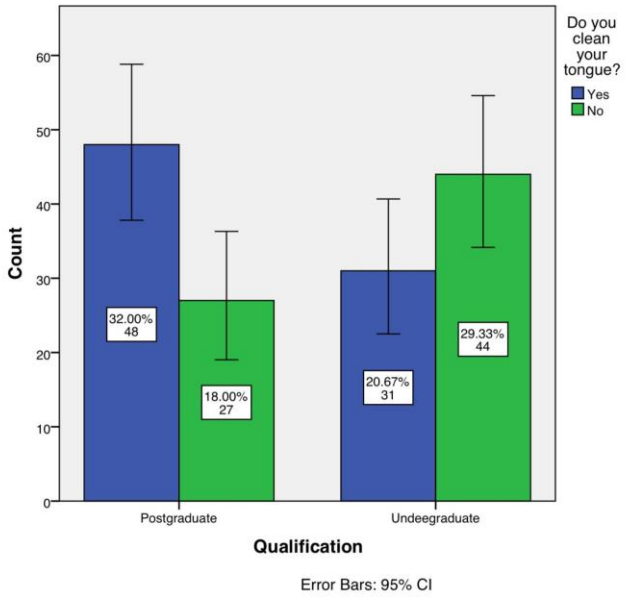


**Figure 8: Bar graph representing the cleaning of the tongue among dental students in the study. About 32% of the postgraduates cleans the tongue and only 20% of the undergraduates cleans the tongue.On the chi-square test, P value= 0.001 which is statistically significant(p<0.05).**

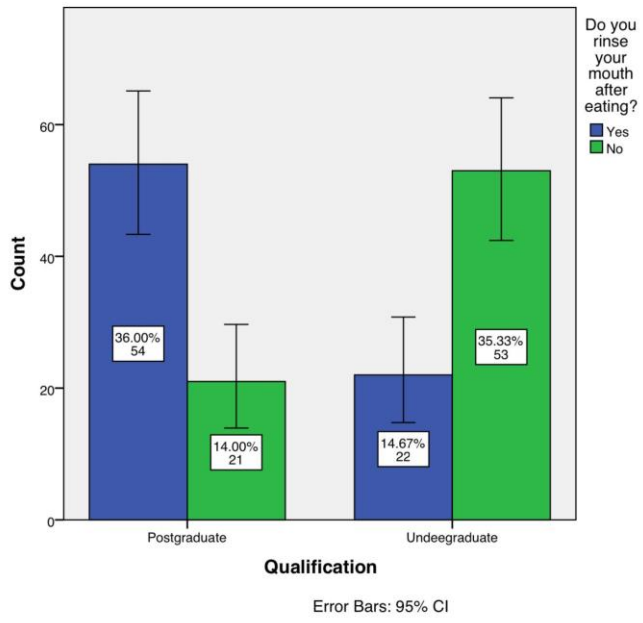


**Figure 9: Bar graph represents the rinsing your mouth after eating among dental students in the study. About 36% of the postgraduates rinse their mouth after eating and only 14.67% of the undergraduates rinse their mouth after eating.It was found to be statistically not significant,Chi square test, P =0.445(p>0.05).**

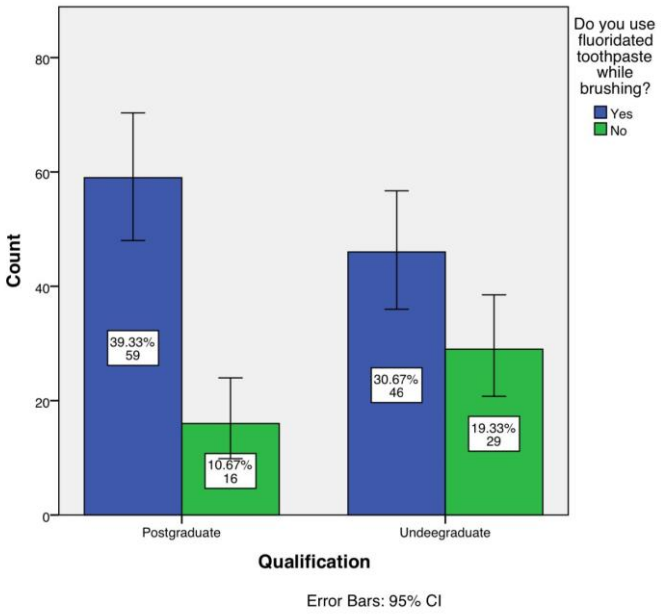


**Figure 9: Bar graph representing the use of fluoridated toothpaste among dental students in the study. About 39.53% of the postgraduates use fluoridated toothpaste while brushing and only 30% of the undergraduates use fluoridated toothpaste while brushing.It was found to be statistically not significant,Chi square test, P =0.234(p>0.05).**

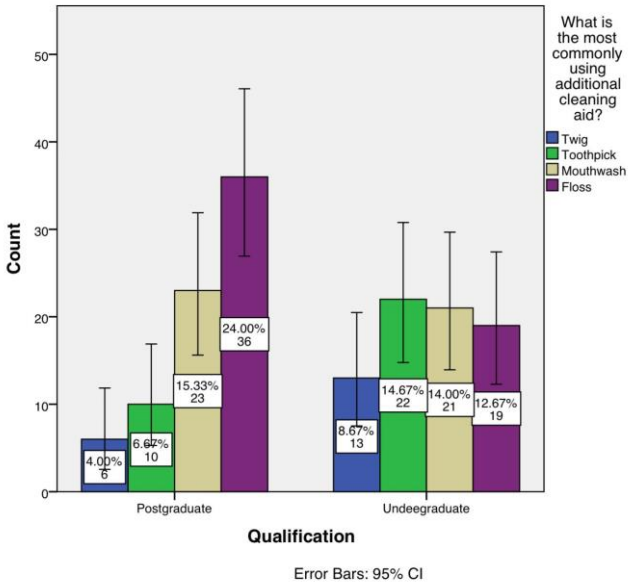


**Figure 10: Bar graph representing the most commonly used cleaning aid. About 24% of the postgraduates answered that floss is the most commonly used cleaning aid and 14.67% of the undergraduates answered that toothpick is the most commonly used additional cleaning aidOn the chi-square test, P value= 0.001 which is statistically significant(p<0.05).**

## CONCLUSION

The overall awareness of undergraduates and postgraduates regarding oral hygiene needs to be improved, given the tendency of dental students to engage in oral hygiene habits. Undergraduates need a lot of awareness in their oral self hygiene. Awareness programmes must be conducted frequently to boost up the oral self hygiene practices among undergraduates.

**Acknowledgement:**
The authors would like to acknowledge the help and support rendered by the department of Orthodontics and information technology of Saveetha Dental College and Hospitals and the management for the constant assistance with the research.

**Conflicts of Interest:**
There are no conflicts of interest.

**Source of Funding:**
The present study was supported by the following agencies:
- Saveetha Dental College
- Saveetha Institute of Medical and Technical Science
- Mahendra Enterprises

**Ethical Clearance:**
It is taken from "Saveetha Institute Human Ethical Committee" (Ethical Approval Number- SDC/SIHEC/2020/DIASDATA/0619-0320)

**Reference**

1. *Ravaghi V, Quiñonez C, Allison PJ. The magnitude of oral health inequalities in Canada: findings of the Canadian health measures survey [Internet]. Vol. 41, Community Dentistry and Oral Epidemiology. 2013. p. 490–8. Available from: http://dx.doi.org/10.1111/cdoe.12043*
2. *Msyamboza KP, Phale E, Namalika JM, Mwase Y, Samonte GC, Kajirime D, et al. Magnitude of dental caries, missing and filled teeth in Malawi: National Oral Health Survey [Internet]. Vol. 16, BMC Oral Health. 2016. Available from: http://dx.doi.org/10.1186/s12903-016-0190-3*
3. *Sharda AJ, Shetty S. A comparative study of oral health knowledge, attitude and behaviour of first and final year dental students of Udaipur city, Rajasthan, India. Int J Dent Hyg. 2008 Nov;6(4):347–53.*
4. *Gupta S, Saxena S, Sikka N, Bhatia G. Oral health attitude, knowledge, and behaviour of dental students of Jaipur, Rajasthan: A comparative study [Internet]. Vol. 13, Journal of Indian Association of Public Health Dentistry. 2015. p. 459. Available from: http://dx.doi.org/10.4103/2319-5932.171179*
5. *Kadhim M. A Comparative Study of Oral Health Knowledge, Attitude and Behavior of Dental and pharmacy Students at Ibn Hayyan university [Internet]. Available from: http://dx.doi.org/10.26226/morressier.5ac383162afeeb00097a41ab*
6. *Ahsin E, Ahsin S. ORAL HYGIENE PRACTICES OF FIRST AND FINAL YEAR DENTAL STUDENTS AT FOUNDATION UNIVERSITY: A COMPARATIVE STUDY [Internet]. Vol. 71, PAFMJ. 2021. p. 275–80. Available from: http://dx.doi.org/10.51253/pafmj.v71i1.4325*
7. *Gopinath V. Oral hygiene practices and habits among dental professionals in Chennai. Indian J Dent Res. 2010 Apr;21(2):195–200.*
8. *Shah S, Professor A, Department of Dentistry, GMERS Medical College and Hospital, Sola, Ahmedabad, et al. Assessment of Smoking Habits, Oral Hygiene Practices and Self Perceived Malodour among the College Students in Ahmedabad [Internet]. Vol. 10, Indian Journal of Dental*

*Education. 2017. p. 25–9. Available from: http://dx.doi.org/10.21088/ijde.0974.6099.10217.5*

9. *Ezhilarasan D. Hepatotoxic potentials of methotrexate: Understanding the possible toxicological molecular mechanisms. Toxicology. 2021 Jun 30;458:152840.*
10. *Preethi KA, Sekar D. Dietary microRNAs: Current status and perspective in food science. J Food Biochem. 2021 Jul;45(7):e13827.*
11. *Kumar Tadakamadla S, Kriplani D, Shah V, Tadakamadla J, Tibdewal H, Duraiswamy P, et al. Oral health attitudes and behaviour as predisposing factor for dental caries experience among health professional and other professional college students of India. Oral Health Prev Dent. 2010;8(2):195–202.*
12. *Mirani SA. ORAL HEALTH; PERCEPTION OF ORAL HEALTH AND PREVALENCE OF DENTAL CARIES AMONG THE STUDENTS' OF LIAQUAT MEDICAL UNIVERSITY JAMSHORO [Internet]. Vol. 24, THE PROFESSIONAL MEDICAL JOURNAL. 2017. p. 1894–8. Available from: http://dx.doi.org/10.17957/tpmj/17.4134*
13. *Mikou S. Attitudes of dental students in their first and final years of studies to oral health behaviour [Internet]. Available from: http://dx.doi.org/10.26226/morressier.5ac3831c2afeeb00097a418d*