

## Oral Health Knowledge, Attitude, and Practice among Nursing Students in the North-Eastern Part of Rajasthan, India

### Abstract

**Background:** Professional and paramedical students have a key role in oral health promotion. The aim of this study was to assess oral health-related Knowledge, Attitude, and Practice (KAP) among the nursing students in Rajasthan. **Materials and Methods:** A cross-sectional, questionnaire-based study was carried out among 409 nursing students from five different institutes who were selected by simple random sampling. A 27-item questionnaire was used to assess KAP. The resulting data were analyzed using frequency distribution. **Results:** Over 50% of the students used toothbrush and toothpaste twice a day to maintain their oral hygiene. Besides, 41% recognized the importance of dental visit in case of gingival bleeding and knew that poor oral hygiene is responsible for bad breath. **Conclusions:** Oral health-related behavior among the nursing students needs improvement. More educational and preventive programs should be organized to achieve better results.

**Keywords:** Behavior, knowledge, nursing students, oral health

### Introduction

Oral health is an integral part of general health and well-being. A healthy mouth enables an individual to speak, chew, and socialize without any active disease, discomfort, or embarrassment.<sup>[1]</sup> Nursing personnel are the backbone of any healthcare system. However, many studies have suggested the prevalence of poor knowledge and negative attitude toward oral health among the nursing students.<sup>[2-5]</sup> These students face several patients of different age groups and backgrounds during the course of their study.<sup>[6-9]</sup> Hence, with proper knowledge about oral health, they can educate and motivate people, serving as role models for both the patients and the community at large.<sup>[10]</sup> Therefore, this study was performed to evaluate the oral health Knowledge, Attitude, and Practice (KAP) among the nursing students.

### Materials and Methods

A cross-sectional, questionnaire-based study was conducted in 2014 in the North-Eastern region of Rajasthan, India. Out of the 83 nursing institutes, 5 were selected by simple random sampling method. The minimum sample size was calculated to

be 380 subjects by assuming 5% level of significance with 80% power at 95% confidence interval and 45% prevalence of a previous study by Kaira *et al.*<sup>[11]</sup> However, considering a possible attrition, 10% increment [ $380 + 10\% (380) = 418$ ] was done in the estimated sample size and 425 was fixed as the final sample size. Subjects who gave written consent were included, and 16 participants who submitted incomplete questionnaires were excluded from the study. A 27-item close-ended questionnaire in English language was used. A pilot study was done in 43 subjects to test the reliability and validity of the questionnaire (Cronbach's alpha = 0.90). Frequency distribution was performed for analyzing the data using SPSS version 20.0 (SPSS Inc., Chicago, IL, USA).

### Ethical considerations

Ethical clearance was obtained prior to the study from the Institutional Ethical and Review Board of the dental college [RDCH/EC/2014/084 dated: 26-03-2014]. Permission for conducting the study was obtained from the concerned authorities. The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported

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## Results

Out of the total 425 students, 409 responded and returned completely filled questionnaires, resulting in a response rate of 96.23%. Among the respondents, 345 (84.35%) were male and 64 (15.65%) were female. The findings revealed that 98.77% of the nursing students clean their teeth regularly. Besides, it was inferred that 39.12% and 35.94% of the students brush for the sake of obtaining clean and bright teeth and preventing dental caries, respectively. Nearly 58% of the students brush their teeth twice daily, 39% brush once a day, and 2.20% brush more than twice daily. Answering the question about the use of different oral hygiene aids, 43.52% and 28.85% stated that they used tongue cleaner and mouth wash, respectively, while 9.05%, 6.60%, and 10.27% commented that they used interdental brush, toothpick, and other products as oral hygiene aids, respectively [Table 1]. The study showed that around 96% of the respondents use toothbrush and toothpaste to clean their teeth. About 27% of the students visited the dentist every 6 months. Furthermore, 26.89% visited a dentist in the last 6 months and only 2.93% in the past 3 years. Nearly 32% of the respondents believed in routinely visiting a dentist. Only 4.16% of the nursing students had their last dental visit owing to gum bleeding.

## Discussion

The results from this study imply that most of the nursing students clean their teeth for one reason or the other. Similar findings were reported in a study conducted by Alsrouf *et al.* in which 53.10% of the nursing students claimed that they brushed to get clean and bright teeth, while 27% stated

that they brushed for the purpose of preventing dental caries. This tendency might be due to an increased desire for the aesthetic aspects.<sup>[12]</sup> The study revealed that a large number of the respondents used toothbrush and toothpaste. This observation is in close agreement with the study by Kaira *et al.* and Bashiru and Omotola in which 96% and 100% of the students used toothbrush and toothpaste, respectively, for cleaning the teeth.<sup>[11,13]</sup> The results reflect the adaptation of the subjects to the current lifestyle. In the present study, the students used dental floss, tongue cleaner, and mouthwash as oral hygiene aids, and the results agree with those obtained in a study by Bashiru and Omotola, according to which 5.80% of the nursing students used dental floss. However, the findings are contradictory when it comes to the use of mouthwash (4.2%) as an oral cleaning aid.<sup>[14]</sup> Similarly, our finding is in contrast to the study by Kaira *et al.* in which 39% of the students reported the use of dental floss as an oral hygiene aid.<sup>[11]</sup> The results reflect the understanding of the students regarding the cause of dental caries and periodontal disease. Our observations vary from those of Sharif *et al.* in which 86.50% and 97.70% of the nursing students were aware that poor oral hygiene and inflammation, respectively, were responsible for the problems.<sup>[15]</sup> The attitude of the nursing students in the present study toward routine visit to a dentist is similar to that noted in the investigation by Kaira *et al.* in which 39% of the students appreciated the importance of routine dental visit. A study with a multicentric approach involving a larger sample size and wider geographic region is needed to generalize the results.

## Conclusion

The overall level of knowledge among the nursing students on oral health-related issues was found to be adequate. Preventive measures undertaken through a multisectoral approach encompassing healthcare organizations can result in further improvements. Therefore, there is a need to augment the knowledge level regarding oral health among the nursing students.

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Nil.

## Conflicts of interest

Nothing to declare.

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**Table 1: Level of awareness among nursing students regarding gingival bleeding and bad breath**

Awareness about gingival bleeding	
If gums are bleeding what do you do?	n (%)
Stop brushing	46 (11.25)
Pay more attention to gums when brushing	35 (8.56)
Visit a dentist	167 (40.83)
Brush more frequently	13 (3.18)
Never had this problem	95 (32.23)
Ignore the problem	22 (5.38)
Don't know	31 (7.58)
Awareness about the bad breath	
Causes of bad breath	n (%)
Improper oral hygiene	18 (41.08)
Improper tooth cleaning	90 (22.00)
Natural	23 (5.62)
Because of food that has eaten	28 (6.84)
Don't know	100 (24.45)

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