

# Oral Health-Related Knowledge, Attitude and Practice among Nursing Students of Rohilkhand Medical College and Hospital: A Questionnaire Study

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## ABSTRACT

**Aim:** The present study was conducted to investigate the oral health knowledge, attitude and practice among nursing students of Rohilkhand Medical College and Hospital.

**Materials and methods:** A questionnaire study was conducted among 111 nursing students of Rohilkhand Hospital who had an easy access to the dental services within the premises of hospital itself. A self-administered structured questionnaire consisting of 32 questions on demographic data, oral hygiene knowledge, attitude and practices was distributed. The data collected was analyzed using statistical package for social sciences (SPSS) version 11.5.

**Results and conclusion:** A majority of the respondents were practicing healthy oral hygiene practices that included brushing twice a day with toothbrush and toothpaste for adequate duration of 2 to 3 minutes. Almost 87% of them were aware of the diseased gingival condition and the consequences due to accumulation of plaque. Almost half of the participants visited a dentist only on pain. However, a majority of them had given importance to their teeth equally as their general health. It was seen that the knowledge, attitude and practice of nursing students about oral health was adequate, but further improvements can be encouraged.

**Keywords:** Oral health, Oral hygiene practice, Attitude, Questionnaire.

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## INTRODUCTION

Health is a common theme in most cultures. During the past few decades, there has been a reawakening that health is a fundamental human right and a worldwide social goal that it is essential to the satisfaction of basic human needs and to an improved quality of life. According to World Health Organization, health has been defined as 'a state of complete physical, mental and social well-being and not merely the absence of disease and infirmity' (1948).<sup>1</sup> For the field of dentistry, this new perspective on health suggested that the ultimate goal of dental care, namely good oral health, should no longer merely be seen as the absence of caries or periodontal disease; a patient's mental and social well-being should be considered as well.<sup>2</sup> Based on this, it is the primary

concern of dental professionals and oral health educators to impart a positive oral health knowledge and behavior in the society and there has been a growing idea of health promotion through education, instruction and motivation all over. It creates an environment which is conducive for shifting the onus of public health from the shoulder of health care professionals to 'people's own hands'. To achieve this there should be an accurate knowledge and understanding of scientifically supported information and facts. Medical, dental and paramedical students play an important role in oral health care and promotion. Learning in these professional institutions becomes ineffective unless it leads to a profound change in student's behavior and attitude toward improvement of their own personal health.<sup>3</sup> Nursing personnel also play a vital role in health promotion and preventive information dissemination, therefore it is very important that their own oral health knowledge should be good and their oral health behavior confirms to expectation of the community people. One group which could be more easily used for this purpose is nursing students of Rohilkhand Hospital. The simple concept of oral hygiene should be equally understood and put into practice by them. Central to that, the purpose of the study was to investigate the oral health knowledge, attitude and practice among the nursing students of Rohilkhand Hospital.

## MATERIALS AND METHODS

A cross-sectional questionnaire-based study was conducted to investigate the oral health knowledge, attitude and practice among nursing students of Rohilkhand Medical College and Hospital. A questionnaire study was conducted among 111 nursing students of Rohilkhand Hospital who had an easy access to the dental services within the premises of hospital itself. A self-administered structured questionnaire consisting of 32 questions on demographic data, oral hygiene knowledge, attitude and practices was distributed. The questionnaire was adopted from a study done by Al-Omiri et al.<sup>4</sup> Among those 32 questions, 28 were close ended and four were open ended. It was distributed to 111 nursing students and the response rate was 100%. The respondents were instructed to fill the questionnaire without discussion with each other in their own classroom. They took an average of 10 minutes to complete the questionnaire. The preliminary

section was designed to gather demographic data and the anonymity of the respondents was assured. The second section was concerned with oral health knowledge, attitude and practice related questions. The data collected was analyzed using statistical package for social sciences (SPSS) version 11.5. Informed consent was obtained from each student before the questionnaire was distributed. The study protocol was reviewed and approved by the Ethical Committee of Rohilkhand Medical College.

## STATISTICAL ANALYSIS

All answers were treated with utmost confidentiality. Results were statistically analyzed using statistical package for social sciences (SPSS) 11.5 version. Descriptive statistics was obtained and mean, standard deviation and frequency distribution were calculated.

## RESULTS

Table 1 reveals that 48.7% students brushes their teeth twice daily followed by 28.9% who brushes once a day. Out of 111 nursing students, only 22.5% brushes their teeth thrice daily.

Table 2 reveals the knowledge regarding oral hygiene aids. Out of 111 students, majority of students (70%) uses toothpaste followed by dental floss (13.5%), followed by 11% (paste plus floss) and lastly 4% who uses mouthwash as oral hygiene aids.

Table 3A reveals awareness about gingival health. Majority of them (96%) knew that gum bleeding meant inflamed gums, while 15% are unaware of gingival health.

Table 3B reveals awareness about plaque composition. A total of 65% of the respondents knew the basic composition of plaque and 45% had the correct knowledge regarding the role of dental plaque as caries producing agent.

Table 4 reveals attitude toward professional dental care as follows:

- Regarding the attitude towards visiting the dentist for professional care:* Almost 49% of the respondents believed to visit the dentist only in pain. Less than 20% knew the importance of visit to the dentist twice a year. However, 28% students had visited the dentist once a year.
- Regarding the reasons behind visiting the dentist:* The most common reason for visiting the dentist was due to pain (49%), while 39% had visited dentist for general checkup only 10% had visited dentist because of friends advice.
- Regarding the reasons behind not visiting the dentists:* Almost 41% of the respondents had not visited a dentist

**Table 1:** Oral hygiene habits among the nursing students

Brushing frequency	No. of students	Percentage
Once daily	32	28.9
Twice daily	54	48.7
Thrice daily	25	22.5

**Table 2:** Oral hygiene methods used by the students

Oral hygiene aids used	No. of students	Percentage
Toothpaste	78	70.2
Dental floss	15	13.5
Mouthwash	5	4.54
Combination (paste and floss)	13	11.7

**Table 3A:** Awareness of gingival and periodontal health among students

Gingival health	No. of students	Percentage
Gum bleeding means inflamed gingiva	96	86.4
unawareness	15	13.5

**Table 3B:** Awareness regarding plaque

Awareness regarding plaque	No. of students	Percentage
Regarding plaque composition	73	65.7
Regarding plaque as caries causing agent	50	45.4
Unawareness regarding both	38	33.8

**Table 4:** Awareness toward professional care among students

a. How often you visit the dentist for professional care		
How often do you visit	No. of students	Percentage
When you have pain	55	49.5
Once a year	32	28.8
Twice a year	22	19.8
Never visited	2	1.8
b. Reasons for visiting the dentist		
Main factor for last visit	No. of students	Percentage
Dental pain	55	49.5
General checkup	44	39.6
Friends advice	12	10.8
Total	111	
c. Reasons behind not visiting dentist		
Reasons for not visiting dentist	No. of students	Percentage
Fear of drill	46	41.4
Fear of needle	38	34.2
High cost	18	16.2
Lack of time	19	17.1

due to fear of drill. Around 50% of the respondents had not visited a dentist due to lack of time and the fear of dental needle. The other reasons for not visiting a dentist were high costs of the treatment, accessibility of the dental clinic, etc. (18%).

## DISCUSSION

Oral disease can be considered as a public health problem due to its high prevalence and significant social impact. Due to the educational level and the professional role of the nurses, it is expected that they are to be more knowledgeable in the community about oral health and its diseases. Keeping in mind the expected role to be played by the nursing students, a need was felt for assessing the oral health related knowledge, attitude and practice by these students. Oral hygiene is fundamental to the maintenance of oral health; therefore oral hygiene knowledge and practice were taken as the basic data. A self-structured questionnaire was used for the collection of data in this study which constituted 32 questions. The questionnaire was written in English and adapted from a study conducted by Al-Omiri et al.<sup>4</sup> To obtain the genuine responses, the anonymity of the respondents was ensured. Oral hygiene practices in our country are deeply based in tradition and culture with use of various materials.

This study revealed 70% of the respondents were using toothbrush and toothpaste to clean their teeth. It reflects on the homogeneity of the study group with the current lifestyle. This is not similar (96%) to a study conducted by Doshi D et al<sup>5</sup> among medical and engineering students and a study among school children by Al-Omiri et al.<sup>4</sup> Walsh<sup>7</sup> in a study of 12- and 15-year-old students in San Francisco, reported that about 96% of the respondents used toothbrush at least once a day and 75% claimed to use the dental floss at least once a day where else in the present study 48% of the individuals brush their teeth twice a day which showed the awareness level an implementation into practice among nursing students to a satisfactory level. This could be justified because it seemed due to the traditional belief, culture and feasibility of time.

Almost 28% of the respondents used to brush their teeth once daily before breakfast in the morning. It could be mainly due to the feasibility of the time as well as to feel fresh in the early start of the day. It is in accordance with the study by Doshi D et al<sup>5</sup> whereas in a study by Al-Omiri et al<sup>4</sup> almost 52% of the respondents used to brush their teeth before going to bed at night.

The study sample showed awareness of inflamed gums as an indicator of gingival disease, which is in accordance with the results of previous study by Al-Omiri et al<sup>4</sup> and Farsi JMA et al.<sup>6</sup> These findings are found to be same when compared with 8 to 15 years old school children in Udaipur city.<sup>8</sup> This shows awareness regarding gingival bleeding as an indicator of periodontal disease, a finding that analogs with the results of a study among 12 to 14-year-old Jordanian children.<sup>9</sup>

Besides toothbrush and toothpaste, a maximum number of respondents (30%) were also aware of the other oral hygiene aids like dental floss which is quite an important sign of detail information among the nursing students.

Almost 45% of them had correct knowledge regarding the role of dental plaque as producing dental caries. Being a developing country it is almost obvious the curative services predominant over preventive ones. So, almost half of the respondents believe to visit a dentist only in pain.<sup>13</sup> Less than 20% knew the importance of dental visit twice a year. It was in agreement with the study by Al-Omiri et al.<sup>4</sup>

In contrast to this response, it seemed that due to some problem related to oral cavity, and almost 28% of the respondents had visited a dentist in the past 6 to 12 months. A majority of them had visited a dentist for regular dental checkup followed by other treatments like oral prophylaxis, filling, extraction, etc. However, other studies have shown that oral health knowledge was expected to be good among dental students as compare to medical and paramedical students.<sup>14,15</sup>

Almost 49% of them were afraid during their first dental visit that showed that they were conscious about the need and importance of timely dental treatment. This is in contrast with studies conducted by Farsi JMA et al<sup>6</sup> and Al-Omiri et al<sup>4</sup> in which almost half of the respondents were reluctant to visit a dentist due to the fear of pain. Similarly, when they were asked regarding not visiting a dentist, almost equal number of respondents (33%) said that it was due to lack of time and the cost of the treatment being high.

Most of the respondents were aware of the importance of the dental visit and the role of the dentist as a crucial one for maintaining their oral health. The participants demonstrated a positive attitude toward dentists and high awareness of the link between oral health and systemic well being. It is very important to mention the link as it might help to promote oral health care and oral self-care practice among them. Almost all of them were aware of the importance of brushing for prevention of dental caries and the role of fluoride as an anticaries agent.

When they were asked regarding the most important role of dentists, various opinions were obtained. Almost half of them thought dentists only cares about the treatment part but not the prevention part. It is most likely due to the lack of awareness among them as well as due to various factors like most of them used to visit dentist only in pain. These findings are found to be same when compared with North Jordanian schoolchildren<sup>4</sup> and selected Japanese and Australian students.<sup>12</sup>

Due to the high cost of the treatment, most of the people in developing country cannot afford the treatment cost, thus reluctant to seek the treatment. However, in a study by

Al-Omiri et al<sup>4</sup> the respondents thought that dentists care about the prevention part more than the treatment part. Almost 95 to 98% of them were aware of the harmful effects of tobacco and tobacco products as well as the worst impacts of alcohol on oral health.<sup>10,11</sup> This showed a good level of awareness and knowledge among them.

## CONCLUSION

This study presented a comprehensive overview of the oral health-related knowledge, attitude and practice of nursing students of Bareilly, India. The knowledge levels of the nursing students about oral health was found to be quite good. In the context of oral health, whatever amount of knowledge the subjects already has about healthcare and associated preventive measures, better positive attitudes can always be achieved at every step of their learning process. Thus, a more detailed studies probing in depth about the knowledge, attitude and practice about oral health can always be explored further.

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