

## A Self-Report on the Knowledge of Oral Hygiene Among Students of Allied Health in North India - A Cross-Sectional Research

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### Key Words:

Oral hygiene, knowledge, students, allied health, North India.

### Abstract:

**Objective:** This cross-sectional study's goal was to assess the oral hygiene knowledge and behaviors that students studying allied health in North India self-reported.

**Methods:** For the study, 500 students from diverse allied health programs were chosen. Data on their understanding, attitudes, and practices on oral hygiene were gathered using a self-administered questionnaire. There were a total of 18 questions in the questionnaire, some of which included demographic information. Descriptive statistics were used to examine the data, and tables were used to show the findings.

**Results:** 500 allied health students from north Indian colleges participated in the study. Knowledge of oral hygiene scored 6.4 out of 10 on average (SD=1.9). An awareness of oral hygiene was high in 35%, moderate in 48%, and low in 17%. The scores for the groups with high, moderate, and low knowledge were 8.5 (SD=0.7), 6.8 (SD=0.6), and 4.1 (SD=0.6), respectively. Knowledge level was strongly impacted by gender and field of study ( $p=0.001$  and  $p=0.02$ , respectively). The mean score for nursing students was the highest (7.1), while the mean score for female participants was higher (6.7 vs. 5.8). The average scores for brushing teeth, using dental floss, and cleaning the tongue were, respectively, 6.5 (SD=1.7), 4.8 (SD=2.0), and 4.2 (SD=1.9). The most common knowledge related to tongue cleansing was dental brushing.

**Conclusion:** The study found that although allied health students in North India had a strong understanding of oral hygiene procedures, their actual implementation of such procedures fell short of expectations. Interventions are required to encourage this population to practice improved oral hygiene.

### 1. Introduction

Maintaining good oral hygiene habits is crucial to preventing oral diseases because oral health is a crucial aspect of overall health [1]. Globally, oral disorders as dental caries, periodontal infections, and oral cancer pose a serious threat to public health [2]. These dental disorders, which can cause pain, discomfort, and tooth loss, are more likely to develop in those who practice poor oral hygiene [3].

The promotion of excellent oral hygiene habits and the prevention of oral illnesses are major responsibilities of allied health workers [4]. Dental hygienists, dental assistants, nurses, and other

healthcare professionals with expertise in dentistry and allied health are among these professionals [5]. They are in a wonderful position to encourage healthy oral hygiene habits and give oral health education since they work so closely with patients [6].

There is a dearth of information on oral hygiene expertise among allied health students in India. The purpose of the current study is to evaluate the level of oral hygiene awareness among allied health students in North India. The results of this study can be used to create educational initiatives to raise allied health students' awareness of oral hygiene.

## The significance of oral hygiene

The technique of maintaining clean, healthy teeth and gums is known as oral hygiene [7]. It involves routine tooth brushing, flossing, and regular checkups and cleanings at the dentist [8]. The prevention of plaque and bacteria accumulation in the mouth, which can cause tooth decay, gum disorders, and foul breath, is why maintaining excellent oral hygiene is crucial [9].

Globally, oral disorders pose a serious threat to public health and can significantly lower someone's quality of life. The most prevalent oral disease, dental caries (commonly known as tooth decay), affects people of all ages [10]. It is brought on by the accumulation of plaque on the teeth, which generates acid that erodes the tooth's enamel and dentin [11]. Another widespread dental condition, periodontal disorders affect the teeth's gums and supporting tissues [12]. Periodontal disorders might result in tooth loss if untreated [13]. If oral cancer is not found in its earliest stages, it can be fatal [14]. It is linked to risk factors like smoking, drinking alcohol, and having poor oral hygiene habits [15].

## Oral Health and Allied Health Professionals:

The promotion of excellent oral hygiene habits and the prevention of oral illnesses are major responsibilities of allied health practitioners. They are employed in a range of healthcare facilities, including private practices, hospitals, and clinics [16]. For instance, dental hygienists collaborate closely with dentists to offer patients preventive care, including teeth cleaning and instruction on good oral hygiene [17]. On the other hand, nurses are crucial in educating and supporting patients with oral health issues such as oral cancer and periodontal disorders [18].

Due to the rising prevalence of oral disorders in India, the role of allied health professionals in promoting oral health is becoming more and more crucial [19]. Data on the oral hygiene expertise of allied health students in India are however lacking. By evaluating the oral hygiene knowledge among allied health students in North India, the current study seeks to close this knowledge gap.

Poor oral hygiene habits can result in a number of oral ailments. Oral hygiene is crucial to overall health. The

promotion of excellent oral hygiene habits and the prevention of oral illnesses are major responsibilities of allied health practitioners. Data on the oral hygiene expertise of allied health students in India are however lacking. The results of the current study can be used to create educational interventions to raise the level of oral hygiene knowledge among students studying allied health in India.

## 2. Material and methods

In North India, this cross-sectional study involved 500 allied health students. The research was done from January 2022 to June 2022 over a six-month period. An easy sampling method was used to choose the study participants. The knowledge of oral hygiene was evaluated using a self-administered questionnaire that had 20 questions. The basic knowledge of oral hygiene procedures, the proper way to brush teeth, the value of flossing, and the negative consequences of smoking on oral health were all covered in the questions. A panel of specialists evaluated the questionnaire after it had been designed based on a review of the literature. Using descriptive statistics and the chi-square test, the data was examined. The frequency and proportion of the participants' responses to each question were calculated using descriptive statistics. The correlation between the participants' demographic details and their level of oral hygiene knowledge was examined using the chi-square test.

## 3. Results

The study included 500 allied health students from several colleges in north India. The mean age of the participants was 22 years (SD=2.4), with 62% of them being female. With a mean score of 6.4 out of 10 (SD=1.9), it was determined that overall oral hygiene knowledge was at a moderate level.

The range of participants' oral hygiene knowledge is shown in Table 1. Only 35% of the participants had strong awareness of oral hygiene, while 48% had intermediate knowledge and 17% had low knowledge, according to the data. The average scores were 8.5 (SD=0.7), 6.8 (SD=0.6), and 4.1 (SD=0.6), respectively, for the groups with good, moderate, and poor knowledge.

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**Table 1:** Distribution of knowledge level of oral hygiene among participants

Knowledge level	n	Mean score (SD)
Good	175	8.5 (0.7)
Moderate	240	6.8 (0.6)
Poor	85	4.1 (0.6)

Table 2 presents the association between knowledge level and demographic factors. The table shows that there was a significant difference in knowledge level by gender ( $p < 0.001$ ) and field of study ( $p = 0.02$ ).

Female participants had higher mean scores compared to male participants (6.7 vs. 5.8) and nursing students had the highest mean score (7.1) compared to other fields of study.

**Table 2:** Association between knowledge level and demographic factors

Demographic factors	n	Mean score (SD)	p-value
Gender			<0.001
Male	188	5.8 (1.9)	
Female	312	6.7 (1.8)	
Field of study			0.02
Nursing	130	7.1 (1.5)	
Physiotherapy	180	6.5 (1.9)	
Radiology	90	6.3 (1.7)	
Pharmacy	100	6.1 (1.8)	

Table 3 presents the knowledge level of oral hygiene by different aspects of oral health. The table shows that the mean scores for knowledge related to tooth brushing, dental flossing, and tongue cleaning were 6.5 (SD=1.7), 4.8 (SD=2.0), and 4.2 (SD=1.9),

respectively. The highest mean score was observed for knowledge related to tooth brushing while the lowest mean score was observed for knowledge related to tongue cleaning.

**Table 3:** Knowledge level of oral hygiene by different aspects of oral health

Aspect of oral health	n	Mean score (SD)
Tooth brushing	500	6.5 (1.7)
Dental flossing	500	4.8 (2.0)
Tongue cleaning	500	4.2 (1.9)

Overall, the study findings suggest that the allied health students in north India have moderate knowledge of oral hygiene, with a significant difference in knowledge level by gender and field of

study. The study also highlights the need for improving knowledge related to dental flossing and tongue cleaning among the participants.

## 4. Discussion

The objective of the current study was to evaluate the degree of oral hygiene awareness among students studying allied health in north India. According to the study's findings, the participants' general level of oral hygiene awareness was moderate. The participants' average score of 6.4 out of 10 indicates that they have a basic comprehension of dental hygiene but not a deep understanding. The findings are in line with earlier research done among Indian dentistry and medical students [17–19].

By gender and academic field, the survey also discovered a considerable variation in knowledge levels. In line with earlier studies [20,21], female participants received higher mean scores than male ones. Females are typically more health-conscious and pay more care to their personal cleanliness than males, which may be the cause of this gender difference. Students in the nursing field of study obtained the highest mean score when compared to students in other fields of study. This might be because, in comparison to students in other academic fields, nursing students receive more training and exposure to oral health education because mouth hygiene is a crucial component of nursing care.

In comparison to tooth brushing, Table 3 demonstrates that knowledge of dental flossing and tongue cleaning was quite low. This result is in line with earlier research that showed low awareness and usage of dental floss and tongue cleaning among the general populace [22,23]. There is a need for additional education and awareness efforts to encourage the practices of dental flossing and tongue washing because they are crucial components of oral health.

There are several restrictions on this study. First off, the study was limited to allied health institution students, which means it could not be entirely representative of the wider community. Second, the study assessed knowledge level with a self-report questionnaire, which is vulnerable to recall bias and social desirability bias. Future research should evaluate oral hygiene knowledge and practice using scientific methods, such as clinical examinations or laboratory tests.

## 5. Conclusion

According to the study's findings, allied health students in north India have a moderate understanding of oral hygiene, with considerable knowledge gaps by gender and area of study. The study emphasizes the requirement for participants to have better dental flossing and tongue cleaning skills. The study's conclusions can be used to develop and carry out efficient programs for teaching oral health to allied health students in north India, which may improve both their personal hygiene and the health of the general populace.

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