



## EVALUATION OF ORAL HEALTH ATTITUDE AND BEHAVIOUR AMONG A GROUP OF NURSING STUDENTS IN AHMEDABAD, INDIA: A PRELIMINARY CROSS-SECTIONAL STUDY

### Dental Science

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| <b>Dr Payal Purohit</b>      | MDS Part III, Dept. of Periodontology, AMC Dental College & Hospital, Khokhara, Ahmedabad, India.                                         |
| <b>Dr Bela Dave*</b>         | Professor & Head of Department, Dept. of Periodontology, AMC Dental College & Hospital, Khokhara, Ahmedabad, India. *Corresponding Author |
| <b>Dr Ajaykumar Chandana</b> | MDS Part III, Dept. of Periodontology, AMC Dental College & Hospital, Khokhara, Ahmedabad, India.                                         |
| <b>Dr Chandni Rathi</b>      | MDS Part III, Dept. of Periodontology, AMC Dental College & Hospital, Khokhara, Ahmedabad, India.                                         |

### ABSTRACT

**Introduction:** The behaviour and attitude of health providers, especially nursing students, towards oral health affect their capacity to deliver oral health care services.

**Aim:** The purpose of this study is to evaluate the oral health attitude and behaviour among nursing students in Ahmedabad, India and to find any gender-based differences in terms of oral health attitude and behaviour.

**Materials and Methods:** A total of 200 (50 students per year) nursing students of Gujarat Institute of Nursing Education and Research, Ahmedabad, India interviewed through a questionnaire included in the study.

**Results:** Statistical significance was observed for the responses between the students from different academic years to visit dentist office, dentist visit on toothache, brushing frequency, careful brushing of teeth, use of floss and mouthwash, careful self-evaluation of brushing and satisfied appearance of teeth and gums. Male students preferred to use floss than female students. With regards to worrying about bad breath, male students had more "yes" responses than females.

**Conclusions:** Oral health attitude and behaviour increased with the increasing levels of education, and no significant differences were observed among male and female nursing students.

### KEYWORDS

Nursing students, oral health attitude, oral health behaviour

### INTRODUCTION

Health is a universal human need for all cultural groups. General health cannot be attained or maintained without oral health. The mouth is regarded as the mirror of the body and the gateway to good health. Oral hygiene has been considered as a risk indicator, and risk predictor for various oral problems. Access to oral health is a complex issue involving barriers as diverse as inability to afford services to cultural preferences, from lack of adequate services to technological setbacks [1].

The World Health Organization, (WHO, 2009), has defined good oral health as: "Oral health means being free of chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay and tooth loss, and other diseases and disorders that affect the mouth and oral cavity". The majority of dental diseases can be prevented but oral care resources are not available in many parts of the world [2,3].

Attitude is an acquired characteristic of an individual. People demonstrate a wide variety of attitudes towards teeth, dental care and dentists. These Attitudes naturally reflect their own experiences, cultural perceptions, familial beliefs, and other life situations and they strongly influence the oral health behaviour.

Stephens et al. defined health behaviour as "the activities undertaken by people in order to protect, promote or maintain health and to prevent disease" [4]. Health behavior is the human action taken to maintain and promote health. It also helps to prevent diseases. Oral health behavior consists of individual and professional care and includes tooth brushing, dental flossing, visiting dentist and following proper diet. Oral behaviour reflects individual perception on oral health. Numerous studies have found oral behaviour to vary from among people of different countries and communities [5]. Current disparities in oral health are also attributed to, socioeconomic status, profession, and even levels of education [6-8].

Positive attitudes and behaviour about oral health and oral health care among nursing students could make it possible to improve oral health and bring quality of life for their patients. The first step in establishing a habit is to provide relevant knowledge to the clients and to raise their awareness of how to prevent oral diseases.

Nurses play a prominent role in providing health services, along with doctors. At present, their role in dentistry is negligible as they have less training and knowledge regarding the instruments and methods in this field. However, nurses can be effectively utilized to improve oral health awareness among the public. Oral health should receive greater importance in the nursing curriculum which should include many clinical hands-on courses in diagnosing the oral diseases [9]. Gallagher and Rowe, 2001, stated that community nurses play an important role in the oral health care of the society, particularly among those less likely to access dental services, and there is a need to improve their knowledge regarding oral health aspects [10].

Since male and female have a different psychological approach, oral health attitude also differs among gender. Studies on students from different universities found better oral health behaviour and practices among female students as compared to male students. [11-13]

In lieu of the above, this study aims at determining the gender and education level based oral health attitude and behaviour among groups of nursing students in Ahmedabad, India.

### Significance of the study:

Since nursing students specialize in preventive information and health promotion, it is important that their own oral health knowledge is good and confirms to professional recommendations. They can play an important role in oral health education of individuals and group, and act as role models for their patients and community at large. 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.

### MATERIALS AND METHODS

Prior permission was obtained from the nursing college authorities and participants in written consent form as well as from Institute's Head (Dean), HOD of Periodontology & ethical committee.

The proposed study was conducted at Gujarat Institute of Nursing Education and Research, Ahmedabad. This school is a four-academic year's system.

**METHODOLOGY:**

The participants were selected by stratified random sampling technique from the Gujarat Institute of Nursing Education and Research, Ahmedabad. A total of 200 nursing students from the all four academic years participated in the study (50 students from each year). Participation in this study was voluntary. All participants were informed about the purpose of the study, they were given consent form and questionnaire form for 30 minutes time period and resubmit it to principal investigator. They were asked to answer all the items of the questionnaire and an investigator was available to answer any query regarding the questionnaire. The questionnaire was designed with a simple dichotomous response format (Yes/No) [Table 1] and was validated. Questionnaire validation was done and the result was 81.75% for this study.

**SELECTION CRITERIA:****A) Inclusion criteria:**

All the nursing students were included without gender bias.

**B) Exclusion criteria:**

All the participants were excluded who were not nursing students.

Nursing students who did not give written consent.

**STATISTICAL METHOD**

A sample size of 200 achieves 80% power to detect an effect size (W) of 0.25 using a 1 degrees of freedom Chi-Square Test with a significance level (alpha) of 0.05000.

Questionnaire validation was done and the result was 81.75% for this study.

The Collected data were entered in Microsoft excel (2010) spreadsheet.

Statistical Test: For categorical data, Using Chi-Square & non parametric correlation test at 5% level of significance by SPSS 20.

**RESULTS**

Of 200 students present on the day of the survey, all completed the questionnaire. The response rate of 100% was observed. The age of students ranged between 18 and 22 years. The distribution of this study sample over the four academic years is shown in Table 2.

Table 3 represents the distribution of the percentage of "yes" responses, according to the year of study. The results showed that the % of yes was very low among the students of the 1st year and as the years of education advanced the positive reply also increased. From the response to (#1), it was surprising to know that 33% of nursing students never visited to a dentist and 68% of nursing students brush their teeth only once (#3). 55% of total nursing students visited the dentist only when they had toothache (#2). 60% of total students were not worried about teeth color (#16), and interestingly 44% were not worried about the color of gums (#17). About 15% of students self-reported bleeding in gums during brushing (#18). 85% of total nursing students were satisfied with the appearance of teeth and gums (#20). Statistical significance was observed for the responses between the students from different academic years for the following questions: #1, 2, 3, 4 #12, 13, #15, and #20.

Table 4 shows the distribution and comparison of "yes" responses between male and female students. Highly significant results were observed with regards to questions: #12, #13, and #19.

Male students preferred to use toothbrush with hard bristles and regular mouthwashes and floss than female students. With regards to worrying about bad breath, male students had more yes responses than females.

**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 more knowledgeable about oral health and its diseases to be able to disseminate such knowledge in the community.

This is the first study to do a cross sectional analysis of dental attitudes and behaviour among groups of nursing students in Ahmedabad, India. A total of 200 nursing students present on the day of the survey were included in the study. The response rate was observed as 100%.

In this study, statistically significant difference was found for improvement in dental visits, the number of time they brush and how carefully they brush ( $P < 0.05$ ). Again there was the notable difference for using toothbrush with hard bristles and checking the teeth in the mirror after brushing. Interestingly, the reports of bleeding gums increased with the senior years ( $P = 0.001$ ). Conversely, this might indicate an increase in awareness with education levels. The satisfaction of appearance of the teeth also increased with the year of study ( $P = 0.001$ ).

Regarding the attitude/behavior of the studied nursing students the present study illustrated that the majority of them reported that they brush their teeth carefully, this doesn't imply that all students who agreed with this statement do in fact brush their teeth carefully. These findings are in agreement with the results of Dagli et al., (2008) study.

Majority of them don't visit the dentist until they have toothache (item 15). This may be due to the lack of awareness of the importance of following up for oral health like any other part of the body or the probable reason for such behavior could be dental treatment anxiety and high cost of dental care. This finding is in agreement with the study of Dagli et al., (2008) and this finding also consistent with the results of Taani's two studies in Jordan, 2002 which revealed that in both studies around 80% of subjects visited the dentist only for emergencies and when they had pain. This could be culturally true where most people refrain from visiting the dentist either from fear of the pain related to dental care or the high expense of dental care. Also, one major problem is that dental care is not included in most of free/ partially free medical insurance planes. Also, the high cost of sophisticated dental services may discourage the subjects in the lower class not to have a dental visit on a routine basis. They reserve the dental visit for an acute problem when all other possible methods to alleviate the existing problem have completely failed.

In general, female engage in better oral hygiene behaviour measures and studies have reported the females possess a greater interest in oral health and perceive their own oral health care to a higher degree than males [11]. Studies conducted in Lebanon, Thailand, and Malaysia, have also found that female university students have better habits in term of tooth brushing than male students. However, in this study, no highly significant differences were noted among male and female students [12, 13, 25].

More male students used hard bristled toothbrushes than female students (94.1% vs. 90.7 %). Percentage of male students using mouthwash was greater as compared to female students (76.5% vs. 52.2%). However, surprisingly, it was male students who were more worried about bad breath (64.7% vs. 38.3%). Again this might explain the increased use of regular mouth rinses among this group.

This study did not show any statistical difference between male and female students with respect to oral health attitude or behaviour. This is also consistent with studies on Japanese and Mongolian dental students [26,28]. Same results were observed in group of dental students from Rajasthan, India. However in a study done among dental students in Israel female students exhibited better attitude and behaviour than male students [29]. The authors attribute this to different physiological and psychological behaviour among the gender. This might reflect on their oral health as well.

Few differences found among the results from different countries, and Indian students might be due to differences in concepts regarding health and disease between the countries in the east and the west. In Asia, most health beliefs and practices are learned and practiced in the home, and professional help is only sought when home remedies fail [31]. This strong reliance on self-care may undermine the effectiveness of organized oral health care and delaying dental visits or considering them unnecessary.

**CONCLUSION**

The current study concluded that although most of the nursing students had satisfactory attitude towards oral health status and their role in oral health education. Nursing students are in need to raise their awareness about the importance of oral health to be competent in giving oral health care advices to the public as a part of the primary healthcare team.

## LIMITATION

This study was conducted in only 200 nursing students of one nursing institute. So this study should be performed in larger sample size and in multiple centres.

## SCOPE OF STUDY

1. Similar studies in various multicentric and multicity nursing schools should be done.
2. Basic topics on oral hygiene should be included for nursing students from the beginning.
3. Continuing education programs for the newly graduated nurses to improve their attitude and behaviour about oral health should be conducted.
4. Health instructional programs that encourage healthful dental habits among students should be intensified in all schools.
5. Oral health awareness programs should be conducted at all PHCs, CHCs and hospitals.

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