

Comparative Analysis of Oral Health Attitudes and Practices among Health Care and Non - Health Care Students: An Online Survey Study

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Abstract: *This study investigates the attitudes and practices towards oral health among health care and non - health care students. Using an online questionnaire, we collected data from students aged 16 - 20 years. Our findings reveal that health care students generally have better oral health practices and attitudes compared to their non - health care counterparts. However, there are areas where non - health care students demonstrated better awareness, such as the time taken for teeth cleaning and the importance of rinsing the mouth after eating. The study underscores the need for improved oral health education among all students, regardless of their field of study.*

Keywords: Oral Health, Health Care Students, Non - Health Care Students, Oral Health Practices, Oral Health Attitudes

1. Introduction

Oral health is considered to be equally important as our general health. The attainment by all the people of the world, a level of health that enables them to lead a socially and economically productive life, is the social target of WHO [1]. It has been identified that there are many risk factors which are implicated in manifestation and progression of periodontal diseases such as age, gender, oral hygiene habits, frequency of dental visits, income level, educational attainment, residence place, cigarette smoking, diabetes mellitus, ethnicity, microbiological factors, immunity, social, behavioural and psychological factors. Attitude consider one's experience, beliefs as it is an acquired characteristic by social interaction. While practice describes measures done for preventing various oral diseases. Dental students are expected to play a critical role in instructing public oral health; their attitude reflects their understanding of the importance of disease prevention and their responsibility for improving their patients' oral health. Therefore, the level of their own oral health behaviour can serve as positive models for their patients, families and friends [2]. The present study was carried out to evaluate oral health attitude and practice among health care and non health care students.

2. Materials and Methods

A total of 231 participants out of which 129 were health care and 102 were non health care students were selected for the study within age range of 16 - 20 years. The study was conducted over a period of 3 months.

Inclusion Criteria

- Age between 16 to 20 years of students which includes -
Bds (1st and 2nd prof students)
BSc Nursing (1st and 2nd prof students)
Bpt (1st and 2nd prof students)
- Systemically healthy students

Exclusion Criteria

- Post graduate students
- Age above 20 years
- Systemically unhealthy students

The data pertaining to their attitude and practice about oral health was gathered using online survey forms (Google forms) containing 21 questions which were multiple choice options questions. The questionnaire was sent to their whatsapp groups of 11th, 12th standards of non health care students and 1st and 2nd prof of health care students. The questionnaire was divided into 3 sections –

- Demographic data
- Data pertaining to their practice of oral health
- Data pertaining to their attitude of oral health

The identity of health care and non health care students was not disclosed.

Statistical Analysis

Statistical analysis was performed with the help of Chi - Square test and percentage analysis.

3. Results

Out of all 231 students, 129 (55.8%) were health care students and 102 (44.2%) were non health care students. A total of 76 males (32.9%) and 155 (67.1%) females were participated in the study as shown in table1.

Table 1: Demographic characteristics of participants

	Frequency	Percent
Gender		
Male	76	32.9
Female	155	67.1
Education		
Health care students	129	55.8
Non health care students	102	44.2

Toothbrushing [Table - 2]

Technique

About 43.4% of health care and 32.4% of non health care students brushed their teeth in round motion. The rest used vertical /horizontal motion.

Frequency of brushing -

About 58.1% of health care and 45.1% of non health care brushed their teeth twice daily.

Material -

About 98.4% of health care and 91.2% of non health care students brushed their teeth with toothbrush and toothpaste

Type of toothbrush -

86% of health care and 76.5% of non health care students used soft toothbrush for brushing their teeth. While 97.7% of health care and 93.1% of non health care students used manual type of toothbrush.

Interval of exchange of toothbrush

79.8% of health care and 58.8% of non health care students changed their toothbrush after every 3 months.

Table 2: According to tooth brushing

Question	Health care students (%)	Non - health care students (%)
How you brush your teeth?		
Vertically	23.3	25.5
Horizontally	27.1	29.4
Round	43.4	32.4
Not aware	6.2	12.7
How often do you clean your teeth?		
Once daily before/after breakfast	37.2	51
Twice daily morning and evening	58.1	45.1
Thrice or more	4.7	3.9
What do you use to clean your teeth?		
Toothbrush and toothpaste	98.4	91.2
Toothbrush and toothpowder	1.6	6.9
Finger and toothpaste/toothpowder	-	1
Neem stick datun	-	1
What kind of toothbrush you use while brushing teeth?		
Soft	86	76.5
Hard	8.5	11.8
Don't know	5.4	11.8

Which type of brush are you using?		
Electric	2.3	6.9
Manual	97.7	93.1
How frequently you change your toothbrush?		
Once a year	6.2	22.5
Twice a year	14	18.6
After 3 months	79.8	58.8
How much time you take for cleaning your teeth?		
1 - 2 min	41.1	49
3 - 5 min	46.5	38.2
>5 min	7.8	7.8

Lifestyle - [Table - 3]

Pattern of Chewing

26.4% of health care students and 32.4% of non healthcare students used one side for chewing.

Adverse Habit

Only about 0.8% of health care and 2% of non healthcare students have habit of smoking. Approximately 98% of both health care and non health care students have no adverse habit.

Mouth Rinsing and Tongue Cleaning

81.4% of health care and 83.3% of non health care students rinse their mouth after eating. While 87.6% of health care and 81.4% of non health care students clean their tongue during brushing.

Table 3: According to Lifestyle

Question	Health care students (%)	Non health care students (%)
Do you use one side for chewing?		
Yes	26.4	32.4
No	73.6	67.6
Do you have any habit?		
Smoking	0.8	2
Alcohol	1.6	-
None	97.7	98
Do you rinse your mouth after eating?		
Yes	81.4	83.3
No	18.6	16.7
Do you clean your tongue?		
Yes	87.6	81.4
No	12.4	18.6

Other Self Care Practices [Table - 4]

Use of Mouthwash and Other Dental Aid

23.3% of health care and 21.1% of non health care students used mouthwash everyday. While 8.5% of health care and 26.5% of non health care students use dental aid along with toothbrushing.

Dental Treatment

55.8% of health care and 36.3% of non health care students have taken dental treatment.

Table 4: According to other self care practices

Question	Health care students (%)	Non health care students (%)
How often do you use mouthwash?		
Everyday	23.3	27.5
Once a week	23.3	21.6
Once a month	12.4	19.6
Never	41.1	31.4
Do you use any other dental aid along with toothbrush?		
Yes	8.5	26.5
No	91.5	73.5
Have you taken any dental treatment?		
Yes	55.8	36.3
No	44.2	63.7

Oral Health Attitude among Study Participants - [Table - 5]

Majority of health care students (84.5%) strongly agree with the fact that oral hygiene is mandatory to overall health of the body compared to non - health care students. The difference among the two groups was statistically significant ($p < 0.05$). Whereas 63.7% of non - health care students strongly supports the notion that brushing prevents gum problems. Here the value is non - significant.

Cleaning of teeth cause sensitivity and 48.1% of health care students disagree with this, whilst 23.5% of non - health care students disagree with the same. 42.2% of non - health care students strongly believes that fluoride has a positive effect on oral health. A minute proportion of both health care and non - health care groups strongly disagree that mouthwash has any effect on oral hygiene.

Education	Response	Frequency	Percent	Chi Square value	p value
Oral hygiene is mandatory to overall health of the body.					
Health care students	Strongly agree	109	84.5	12.263	0.002*
	Agree	19	14.7		
	Neutral	1	.8		
Non - Health care students	Strongly agree	69	67.6		
	Agree	25	24.5		
	Neutral	8	7.8		
Brushing prevents gum problems.					
Health care students	Strongly agree	76	58.9	3.994	0.407
	Agree	47	36.4		
	Neutral	5	3.9		
	Disagree	1	.8		
Non - Health care students	Strongly agree	65	63.7		
	Agree	28	27.5		
	Neutral	6	5.9		
	Disagree	2	2.0		
Cleaning of teeth cause sensitivity problem					
Health care students	Strongly agree	7	5.4	23.144	<0.01*
	Agree	16	12.4		
	Neutral	26	20.2		
	Disagree	62	48.1		
	Strongly disagree	18	14.0		
Non - Health care students	Strongly agree	22	21.6		
	Agree	20	19.6		
	Neutral	23	22.5		
	Disagree	24	23.5		
Fluoride has positive effect on oral health					
Health care students	Strongly agree	30	23.3	11.816	.019*
	Agree	48	37.2		
	Neutral	34	26.4		
	Disagree	11	8.5		
	Strongly disagree	6	4.7		
Non - Health care students	Strongly agree	43	42.2		
	Agree	23	22.5		
	Neutral	27	26.5		
	Disagree	7	6.9		
Mouthwash has any effect over oral hygiene					
Health care students	Strongly agree	30	23.3	18.108	0.001*
	Agree	73	56.6		
	Neutral	19	14.7		
	Disagree	5	3.9		
	Strongly disagree	2	1.6		
Non - Health care students	Strongly agree	35	34.3		

	Agree	32	31.4		
	Neutral	20	19.6		
	Disagree	14	13.7		
	Strongly disagree	1	1.0		

*Statistically Significant

4. Discussion

William Osler said, the mouth is the mirror of general health; poor oral conditions may adversely affect the general health, and certain medical conditions may have a negative impact on oral health. [3, 4]. This study was conducted to assess the oral health practice and attitude among health care and non health care students within age range of 16 - 20 years.

This paper focuses on describing differences among health care and non health care students on basis of their practices and attitude towards oral health.

Concerning practice, most of the health care students knew the use of proper brushing technique, frequency of brushing, interval of exchange of toothbrush, type of toothbrush etc. However approximately 2/3rd of non health care students had not taken any dental treatment. This indicates that there is a difference in degree of dental awareness among non health care students. Therefore they did not felt any need for dental treatment.

So, the frequent dental visit facilitates the subjects in non health care group to gain more knowledge about the measures taken to improve oral health. The favorable dental attitude that develops because of dental visits drives the students in non health care group to seek information on oral diseases and apply the preventive procedures in their day to day life. [5]

However in some cases, non health care students were more aware in time taken for cleaning teeth and rinsing of mouth after eating. On the other hand, health care students were more concerned about their lifestyle and other self care practices. So according to result, health care students had no adverse habits, using both sides for mastication and also aware about taking any dental treatment.

5. Conclusion

This study highlights the differences in oral health attitudes and practices between health care and non - health care students. While health care students generally demonstrated better oral health practices, there were areas where non - health care students showed better awareness. This suggests a need for a more comprehensive approach to oral health education that reaches all students, regardless of their field of study. Strategies could include incorporating basic dental knowledge into the curriculum, interdisciplinary lectures, and special study models or electives in oral health. Further research is needed to explore the impact of these educational interventions on students oral health practices and attitudes.

Author Contribution

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Contribution: Literature search, Definition of intellectual content, Data acquisition, Data analysis, Statistical analysis, Manuscript preparation

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Conflict of Interest

There are no Conflict of Interest.

Patient Consent Declaration

The authors certify that they have obtained all appropriate patient consent.

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