

# Knowledge, Attitude, and Practices regarding Oral Health among Patients Visiting a Medical College

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## ABSTRACT

**Introduction:** Poor oral health affects quality of life. Experience of pain, eating, and chewing problems; embarrassment about shape of teeth or about missing, discoloured or damaged teeth can adversely affect people's daily lives and well-being.

**Objective:** To assess knowledge, attitude, and practices regarding oral health among patients visiting a medical college.

**Methods:** A cross-sectional descriptive study was conducted at Nobel Medical College, after obtaining ethical clearance from the institutional review committee. Convenience sampling technique was utilised for data collection from 2021 March to 2021 June. Total of 250 patients visiting Department of Community and Public Health Dentistry and Department of Periodontics were included. Data on the oral health knowledge, attitude, and practices, were collected by means of a self-administered closed-ended questionnaire. Prior written informed consent was taken from all the study participants. Descriptive statistics were used for data analysis.

**Results:** Total of 250 outpatients participated in this study out of which 167 (66.8%) were males and 83 (33.2%) were females. Majority, 170 (68%) brushed their teeth for <3 minutes, and only 25 (10%) subjects used interdental aids. More than half of respondents were aware about the role of tobacco in oral cancer and its impact on general health. Majority (88, 35%) yielded sources of information about oral health from radio and television.

**Conclusions:** The knowledge and attitude regarding oral health in selected population was low. Hence, to promote good oral health and education about correct oral hygiene practices, there is need for conducting oral health education programs at periodic intervals.

**Keywords:** Attitude; knowledge; oral hygiene; practice.

## INTRODUCTION

Good oral health is essential for overall health and as such has a positive impact on physical, mental, and social well-being. Poor oral health can cause pain, interrupt sleep, affect the ability to consume healthy diet, has impact on social interaction and cause difficulty with speech.<sup>1</sup> Patients comply better with oral health care regimens when informed and positively reinforced. Lack of information is among the reasons for no adherence to oral hygiene practices. Further, oral health attitudes and beliefs are significant for oral health behaviour.<sup>2</sup>

World health organisation (WHO) has stated that promotion of oral health is a cost-effective strategy to reduce the

burden of oral health diseases and maintain oral health and quality of life.<sup>3</sup>

Lack of knowledge and following incorrect oral hygiene practices related to oral health are very important factors resulting in poor oral hygiene. It is always important to assess the knowledge, attitude, and practices of community so that one can focus on health related behaviours and improve knowledge and awareness which would be instrumental in the effective prevention of dental diseases.<sup>4</sup> Hence, present study was conducted to assess oral health knowledge, attitude, and practices among patients visiting outpatient departments of Nobel Medical College, Biratnagar, Nepal.

## METHODS

A descriptive cross-sectional study was conducted among the patients attending the outpatient Department of Community and Public Health Dentistry and Department of Periodontics, Nobel Medical College, Biratnagar, Morang, Nepal. This proposed study was approved by the ethical committee of Nobel Medical College and the study duration was from 2021 March to 2021 June (Ref. 399/2020). Total

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of 250 patients were selected using a non-probability convenience sampling technique. Informed consent was obtained from each patient. A self-constructed 21-item closed-ended questionnaire was distributed to all subjects in English and was filled by a dental professional for illiterate persons. The purpose and procedure of the study were explained to each participant and asked whether they agree to participate or not. Each interview took five to 10 minutes. The questionnaire included information related to the patient’s name, age, gender, occupation, residential area and questions to evaluate the knowledge, attitude, and practices pattern related to oral health. They were examined by single examiner to control the examiner variability.

The data were analysed by using the IBM SPSS Statistics for windows version 23 (IBM corp., Armonk, N.Y., USA). Descriptive statistics was used to summarise the sample and responses of the questionnaire.

**RESULTS**

Out of 250 respondents, 167 (66.8%) were male and 83 (33.2%) were female respondents and 80 (32%) were in the 30-40 years age group (Table 1). Majority of respondents were of age 39±2.5 years (Table 2).

Majority of respondents (90, 36%) cleaned their teeth for brightening purpose followed by prevention of foul breath

(70, 28%) and bleeding gums (40, 16%). The main reasons for not brushing teeth were lack of time (50, 20%), and very tiring (43, 17%). Few respondents (37, 15%) did not clean as they noticed their gums bleeding while brushing. The main source of oral health information was radio and television (88, 35%). Only 65 (26%) respondents were found to have visited a dentist when bleeding occurred from gums. When sign of tooth decay was observed, 85 (34%) did not care and 68 (27%) went to dentist only after experiencing pain. Majority of respondents (195, 78%) were aware that tobacco causes oral cancer (Table 3).

In the study population, 165 (66%) subjects thought that oral health is as important as general health and 160 (64%) subjects were of the view that oral health has a relationship with systemic illness. The chief complaint for visiting a dentist was pain (95, 38%) but majority (115, 46%) of patients visited for routine dental check-up (Table 4).

A total of 185 (74%) subjects cleaned their teeth regularly. Most commonly used interdental aids were toothbrush and toothpaste (175, 70%). Only 43 (17%) brushed their teeth twice daily and 25 (10%) used the interdental aids on a regular basis. Majority (155, 62%) changed their toothbrush within two months, 170 (68%) brushed their teeth for less than three minutes, and more than half of the respondents cleaned their tongue every day (Table 5).

**Table 1: Distribution of socio-demographic characteristics of study population, n (%).**

Age (years)	Male	Female	Total
20-30	42 (24.8)	18 (21.68)	60 (24)
31-40	52 (31.1)	28 (33.73)	80 (32)
41-50	43 (25.6)	20 (24.09)	63 (25.2)
51-60	20 (12.2)	12(14.45)	32 (12.8)
>60	10 (6.3)	05 (6.05)	15 (6.0)
TOTAL	167 (66.8)	83 (33.2)	250 (100)

**Table 2: Mean age of participants based on gender.**

Gender	Age (years)
Males	40.85±11.646
Females	37.68±12.892
Total	39.77±12.153

**Table 3: Distribution of the study population based on knowledge regarding oral health.**

Questions	Frequency (%)
1. Reason for cleaning teeth:	
a. To brighten teeth	90 (36)
b. Prevention of bleeding gums	40 (16)
c. Prevention of oral cancer	50 (20)
d. To get rid of foul breath	70 (28)
<b>Total</b>	<b>250</b>

Questions	Frequency (%)
<b>2. Reason for not cleaning teeth:</b>	
a. Laziness	40 (16)
b. Very tiring	43 (17)
c. No time for brushing	50 (20)
d. Useless good teeth are heredity based	20 (08)
e. Teeth are not dirty	30 (12)
f. Gums bleed while brushing	37 (15)
g. Dental aids are expensive	12 (05)
h. Not a habit since childhood	10 (04)
i. Don't know of any benefit from brushing	08 (03)
<b>Total</b>	<b>250</b>
<b>3. Source of information about oral health:</b>	
a. Radio and television	88 (35)
b. Friends	77 (31)
c. Newspaper	55 (22)
d. Community	30 (12)
<b>Total</b>	<b>250</b>
<b>4. What will you do if gums bleed?</b>	
a. Stop brushing	38 (15)
b. Pay more attention when brushing	54 (22)
c. Brush more frequently	58 (23)
d. Go to see a dentist	65 (26)
e. Never had this problem	25 (10)
f. Don't know what to do	10 (04)
<b>Total</b>	<b>250</b>
<b>5. What will you do on seeing signs of decay?</b>	
a. Just try to cope with this problem	70 (28)
b. Don't care if no pain	85 (34)
c. Go and see a dentist only when in pain	68 (27)
d. Go and see dentists immediately	27 (11)
<b>Total</b>	<b>250</b>
<b>6. Do you know tobacco causes oral cancer?</b>	
a. Yes	195 (78)
b. No	55 (22)
<b>Total</b>	<b>250</b>
<b>7. Do you know sweet foods affect teeth adversely?</b>	
a. Yes	175 (70)
b. No	63 (25)
c. Don't know	12 (5)
<b>Total</b>	<b>250</b>

**Table 4: Distribution of the study population based on attitude regarding oral health.**

Questions	Frequency (%)
8. Do you think it is necessary to create awareness about problems among family member/peer group?	
a. Yes	180 (72)
b. No	45 (18)
c. Don't know	25 (10)
<b>Total</b>	<b>250</b>
9. Do you think oral health is as important as general health?	
a. Yes	165 (66)
b. No	58 (23)
c. Don't Know	27 (11)
<b>Total</b>	<b>250</b>
10. Do you think oral health has relationship with systemic illness?	
a. Yes	160 (64)
b. No	60 (24)
c. Don't Know	30 (12)
<b>Total</b>	<b>250</b>
11. Reason for last dental visit:	
a. Dirty teeth	35 (14)
b. Pain	95 (38)
c. Routine dental checkup	115 (46)
d. Repair	5 (2)
<b>Total</b>	<b>250</b>

**Table 5: Distribution of the study population based on practices regarding oral health.**

Questions	Frequency (%)
13. Frequency of dental visit:	
a. Regularly every 6-12 months	135 (54)
b. Occasionally	90 (36)
c. Whenever I have a problem	15 (06)
d. Never	10 (04)
<b>Total</b>	<b>250</b>
14. Do you clean your teeth?	
a. Regularly	185 (74)
b. Sometimes	60 (24)
c. Never	5 (2)
<b>Total</b>	<b>250</b>
15. Which type of interdental aid you use?	
a. Toothbrush and tooth paste	175 (70)
b. Finger	45 (18)
c. Neem stick	23 (09)
d. Any other	7 (3)
<b>Total</b>	<b>250</b>
16. How do you clean your teeth?	
a. Toothpaste	175 (70)
b. Toothpowder	38 (15)
c. Charcoal	10 (4)
d. Tobacco	15 (6)
e. Any other	12 (5)
<b>Total</b>	<b>250</b>

Questions	Frequency (%)
17. How often do you clean your teeth?	
a. Once a day	192 (77)
b. Twice daily	43 (17)
c. More than twice daily	15 (6)
<b>Total</b>	<b>250</b>
18. Do you use interdental aids?	
a. No	162 (65)
b. Sometimes	63 (25)
c. Regularly	25 (10)
<b>Total</b>	<b>250</b>
19. How often do you change toothbrush?	
a. <2months	155 (62)
b. 2-6months	80 (32)
c. >6months	15 (6)
<b>Total</b>	<b>250</b>
20. How much time spent for cleaning teeth?	
a. Less than three minutes	170 (68)
b. Three minutes or more	80 (32)
<b>Total</b>	<b>250</b>
21. Do you clean your tongue?	
a. Everyday	175 (70)
b. Sometimes	55 (22)
c. Never	20 (8)
<b>Total</b>	<b>250</b>

## DISCUSSION

Developing countries show lack of awareness and poor oral hygiene habits among large number of populations, increasing the risk of oral health problem. The knowledge regarding oral health which is as important as general health among the participants was good (165, 66%). Majority of respondents were aware of the harmful effect of excess sweet foods (175, 70%) and tobacco products (195, 78%) on oral hygiene respectively. Similar results were reported by Nagarajappa et al.<sup>5</sup>

In determining the source of information on oral health, radio and television were the most common source with 88 (35%) of the participants acquiring through it. This finding was similar to study done by Sharda et al.<sup>6</sup> Public knowledge and awareness can increase through “mass media” for the importance about proper oral hygiene maintenance, selection, and method of oral hygiene product usage.

In the present study, 165 (26%) respondents visited dentist when they experienced bleeding from gums which was higher and 70 (28%) respondents paid no attention on sign of decay which was less as compared with the study done

by Zuhu et al.<sup>7</sup> It could be because patients lack knowledge about dental decay and it could be attributed to oral health education programs.

Dental pain was cited the most common cause for dental visit during past six months, in 95 (38%) respondents as compared to study done by Hamilton et al.<sup>8</sup> This is because of missing awareness about regular dental check-ups in preventing and detecting dental diseases.

Oral health practices of the study respondents were relatively good, with 185 (74%) brushing their teeth regularly, and about 175 (70%) respondents used toothbrush and toothpaste for cleaning teeth. This result was found similar to a study done by Jain et al.<sup>9</sup> The number of subjects brushing their teeth twice daily is 43 (17%) which is very less compared with in a study done by Dilip et al.<sup>10</sup>

Only 25 (10%) respondents used interdental aids to clean tooth which is almost similar to the result found in the study done by Jamjoom et al.<sup>11</sup> The low percentages of use interdental aids in this study there urgent need for educating and motivating to use this efficient method for oral health. Most of respondents 175 (70%) knew that sweets food were

factor that can cause dental caries which is similar to the study done by Mhd-dom et al.<sup>12</sup>

This study is limited by the moderate response rate and small sample size.

## CONCLUSION

Oral hygiene practice which was self-reported was acceptable except the frequency of brushing once a day that was higher than general population. Use of interdental aids was low.

Thus, the knowledge and attitude among respondents in regards to oral health in the present study is satisfactory. The “mass media” and the dentist were the two best sources of information for educating and motivating the public. Dentists approach will be needed to keep spreading awareness of correct using toothbrushing, flossing along with importance of regular checkups and also by various outreach programmes.

**Conflict of Interest:** None.

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