

# Knowledge, Attitude and Practice of Oral Hygiene among Patients Visiting Dental Outpatient Departments of Kathmandu District

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## ABSTRACT

**Introduction:** Oral health of an individual depends on awareness and attitude. People with inadequate oral health knowledge and awareness is more likely to have oral disease.

**Objective:** To assess the knowledge, attitude and practice among patients visiting dental outpatient departments of Kathmandu district.

**Materials and Method:** A descriptive cross sectional study on knowledge, attitude and practice of oral hygiene among patients visiting dental outpatient departments of three selected dental clinics of Kathmandu district. Patients were evaluated by semi-structured questionnaire.

**Result:** The mean age of the respondents was 26.3 years whereas most of them were of the age group 16-24 years (42%). Results showed that almost all the respondents were using tooth brush (98%) and tooth paste (96%) to clean their teeth while 79% of the respondents were brushing teeth twice daily while 15% respondents were brushing teeth once in a day and only 6% of respondents were brushing more than twice a day. This study also showed that 47% of the respondents were not aware of interdental cleaning tools like interdental brush while 45% of the respondents were using dental floss to clean their teeth.

**Conclusion:** This study showed that despite being aware of the problems of poor oral hygiene, the practice was minimal. There was a limited knowledge about brushing techniques and frequency of its use, oral hygiene aids such as interdental brush and dental floss.

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

## INTRODUCTION

Oral diseases are a big public health problem with high prevalence and incidence all around the world. Oral health diseases are detrimental to the quality of life and can have impact on self-esteem, eating ability, nutrition and health of an individual. Studies have shown correlation of poor oral health with many systemic diseases.<sup>1,2</sup> The mouth is the major gateway to the body, whatever affects oral health

may also affect general health.<sup>3</sup> A healthy mouth enables an individual to talk, eat and socialise without experiencing active disease, discomfort or embarrassment.<sup>4</sup> Oral conditions affected 3.9 billion people, and untreated caries in permanent teeth was the most prevalent condition.<sup>5-7</sup> Risk factors for oral diseases include unhealthy diet, tobacco use, harmful alcohol use, and poor oral hygiene.<sup>8,9</sup> Oral diseases are a big public health problem with high prevalence and incidence all around the

world. Improving oral health is a big challenge in a developing country like Nepal.<sup>10,11</sup> As very limited study regarding such topic in our context was done, hence this study was proposed. The objective of this study was to know the knowledge, attitude and practice of oral hygiene among patients visiting dental outpatient department of Kathmandu district.

## MATERIALS AND METHOD

This study was a cross-sectional descriptive study where the primary data had been collected from the survey by using self-administered semi-structured questionnaire which captured the oral hygiene, knowledge and practice on dental health.

Patients visiting dental outpatient departments (OPDs) of three selected dental clinics of Kathmandu District such as Trishakti Dental Clinic, Basundhara; Bibekanand Dental Clinic, Chabahil and Dental Villa, Kuleshwor during three months of period from January 2017 to March 2017. Ethical approval was obtained from the research committee of National Open College. Prior to collection of data, informed consent was taken from the each respondent, who were clearly explained the objectives of the study and confidentiality of data was assured to them. Sampling method was convenient sampling. Hundred respondents were purposefully recruited in this study during three months period having age more than 16 years. Semi-structured questionnaire for collecting data consists of demographic information and knowledge regarding general information of oral hygiene. Explanation of the questions were provided to the participants. The check list form as the questionnaire was given to the patients, then patients marked the answers that was provided in the questionnaire.

After collecting the data from the patients of Dental OPDs, the data was prepared in master chart to make easy to compute the analysis. Collected data was entered on MS-Excel and analysed using SPSS version 16. Socio-demographic and other quantitative data were summarised and presented using frequencies and percentage.

## RESULT

This study found that among the total of 100 respondents, 54% were male while 46% were female and the mean age was 26.3 years (Figure 1). Regarding religion 83% were Hindu, 11% were

Buddhist and 6% were Christian whereas 42% were of Chhetri, 31% Brahmin, 19% Janajati and 8% were of Dalit ethnicity.

Age group, academic level, religion and ethnicity of all the respondents are shown in Table 1.

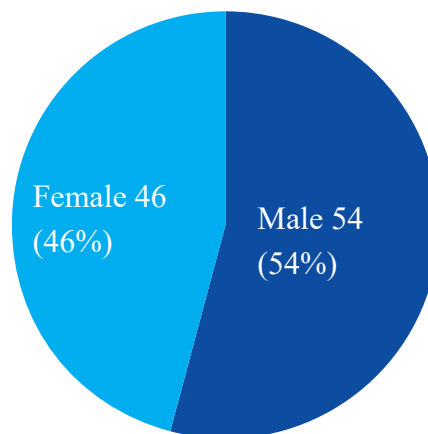


Figure 1: Frequency of gender distribution.

Table 1: Demographic distribution of the participants.

Particulars/ Variables	n (%)
<b>Age-group</b>	
16-24	42 (42%)
24-34	37 (37%)
>34	21 (21%)
Total	100 (100%)
<b>Academic level</b>	
Class 8 to S.L.C.	4 (4%)
Intermediate	46 (46%)
Bachelors	38 (38%)
Masters	12 (12%)
Total	100 (100%)
<b>Religion</b>	
Hindu	83 (83%)
Buddhist	11 (11%)
Christian	6 (6%)
Total	100 (100%)
<b>Ethnicity</b>	
Brahmin	31 (31%)
Chhetri	42 (42%)
Janajati	19 (19%)
Dalit	8 (8%)
Total	100 (100%)

Results showed that almost all the respondents were using tooth brush (98%) and tooth paste (96%) to clean their teeth. Seventy eight percentage of the respondents were brushing twice daily while 15% respondents were brushing teeth once in a day and only 7% of respondents were brushing more than twice a day.

This study also revealed that 81% respondents were brushing both morning and night, where as 13% in the morning before meal and 6% respondents were brushing after meal in the night. Only 62% of respondents were rinsing always after meal whereas 32% rinsed sometimes while 6% of respondents never rinsed their mouth after meal. This shows

that respondents were not aware that they should be brushing their teeth twice a day after meal and rinse their mouth after every meal.

This study also showed that 47% of the respondents were not aware of interdental cleaning tools like interdental brush while 45% of the respondents were using dental floss to clean their teeth. Sixty-eight percentage of the respondents had previous dental visit whereas 32% of respondents never visited any a dentist before. It was also seen that 51% respondents were using circular brushing strokes while 28% were using horizontal stroke and only 21% were using vertical strokes during brushing.

**Table 2: Knowledge on oral hygiene.**

Questions	Response	Percentage
How do you clean your teeth?	Tooth brush	98.0
	Finger	2.0
	Any other tools	-
How many times do you brush your teeth?	Once Daily	15.0
	Twice Daily	78.0
	More than twice	7.0
When do you brush your teeth?	Before Meal in Morning	13.0
	After Meal at night	6.0
	Both in morning and night	81.0
How do you brush your teeth?	Horizontal direction	28.0
	Vertical direction	21.0
	Circular direction	51.0
Materials used to clean your teeth	Tooth Paste	96.0
	Tooth Powder	4.0
	Other	-
Do you rinse your mouth after eating your food?	Never	6.0
	Sometimes	32.0
	Always	62.0
Have you used dental floss?	Yes	45.0
	No	42.0
	Never heard about dental floss	13.0
Have you heard about interdental brush?	Yes	37.0
	No	46.0
	Never heard about interdental brush	17.0
Previous dental Visit	Yes	68.0
	No	32.0
Were you aware that milk, carrots and fish are good for strong teeth?	Yes	68.0
	No	9.0
	Don't Know	23.0

Study showed that 68% of the respondents thought that eating sugary food is a bad habit and 83% of the respondents care their teeth as much as any part of the body. Seventy six percent of respondents were change the toothbrush in every 3-4 months and 62% of the respondents were using soft brush while 38% of the respondents were using medium brush.

**Table 3: Attitude on oral hygiene.**

Questions	Response	Percentage
Do you think that eating sugary food is bad habit?	Yes	68.0
	No	22.0
	Don't Know	10.0
Do you care of your teeth as much as any part of your body?	Yes	83.0
	No	15.0
	Don't Know	2.0
Do you think that treatment toothache is important as any other organ of body?	Yes	92.0
	No	2.0
	Don't Know	6.0
How often do you change your brush?	When it wears off	15.0
	Every 3-4 Months	76.0
	Every 6 Months	7.0
	Don't know when the brush has to be changed	2
Which type of toothbrush do you use?	Soft	62.0
	Medium	38.0
	Hard	-

The results of the study showed that 59% of the respondents felt dental and gum pain before and 89% of the respondents were giving importance to cleaning tongue. Ninety four percentage of respondents went to dentist for dental problem while 4% went to pharmacist for dental problem. Around three-fourth (73%) of the respondents had idea of using dental hygiene aid such as dental floss and mouthwash.

**Table 4: Practice on oral health.**

Questions	Response	Percentage
Have you ever felt dental and gum pain before?	Yes	59.0
	No	38.0
	Don't Know	3.0
Do you give importance to cleaning tongue as well while brushing?	Yes	89.0
	No	11.0
	Don't Know	-
Does your family also use brush and toothpaste while brushing teeth?	Yes	96.0
	No	2.0
	Don't Know	2.0
Where you need to go if you have dental problem?	Physician	2.0
	Pharmacy	4.0
	Dentist	94.0
Do you have any idea of using dental hygiene aid such as dental floss and mouth wash?	Yes	73.0
	No	15.0
	Don't Know	12.0

## DISCUSSION

Good oral health knowledge and practice play a fundamental role for general wellbeing by preventing common oral diseases, such as dental caries and periodontal diseases. This knowledge and practice includes regular tooth brushing and flossing, preventive measures such as fluoridation, healthy nutritional habits, and regular visits to the dentist.<sup>3</sup>

Oral health and other chronic diseases share diet, hygiene, smoking, alcohol use, stress and trauma as risk factors. Thus, adopting a common risk factor approach, during oral health promotion will help to bring down the chronic diseases as well, and contribute to the overall health of the population. In low-income countries, health related behaviours are low. Poverty, lack of awareness and inaccessibility to health care services constrain them to live with the disease. Oral diseases, if untreated, can lead to irreversible damage, pain, disfigurement, more serious general health problems. The delay in treatment not only results in aggravation of disease, but also costs of care are substantially escalated as a consequence. Developing or least developing countries like Nepal do not have strong insurance policies to cover health expenses. Treatment would be possible only through pocket money.

Oral health of an individual mainly depends on knowledge and practice. Practice of an individual is greatly reflected by their own experiences, cultural perceptions, familial beliefs and other life situations which have strong influence on oral health behaviour. Various studies have shown that there is a strong association between increased knowledge and better oral health. Therefore students with inadequate oral health knowledge may be more likely to have dental diseases than students with adequate knowledge.<sup>10</sup>

The change to healthy attitude and practice can be brought about by giving adequate information, motivation to the students. In order to create health education, the assessment of knowledge and practice is essential. Results showed that almost all the respondents were using tooth brush (98%) and tooth paste (96%) to clean their teeth which is higher than the Study done by Shakya (2014)<sup>12</sup> which was

89% done among school children of Jhyamrung, Nepal. Seventy eight percentage of the respondents were brushing twice daily while 15% respondents were brushing teeth once in a day and only 7% of respondents were brushing more than twice a day whereas the study of Shakya (2014)<sup>12</sup> showed that 17% never brushes their teeth, 67% brushes once a day and 15.4% brushes twice a day. This study also revealed that 81% respondents were brushing both the morning and night, where as 13% in the morning before meal and 6% respondents were brushing after meal in the night. Only 62% of respondents were rinsing always after meal whereas 32% rinsed sometimes while 6% of respondents never rinsed their mouth after meal. This shows that respondents were not aware that they should be brushing their teeth twice a day after meal and rinse their mouth after every meal.

Study done by Dixit et al (2013)<sup>10</sup> showed that all the school children selected were using tooth brush and tooth paste to clean their teeth, 66% of the students were brushing once daily and only 34% of students were brushing twice a day.

This study also showed that 47% of the respondents were not aware of interdental cleaning tools like interdental brush while 45% of the respondents were using dental floss to clean their teeth. Sixty-eight percentage of the respondents had previous dental visit whereas 32% of respondents never visited any a dentist before. It was also seen that 51% respondents were using circular brushing strokes while 28% were using horizontal stroke and only 21% were using vertical strokes during brushing.

Study by Khanal et al (2014)<sup>13</sup> showed that 84.1% of the children brushed their teeth everyday with toothbrush (89.7%) and toothpaste (97.6%) but only 36.9% had the habit of brushing twice a day, 74.6% of children had the habit of rinsing their mouth after every meal. 29.8 % of children uses toothpick as an interdental aid. Regular visit to dental hospital was seen in only 5.6% among the studied population, but 77.4% reported that they visit dental hospital if only they have pain.

Microbial plaque is the major cause in periodontal disease as well as dental caries. The American

Dental Association (ADA)<sup>14</sup> recommended the use of floss or other interdental cleaner once per day to effectively remove the microbial plaque. However, in this study, it was seen that 14.89% of patients were brushing only in the morning before meal, and only 44.68% of patients knew about dental floss and 36.17% of patients knew about interdental brush. ADA also recommends that tooth brushes should be replaced every 3-4 months. However, in this study it was seen that 2% of the patients were unaware of frequency of change of brush and 77% of patients changed their toothbrush in 3-4 months. Interdental cleaning tools must be incorporated as every day individual to maintain the oral health. In this study, 51% patients were using circular brushing strokes while 28% of patients were using horizontal strokes to brush the teeth and 21% were using vertical strokes during brushing. If horizontal stroke continues, it will result in cervical abrasions, gingival recession and sensitivity to cold.

Patricia Nassar et al<sup>15</sup> conducted periodontal evaluation of different tooth brushing techniques and suggested that Bass technique can be effective on the reduction of periodontal clinical parameters of plaque index and gingival index. Study showed that 68% of the respondents were think that eating sugary food is a bad habit and 83% of the respondents care their teeth as much as any part of the body. More than three fourth (76%) of respondents were change the toothbrush in every 3-4 months and 62% of the respondents were using soft brush while 38% of the respondents were using medium brush.

The results of the study showed that 59% of the respondents were felt dental and gum pain before and 89% of the respondents were giving importance to cleaning tongue. Ninety-four percentage of respondents were used to go to dentist for dental problem while 4% were used to go to pharmacist for dental problem. Seventy three percentage of the respondents have idea of using dental hygiene aid

such as dental floss and mouthwash whereas study done by Priya (2013)<sup>4</sup> showed that 41% are unaware about knowledge on bleeding gum, 35.60% gives correct answer of gum bleeding, 31.30% answered vitamin C help prevent gum bleeding, 71.8% answered having relationship of general health to oral and dental disease and 80.2% care teeth as much as any part of the body.

In this study, various aspects of the respondents were considered in terms of academic level, religion and ethnicity as oral health of an individual mainly depends on knowledge and practice. Practice of an individual is greatly reflected by their own experiences, cultural perceptions, familial beliefs and other life situations which has a strong influence on oral health behaviour.

The results of this study also showed that despite being aware of the problems of poor oral hygiene, the practice was minimal. This study can be useful document for the future researcher and a reference material for the Government to make oral health policies.

## CONCLUSION

Oral health diseases are detrimental to the quality of life and can have impact on self-esteem, eating ability, nutrition and health of an individual. The study showed that despite being aware of the problems of poor oral hygiene, the practice was minimal. There was a limited knowledge about brushing techniques and frequency of its use, oral hygiene aids such as interdental brush and dental floss. To improve the oral health of the community people, information and awareness raising activities should be developed and diffused to all patients as well as they should reinforce to practice proper oral hygiene procedure. A comprehensive oral health care design is required to address the present oral health care needs. Priority should be given by the government towards oral health.

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