

# Knowledge, Attitude, and Practices about Oral Hygiene Maintenance among Patients attending a Dental College in India

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## ABSTRACT

**Introduction:** Poor oral hygiene can lead to dental caries, periodontal disease, and tooth loss. In a country like India, where majority of population resides in rural areas, oral hygiene awareness is very important. Therefore, this study was conducted to assess the knowledge, attitude, and practices about oral hygiene maintenance among patients attending a dental college in India.

**Materials and methods:** A cross sectional study was conducted among patients attending the Department of Periodontics, Siddhpur Dental College & Hospital, Sidhpur, Gujarat, India. By the method of convenient sampling, 200 patients were included in the study. A customized close-ended questionnaire was used in this study.

**Results:** Results show that a maximum of 86.6% participants were using toothbrush for cleaning teeth, 5.2% were using toothpowder, 4.4% were using datun, 2.3% were using finger, and 1.5% were not using any method of cleaning. Most of the participants (69.5%) were brushing once daily. It was found that most of the participants (83.6%) had visited dentist only if they had a problem.

**Conclusion:** It was found that knowledge, attitude, and practice of the patients were not up to the mark. Hence, there is a need to educate the general population regarding oral hygiene maintenance.

**Keywords:** Awareness, Knowledge, Oral hygiene, Patients, Practice.

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## INTRODUCTION

Oral hygiene maintenance is an important factor in a person's life. It helps in maintaining durability and function of our teeth.<sup>1</sup> Poor oral hygiene can lead to dental caries, periodontal disease, and tooth loss. In a country like India, where majority of population resides in rural areas, oral hygiene awareness is very important.<sup>2</sup> There is a dearth of knowledge on oral health among general population.<sup>3</sup> There are so many studies that show less knowledge and improper practices regarding oral hygiene maintenance.<sup>4</sup> Even people residing in urban areas are affected with a number of oral diseases in spite of better dental facilities.<sup>5</sup> Therefore, this study was conducted to assess the knowledge, attitude, and practices about oral hygiene maintenance among patients attending a dental college in India.

## MATERIALS AND METHODS

A cross-sectional study was conducted among patients attending the Department of Periodontics, Siddhpur Dental College & Hospital, Sidhpur, Gujarat, India. By the method of convenient sampling, 200 patients were included in the study. A customized close-ended questionnaire was used in this study. The questionnaire consisted of patient name, age, sex, education, and occupation. It was further categorized to assess knowledge, attitude, and awareness of patients on oral hygiene maintenance. The patients were from both urban and rural population. After distribution of questionnaire, each patient was explained about the questionnaire. About 15 minutes was given to each patient to complete the questionnaire. The collected data were given for statistical analysis. The statistical software namely Statistical Package for the Social Sciences version 16.0 was used for the analysis of the data. Graphs and tables were prepared by Microsoft

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**Table 1:** Distribution of study population according to age group and gender

Gender	Age group (in years)						Total
	≤20	21–30	31–40	41–50	51–60	>60	
<i>Male</i>							
Number	18	39	24	20	12	11	124
Percent	14.2	31.4	18.7	16.3	9.8	9.6	100
<i>Female</i>							
Number	11	21	13	18	10	3	76
Percent	14.8	27.2	18.2	22.3	14.1	3.4	100
<i>Total</i>							
Number	29	60	37	38	22	14	200
Percent	14.5	30	18.5	19	11	7	100

**Table 2:** Distribution of study population according to education level

Education level	Number	Percent
Illiterate	25	12.2
Undergraduate	136	68
Graduate	32	16.2
Postgraduate	7	3.6
Total	200	100

**Table 3:** Distribution of study population according to method of cleaning teeth

Method of cleaning	Number	Percent
Toothbrush	173	86.6
Toothpowder	10	5.2
Datun	9	4.4
Finger	5	2.3
None	3	1.5
Total	200	100

**Table 4:** Distribution of study population on frequency of tooth cleaning

Frequency	Number	Percent
Once	139	69.5
Twice	46	23
More than twice	7	3.5
Occasionally	8	4
Total	200	100

**Table 5:** Distribution of study population based on the use of interdental aids

Interdental aid	Number	Percent
Floss	10	5
Toothpick	8	4
Interdental brush	3	1.5
None	179	89.5
Total	200	100

Word and Excel. Descriptive statistical analysis was done in the present study. Significance was assessed at 5% level. chi-square test was applied to find the significance of study parameters on categorical scale between two or more groups.

**RESULTS**

The study was done on 200 patients. It was found that 62% were males and 38% were females among the study population. Maximum 30% participants were of age group of 21 to 30 years (Table 1). Distribution of study population according to education level shows that 16.2% were undergraduates, 12.2% were illiterates, and only 3.6% were postgraduates (Table 2). Results show that maximum 86.6% participants were using toothbrush for cleaning teeth, 5.2% were using toothpowder, 4.4% were using datun, 2.3% were using finger, and 1.5% were not using any method of cleaning (Table 3). Most of the participants (69.5%) were brushing once daily, 23% were brushing twice daily, 4% were brushing occasionally, and only 3.5% were brushing more than twice daily (Table 4). Distribu-

**Table 6:** Distribution of study population based on the frequency of visits to the dentists

Frequency	Number	Percent
Only on problem	168	83.6
Once in 3 months	22	11.3
Once in 6 months	7	3.2
Between 1 and 2 years	3	1.9
Total	200	100

tion of study population based on the use of interdental aids shows that 89.5% were not using any interdental aids, 5% were using floss, 4% were using toothpick, and 1.5% were using interdental brush (Table 5). It was found that most of the participants (83.6%) had visited dentist only if they had a problem, 11.3% visited once in 3 months, 3.2% had visited once in 6 months, and 1.9% had visited between 1 and 2 years (Table 6).

**DISCUSSION**

The present study has shown the general opinion that oral hygiene has still remained as an ignored and unrealized



major social problem. Preventive oral health education is in the initial stages in India. Population-based oral health promotional programs are in the process of implementation. Hence, in this study, attempts were made to describe the knowledge, attitude, and practice regarding oral hygiene maintenance of the studied population. Our study has shown very less knowledge on preventive dental behavior. The relationship between dental service utilization and important demographic variables, e.g., age, gender, address, and education, is discussed in this study. The present study shows that male patients have utilized the dental services more than the female patients, which is in contrast to the higher rate of utilization by female patients reported in Ventä I et al.<sup>5</sup> It has also been evaluated that more of educated patients have utilized the dental services, which shows that education plays an important role in oral health awareness.

About 86.6% participants were using toothbrush for cleaning teeth, 5.2% were using toothpowder, only 23% were brushing twice daily, which is very less as compared with a study done in United States where 90% of the studied group was doing the same.<sup>6</sup> It is commonly found that there is very less use of interdental aid as a preventive tool. A study conducted in Saudi Arabia, where no subject used dental floss for interdental cleaning, is similar to our results.<sup>7</sup> In the present study, 89.5% were not using any interdental aids, 5% were using floss, 4% were using toothpick, and 1.5% were using interdental brush. Bad breath was experienced by 58.7% of the patients in our study, which is in contrast to the study findings of Madan-Kumar et al<sup>8</sup> in which 21% of participants were having bad breath. Furthermore, results of the present study are in contrast with a study among general population in Japan where 24% of the individuals complained about bad breath.<sup>9</sup> About 54.3% of the patients in the present study have done tongue cleaning, which is in contrast to the study done by Jain et al<sup>10</sup> in which only 20% of the studied population cleaned their tongue. It shows lack of awareness among participants about basic oral health awareness technique like tongue cleaning. In our study, only 34.8% knew about the relationship between the oral health and systemic health. The present study shows that 83.6% had visited dentist only if they had a problem, 11.3% visited once in 3 months, 3.2% had visited

once in 6 months, and 1.9 % had visited between 1 and 2 years, whereas in the study done by Jain et al<sup>10</sup> 54% of the subjects visited the dentists when they were in pain.

## CONCLUSION

The present study clearly shows lack of awareness among participants regarding oral health. Basic technique like tongue cleaning is not followed by most of the participants. Most of the participants visit a dentist only if they had a problem. It was found that attitude and practice of the patients were not up to the mark. Hence, there is need to educate the general population regarding oral hygiene maintenance. There is a need to conduct effective oral health programs at the government as well as private sector level.

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