

# Oral Hygiene Awareness and Practices among Patients attending Outpatient Department at Dental College, Lucknow

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## ABSTRACT

**Introduction:** Dental care is sometimes generally underestimated by people due to lack of awareness or sometimes due to busy life. Increase in periodontal problem is noticed in Indian population due to negligence. So, importance of dental care is always underestimated; at the same time, the need for regular dental visit and reinforcement or oral health education cannot be neglected.

**Aim:** To assess oral hygiene awareness and practices among patients attending the outpatient department (OPD) at Dental College, Lucknow, India.

**Materials and methods:** A total of 281 patients attending the OPD at Dental College, Lucknow, India, were selected for the study. The samples selected were aged between 16 and 90 years. A self-constructed questionnaire was prepared and presented to the patients. Choices of questions were based on knowledge, attitude, and practices regarding oral health, such as type of brush used, frequency of brushing, reason of changing toothbrush, type of bristles, and behavior toward dental treatment. Responses from the patients were evaluated statistically.

**Results:** Out of 281 patients, 210 (74.7%) said that they use toothbrush regularly, so the most common instrument used for oral hygiene practice was toothbrush, and the second most commonly used oral hygiene aid was chewing stick, i.e., 17.7%. Majority of study participants (71.8%) said that they brush once a day, whereas 24.9% said that they brush twice daily. However, only 1.7% patients were found using mouthwash and none of the study participants were using any kind of interdental aids, so overall lack in knowledge, attitude, and practices among people was seen with respect to oral hygiene practices.

**Conclusion:** The study shows that a large number of people have started using soft brushes. Majority of people are changing toothbrush at recommended interval, but the horizontal pattern of brushing is still more common among people. Use of oral hygiene aids like mouthwash and dental floss was found to be less. Though most of the people use toothbrush and toothpaste, still there is requirement for educational program to increase awareness regarding oral health. Whenever a patient visits a dental college OPD for any problem, they must be educated and motivated regarding prevention of oral diseases, preferably through oral health education section/museum present at the dental college. At the same time, toothbrushing demonstration section should also be set up at every dental college for educating the correct technique of toothbrushing.

**Keywords:** Awareness, Motivation, Oral hygiene, Toothpaste.

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## INTRODUCTION

Health is a very valuable part of individual's life. The World Health Organization defined health as a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity.<sup>1</sup> Oral health is also equally important for an individual but due to hectic lifestyle, people tend to ignore it. According to the literature present, Osler<sup>2</sup> has rightly stressed the significance of the "oral cavity as the mirror of general health." Oral diseases have become a major concern due to its increased prevalence and effect on individual's life.<sup>1</sup> Etiological factors like genetic predispositions, developmental problems, poor oral hygiene, and traumatic incidents lead to oral diseases.<sup>3</sup>

Singh et al<sup>4</sup> suggested that oral health-related education at individual and community levels helps to prevent diseases in a large ratio, thus improving the oral health attitude and practices among the general population. In spite of time-to-time education program, there is still lack of knowledge among people due to negligence in dietary habits and unhealthy lifestyle.<sup>5</sup> There comes the need of a preventive approach, with the focus on health

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education and promotion, which should be given prime importance.<sup>6</sup> Healthy oral profile can be obtained with the joint effort of dentist and individual.

So, we aimed to assess the oral hygiene awareness and practices among patients attending the OPD at Dental College, Lucknow, India.

**MATERIALS AND METHODS**

A cross-sectional study was conducted with a total of 281 individuals attending the OPD at Dental College, Lucknow, India. Sample subjects selected for the study were aged between 16 and 90 years, and both males and females were selected for the study. Out of 281 sample subjects, 171 were males and 110 were females. Written informed consent was obtained from the individuals participating in the study. Patients were assured about the confidentiality of the information provided. Inclusion criteria included those patients attending OPD and willing to participate in the study. Those with chronic systemic disease and mental disorder were excluded from the study. A self-constructed questionnaire consisting of questions regarding oral health was prepared. Bilingual language, i.e., Hindi and English, was used in questionnaire.

Variables in the questionnaire included various oral hygiene materials used like toothpaste, tooth powder, etc., and various oral hygiene instruments like toothbrush, finger, or chewing sticks used; oral hygiene frequency once, twice, thrice, or several times, how frequently toothbrush was changed, and the reason why toothbrush was changed were asked including the pattern of brushing (vertical, horizontal, or circular). Questionnaire also consisted of questions like any other oral hygiene aids used like toothpick, mouthwash, etc. The validation of the questionnaire was done. Questionnaire was distributed among the participants and the importance of answering was explained.

**Statistical Analysis**

Questionnaire was collected from the participants and data were obtained. Data were analyzed using Statistical Package for the Social Sciences package descriptive data. Chi-square test was used in statistical evaluation of bivariate frequency distributions.

**RESULTS**

A total of 281 patents attending the OPD at Dental College, Lucknow, India, were selected. The age group selected in our study was 16 to 90 years. Out of 281 patients, 171 were males and 110 were females (Table 1). Age distribution was done randomly; in this study, most common noted age group wad 37 to 46 years, i.e., 68 patients,

**Table 1:** Demographic distribution

Mean age	44.6 years
Males	171
Females	110
Total	n = 281

**Table 2:** Age distribution

Age group (years)	Frequency
16–26	35
27–36	53
37–46	68
47–56	42
57–66	42
67–76	29
77–90	12

**Table 3:** Various oral hygiene aids used

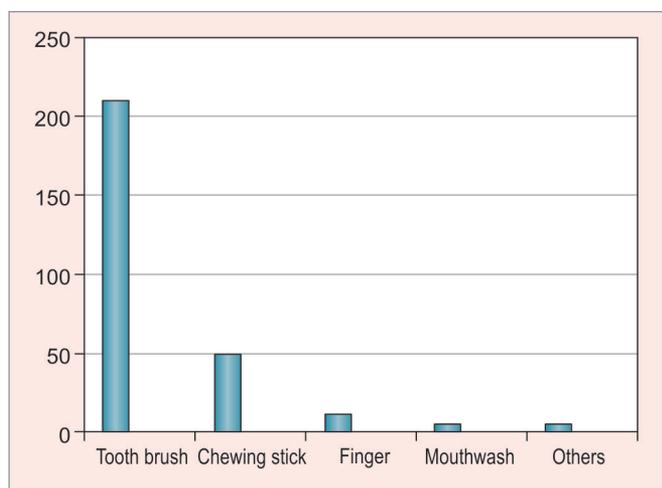
Oral hygiene aids used	Total		Percentage	p-value
	Yes	number		
Toothbrush	210	281	74.7	<0.005
Toothpaste	164	210	78.09	
Tooth powder	39	210	18.5	
Others	7	210	3.3	
Dental floss	1	281	0.3	
Chewing stick	50	281	17.7	
Mouthwash	5	281	1.7	
Toothpick	4	281	1.4	
Finger	11	281	3.9	

followed by 27 to 36 years patient, i.e., 53 (Table 2). Out of 281 patients, 210 said that they use toothbrush regularly, i.e., 74.7%, and the second most commonly used oral hygiene aid was chewing stick, i.e., 17.7%. The use of chewing stick was found to be more common in the elder age group (Table 3). Eleven out of 281 patients said that they still use finger for cleaning teeth, i.e., 3.9%. Patients said that they used finger for cleaning because a few were not aware about toothbrush, while others said that they do not feel comfortable. Only one patient said that she used dental floss sometimes; 1.7% of patients were found using mouthwash and 1.4% said that they use toothpick sometimes (Graph 1).

A total of 202 out of 281 patients, i.e., 71.8%, said that they brush once a day (Table 4); 24.9% patients (70/281) said that they brush twice daily; 0.7% said that they brush once a week (Graph 2). The reason for not brushing was lack of time; 1.4% said that they brush two to three times a week, while 1% said that they brush several times a week. Few patients said that they do not feel the need to brush.

Of the participants, 54% said that they prefer to use soft toothbrush, 24.1% used medium toothbrush, while only 22% preferred hard brush. Out of 281, 199 were using vertical pattern of brushing, 41 (14.5) said that they preferred vertical and 41 (14.5%) were found using circular





Graph 1: Most commonly used oral hygiene aid

Table 4: Frequency of toothbrushing

	Yes	Total number	Percentage
Once a day	202	281	71.8
Twice a day	70	281	15
Once a week	2	281	0.7
Several times a week (2–3 times)	4	281	1.4
Several times a month (2–3 times)	3	281	1.0

motion of brushing (Graph 3). When asked about the ingredient used for brushing, 164 samples (65.4%) said that they used toothpaste, 39 out of 281 said that they used tooth powder (18.5%), while 3.3%, i.e., only eight people said that they used other materials. When asked about the frequency of changing toothbrush 179, i.e., 63.7% said that they changed brush in 3 to 5 months, 16% said that they prefer more than 5 months to change brush, whereas 12.4% changed brush twice in a month and only 7.85 said that they change their toothbrush monthly (Table 5). The reason for the change of toothbrush was flared brushes in 65.4% of cases, 31.6% said wear-off and 2.8% said that it

Table 5: Frequency of change of toothbrush

Time of change	Number of patients	Total	Percentage
Once	22	281	7.8
Twice	35	281	12.4
3–5 months	179	281	63.7
More than 5 months	45	281	16

Table 6: Reason for the change of toothbrush

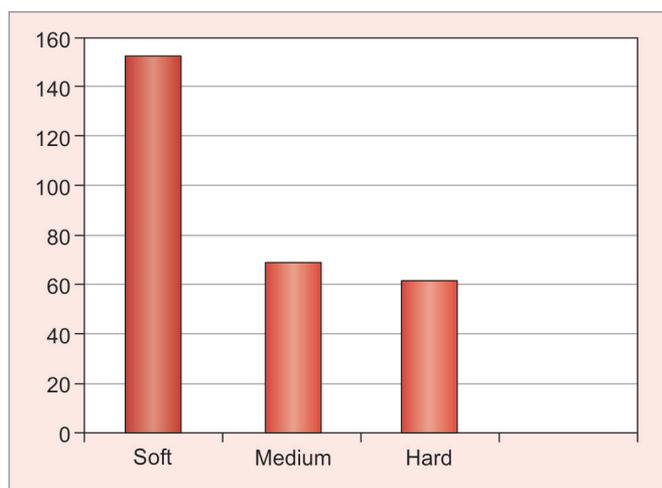
Reason	Patients	Percentage
Flared	184	65.4
Wear-off	89	31.6
Becomes hard	8	2.8

became hard (Table 6). In the current study, more number of females was found to be using oral hygiene aids rather than males and the difference was found to be significant.

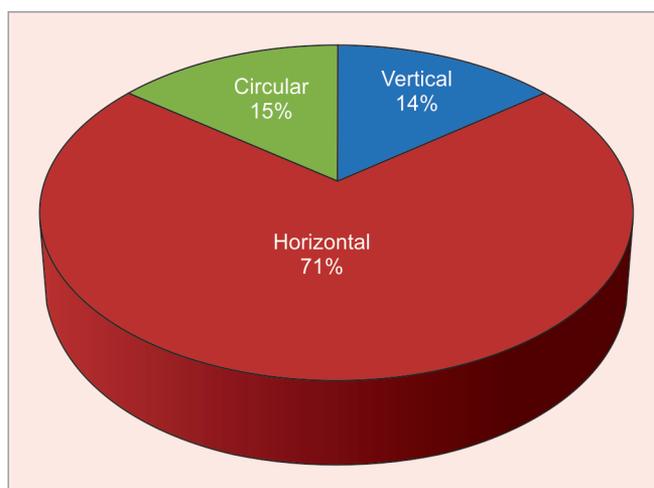
## DISCUSSION

The present study highlights the importance of oral hygiene and various oral aids used by people. Oral hygiene has been continuously ignored. Various oral hygiene aids are available in the market for years and years; still half of the Indian population does not use a toothbrush and only 51% brushed their teeth using a toothbrush and toothpaste.<sup>7</sup> China introduced first bristle toothbrush which was made with the help of horse tail bristles and ox handle.<sup>8</sup>

In the current study, most common oral hygiene aid was toothbrush; 74.7% patients said that they use toothbrush regularly; 71.8% said that they brush once daily with toothbrush and toothpaste. Kapoor et al<sup>9</sup> in their study reported that 90.3% patients cleaned their teeth with toothbrush and toothpaste, which was higher than those reported in our study. Majority of people in the present study were found to be using toothpaste, i.e., 78.09%, while only 18.5% said that they used tooth powder. Use



Graph 2: Type of toothbrush used



Graph 3: Technique used for brushing

of tooth powder was common in the higher age group in our study. In the current study, only 0.3% patient said that they used dental floss. However, the study conducted by Hamilton and Coulby<sup>10</sup> found that 44% of the sample they studied in Northeastern Ontario used dental floss, which is high as compared with our study; 3.9% patients said that they used finger for brushing which was very low, and the study conducted by Oberoi et al<sup>11</sup> is in favor of our study. However, Singh et al<sup>4</sup> reported that 60% patients used finger as the brushing aid in their study; 17.7% patients used chewing stick as the oral hygiene aid in present study. Use of interdental aids was found to be negligible in our study which was significant ( $p < 0.05$ ).

In all, 24.9% brushed their teeth twice daily with toothpaste and toothbrush. Majority of males said that they brushed once daily while females were found to be more concerned regarding hygiene; they brushed twice daily. Oberoi et al<sup>11</sup> in their study reported that 44% brushed twice daily. Use of oral hygiene aids, especially toothbrush, was more common among females as compared with males in our study; however there was no statistical difference found. However, Almas et al<sup>12</sup> reported a highly significant difference in their study.

In the present study, more number of patients said that they used soft toothbrush, whereas Jain et al<sup>13</sup> in their study reported that only 10% used soft toothbrush which is less as compared with our results. Most of the people said that they changed their toothbrush in every 3 to 5 months in our study, which is similar to those reported by other authors where the overall frequency of changing brush within 3 months was 65.5%.<sup>11,14</sup> The most common reason for the change of toothbrush in our study was flared up bristle in 65.4% cases; the possible reason for flared up brushing could be the use of wrong technique of brushing.

## CONCLUSION

Within the limits of our study, it was found that majority of people have started using soft brushes and toothpaste. Majority of people are changing toothbrush at recommended intervals, but horizontal pattern of brushing is still more common among individuals and the reason found was easy to use. However, use of other oral hygiene aids like mouthwash and dental floss was found to be less. Though most of the people use toothbrush and toothpaste, still there is requirement for educational program to increase awareness regarding oral health. Whenever a patient visits a dental college OPD. for any problem, he must be educated and motivated regarding prevention of oral diseases, preferably through oral health education section/museum present at the dental college. At the same time, toothbrushing demonstration section should also be set up at every dental college for

educating the correct technique of toothbrushing. Oral health education camps should be regularly organized to reinforce knowledge, attitude, and practices regarding oral health and hygiene.

## Limitation of the Study

The current study is a hospital-based, cross-sectional study. To get information on the population-level practices, a population survey can give a more representative picture about the oral hygiene practices.

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