

# Awareness on Oral Hygiene and Practices among General Population

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## Abstract

India is the sixth biggest country by area and is the second-most populous country. Factors contributing to the steady rise in prevalence of oral disease include poor oral health awareness and practice among fellow people. Oral health knowledge is considered to be an essential prerequisite for health-related behavior, although only a weak association exists between knowledge and behavior. Keeping a healthy oral profile requires joint efforts from the dentist as well as the patient himself. The study aims to analyze knowledge and awareness of oral hygiene and practice among the general population. A descriptive cross sectional survey was conducted among 100 patients, visiting a private dental institution, Chennai, through a self administered questionnaire. The responses were collected, tabulated in excel sheet and analysed using SPSS software. 97% of the participants were using brush with hard bristles. 81% changed their toothbrush. 40% of the subjects visited a dentist when they were in pain. This shows very less care about oral hygiene which leads to the future undesirable outcome. This study concludes that there is an urgent need for comprehensive educational programs to promote good oral hygiene and impart education about oral hygiene practices.

**Keywords:** Oral hygiene; oral health; awareness; oral profile; oral hygiene, Knowledge

## Introduction

Oral disease is a major public health concern owing to their high prevalence and their effects on the individual's quality of life <sup>(1)</sup>. The possible etiological factors leading to these oral diseases, developmental problems, poor oral hygiene, and traumatic incidents. <sup>(2),(3)</sup> Oral hygiene behavior and oral health care regimens should be positively reinforced. Lack of knowledge is one of the reasons for the lacunae in following oral hygiene practices. Keeping a healthy oral profile requires joint efforts from the dentist as well as the patient himself.

One of the most important factors that decide the dental health of a population is the outlook of its people toward their dentition

We keep reading about studies done to judge the oral health and oral hygiene practices at so many places scattered all across the globe to know about how much the people are aware of the knowledge and awareness of oral hygiene and how they are practicing oral hygiene. Furthermore, even the people living in cities, despite having easy access to dental care, fall prey to dental diseases due to their negligence in dietary habits and an unhealthy lifestyle <sup>(4)</sup>. Globally, with increasing age there is also an associated increase in the calculus among children and adolescents. Oral hygiene maintenance may be a totally ignored practice in people of the low socioeconomic class of developing countries. Good oral hygiene is the foundation of a healthy mouth and prevents 80% of all dental problems. Primary prevention through tooth brushing has paramount importance in the prevention of dental health problems.

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One of the most important factors that decide the dental health of a population is the outlook of its people toward their dentition<sup>(5)</sup>, Keeping a healthy oral profile requires joint efforts from the dentist as well as the patient himself which works in joint venture of both dentists. Previously our team had conducted numerous original studies<sup>(6-13)</sup> and surveys<sup>(14-20)</sup> over the past 5 years. Now we are focussing on epidemiological surveys. The idea for this survey stemmed from the current interest in our community. Therefore the study aims to analyze knowledge and awareness of oral hygiene and practice among the general population.

## Materials and Methods

### Study Design:

A cross sectional study was conducted among 100 participants. A simple random sampling was used to select the study participants.

### Ethical Considerations:

Returning the filled questionnaire was considered as implicit consent with no need for signing a written consent. Ethical approval for the study is obtained from the Institutional Review Board (IRB).

### Study Method:

Self administered questionnaire of 13 close ended questions was prepared and it was distributed among undergraduate dental college students of private dental institutions through online survey forms "google forms". The collected data were checked regularly for clarity, competence, consistency, accuracy and validity. Demographic details were also included in the questionnaire.

## Statistical Analysis

Data was analysed with SPSS. Descriptive statistics as number and percent were calculated to summarise qualitative data. Chi square test was used to analyze and compare the level of knowledge on oral hygiene and practises among the general population. The confidence level was 95% and of statistical significance  $P < 0.05$ . Finally, the result was presented by using bar charts and frequency tables.

## Results and Discussion

The survey included 100 patients of which 97% were male and 3% were female (Table 1).

27% people brush their teeth occasionally, 24% of them were brushing once a day, 22% were brushing twice a day, and none of them brushed more than 2 times a day which is very less as compared with 75% of the elderly Chinese adults in urban areas in a study by Zhu et al<sup>(21)</sup>.

Around 52% of the subjects brush their teeth in vertical direction, which is the most dangerous method of brushing but the results are in consensus with the study done by Zhu et al<sup>(21)</sup>. where 60% of the sample did the same. Approximately 97% of the participants were using brush with hard bristles and only 3% of the sample used a soft toothbrush, which is less than that observed among Zhu et al<sup>(21)</sup> study where 27% of the sample uses the soft bristles. Chi square test was used to compare gender and the type of brush used, where  $P$  value= 0.604 (statistically not significant) (figure 1). 81% changed their toothbrush and the remaining 19% answered that they don't change their toothbrush regularly. 45% change their toothbrush once in 3 months, and surprisingly remaining 32% change their brush only when it is useless. 88% of the participants were aware of interdental aids. 57% of the participants washed their mouths after eating. Chi square test was used to compare gender and mouth washing after eating, where  $P$  value= 0.272 (statistically not significant) (figure 2). 93% of the participants used dental floss and remaining 7% did not use flossing. The results show lacunae in the knowledge on interdental aids.

Only 66% of the studied population said that they clean their tongue and the remaining 34% don't clean their tongue. Chi square test was used to compare responses based on gender to the question on tongue cleaning, where  $P$  value= 0.319 (Figure 3) (statistically not significant). The results from the present study clearly indicate missing lack of awareness of oral hygiene among study participants. 58% of the participants used a mouthwash for cleaning their mouth after eating. Chi square test was used to compare gender and awareness on using mouthwash, where  $P$  value= 0.119 (statistically not significant) (Figure 4). Furthermore, 88% reported halitosis. This study is in contrast with that of an

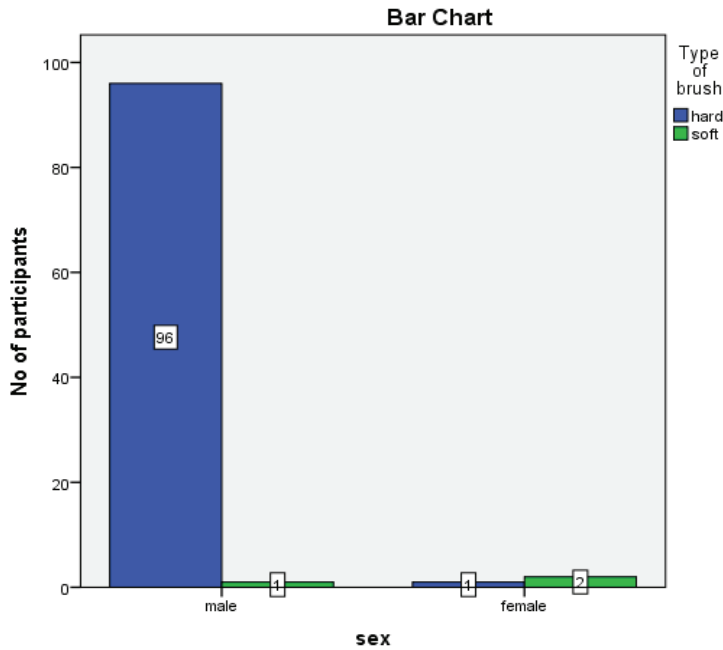
epidemiologic survey by Miyazaki H, et al <sup>(22)</sup> in Japan 24% of the individuals complained about bad breath. Our study showed that 40% of the subjects visited a dentist when they had a dental pain, which is similar to the study done by Nabil Al-Beiruti (69.5%) <sup>(23)</sup>.

Knowledge and awareness of oral health is very poor in India, due to poor socio – economic conditions.

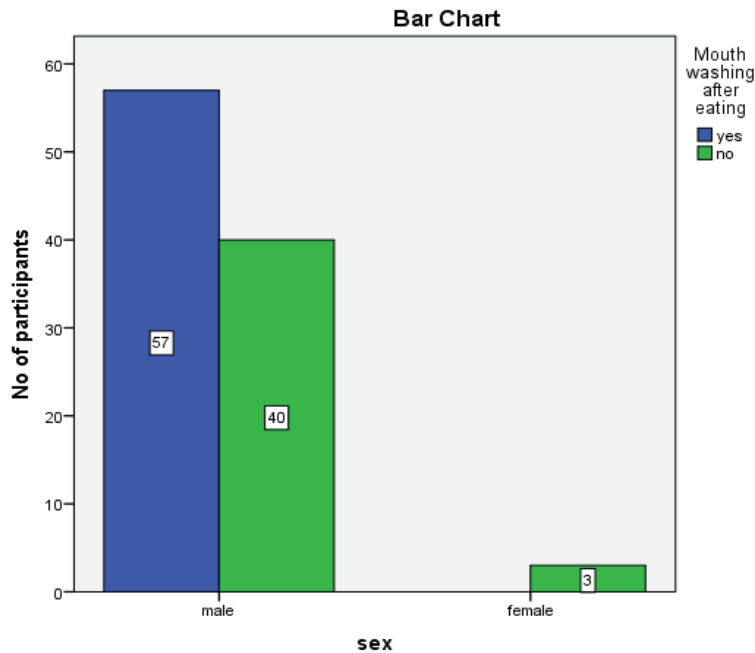
In addition to this, two thirds of people have never seen a dentist. Lack of awareness about the role of regular dental checkups in detecting and preventing dental diseases necessitates the need for public education. As dentists, it is our responsibility to educate and motivate people to visit a dentist.

**Table 1: Depicts percentage of responses on Knowledge and awareness on Oral Hygiene and practices among General Population.**

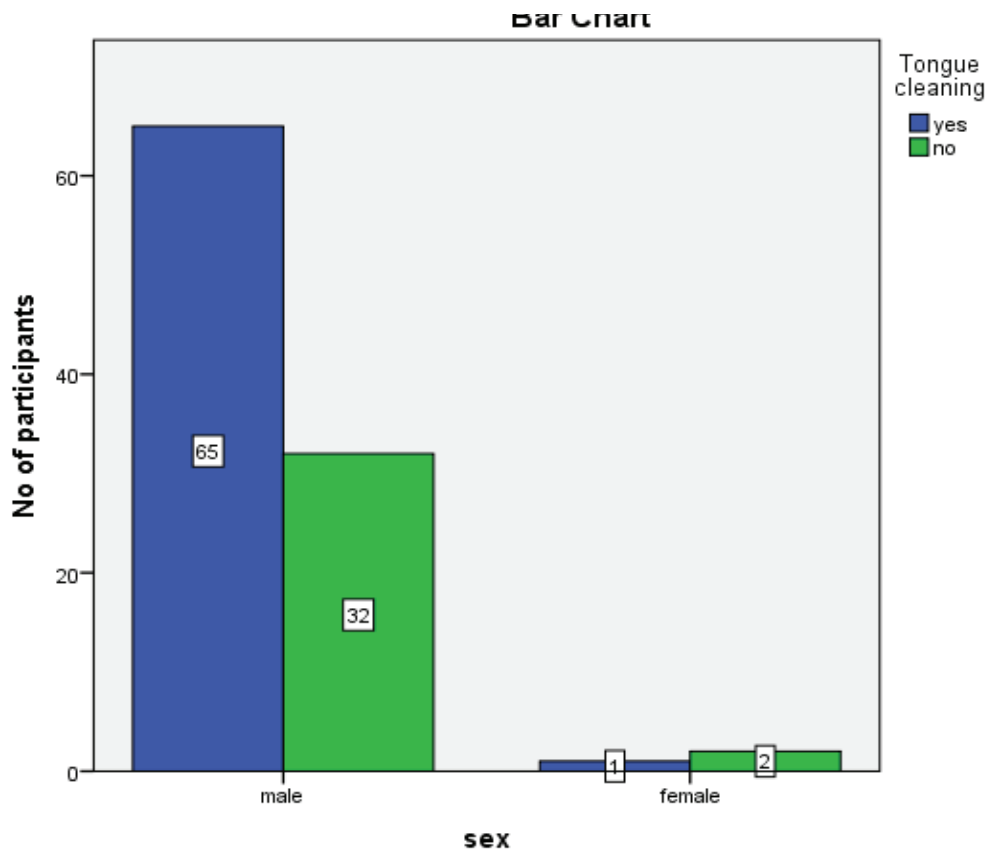
S.no	Question	Choices	Percentage
1.	Gender	<ul style="list-style-type: none"> <li>● Male</li> <li>● Female</li> </ul>	<ul style="list-style-type: none"> <li>● 97%</li> <li>● 3%</li> </ul>
2.	Frequency of cleaning the teeth	<ul style="list-style-type: none"> <li>● Once daily</li> <li>● Twice daily</li> <li>● More than twice</li> <li>● Occasionally</li> </ul>	<ul style="list-style-type: none"> <li>● 24%</li> <li>● 22%</li> <li>● 18.3%</li> <li>● 27%</li> </ul>
3.	Technique used for brushing	<ul style="list-style-type: none"> <li>● Horizontal</li> <li>● Vertical</li> <li>● Circular</li> <li>● combined</li> </ul>	<ul style="list-style-type: none"> <li>● 24%</li> <li>● 52%</li> <li>● 18%</li> <li>● 6%</li> </ul>
4.	Type of toothbrush used	<ul style="list-style-type: none"> <li>● Hard</li> <li>● Soft</li> </ul>	<ul style="list-style-type: none"> <li>● 97 %</li> <li>● 3%</li> </ul>
5.	Knowledge On changing the tooth brush	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>	<ul style="list-style-type: none"> <li>● 81%</li> <li>● 19%</li> </ul>
6.	Frequency of changing the toothbrush	<ul style="list-style-type: none"> <li>● When Useless</li> <li>● Once in 3 months</li> <li>● Every 6 months</li> </ul>	<ul style="list-style-type: none"> <li>● 32%</li> <li>● 45%</li> <li>● 23%</li> </ul>
7.	Knowledge on use of interdental aids	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>	<ul style="list-style-type: none"> <li>● 88%</li> <li>● 12%</li> </ul>
8.	Knowledge on rinsing the mouth after eating	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>	<ul style="list-style-type: none"> <li>● 57%</li> <li>● 43%</li> </ul>
9.	Type of interdental aid used	<ul style="list-style-type: none"> <li>● Floss</li> <li>● Interdental Brush</li> </ul>	<ul style="list-style-type: none"> <li>● 93%</li> <li>● 7%</li> </ul>
10.	Awareness of cleaning the tongue	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>	<ul style="list-style-type: none"> <li>● 66%</li> <li>● 34%</li> </ul>
11.	Awareness on using mouthwash	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>	<ul style="list-style-type: none"> <li>● 56%</li> <li>● 44%</li> </ul>
12.	Odour from mouth after eating	<ul style="list-style-type: none"> <li>● Yes</li> <li>● No</li> </ul>	<ul style="list-style-type: none"> <li>● 88%</li> <li>● 12%</li> </ul>
13.	Frequency of visiting dentists	<ul style="list-style-type: none"> <li>● Never</li> <li>● Only in problem</li> <li>● Once in 3 months</li> <li>● Once in 6 months</li> <li>● Any other</li> </ul>	<ul style="list-style-type: none"> <li>● 11%</li> <li>● 40%</li> <li>● 11%</li> <li>● 36%</li> <li>● 2%</li> </ul>



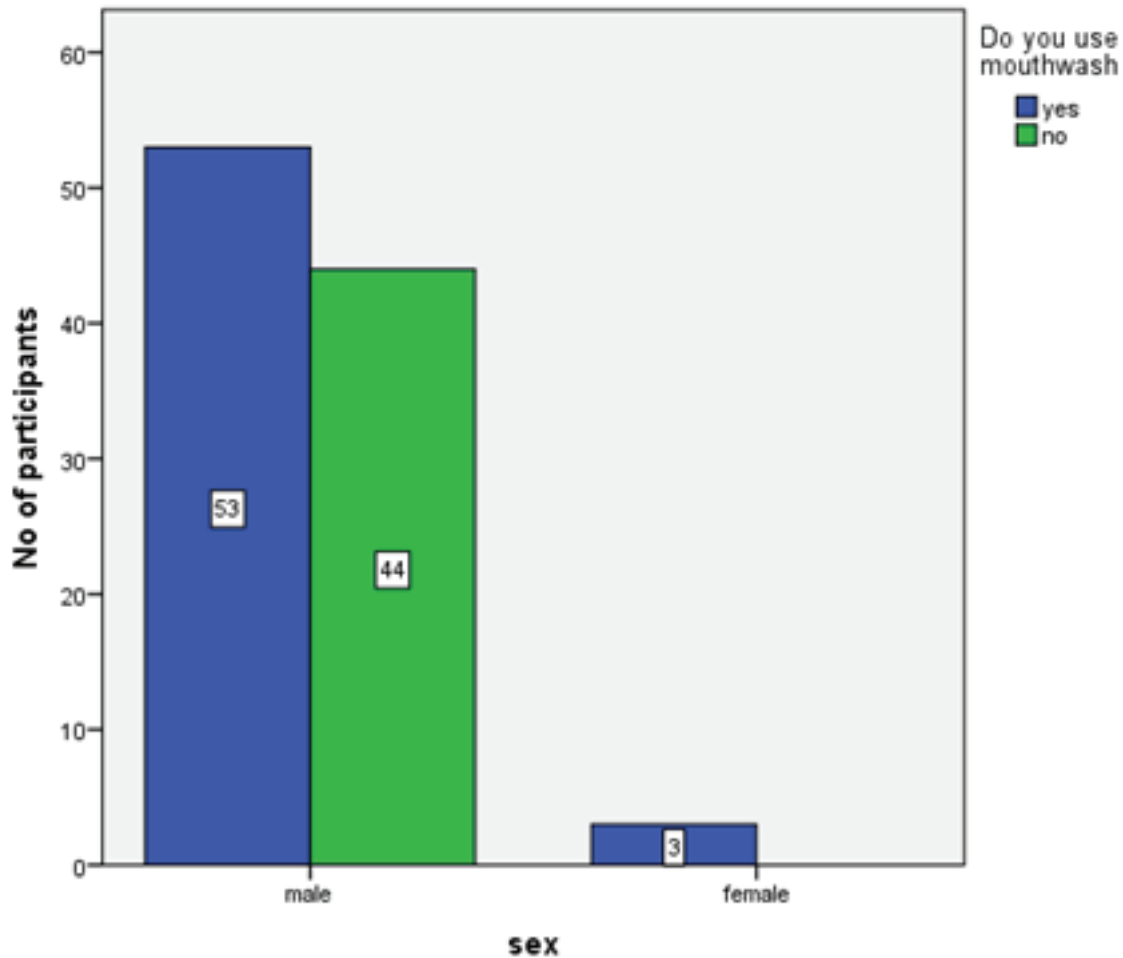
**Figure 1:** Bar graph showing association between gender and type of brush used, where (blue) hard, (green) soft. X-axis represents the gender and Y-axis represents the Number of participants. Maximum awareness response (96-blue) was among males. Bar chart shows an unequal distribution of participants. However the difference is statistically not significant. Chi square test P value= 0.604 (  $p > 0.05$  ) hence not statistically significant.



**Figure 2:** Bar graph showing association between gender and habit of mouth washing after eating, where yes(blue),No(green) X-axis represents the gender and Y-axis represents the Number of participants. Maximum awareness response was among males(53). Bar chart shows an unequal distribution of participants. However the difference is statistically not significant. Chi square test P value= 0.272 (  $p > 0.05$  ) hence statistically not significant.



**Figure 3:** Bar graph showing association between gender and tongue cleaning, yes(blue),No(green). X-axis represents the gender and Y-axis represents the Number of participants. Maximum awareness response (65) was among males. Bar chart shows an unequal distribution of participants. However the difference is statistically not significant. Chi square test P value= 0.319 (  $p>0.05$ ) Hence not statistically significant



**Figure 4:** Bar graph showing association between gender and use of mouthwash, where denotes yes(blue), no(green). X-axis represents the gender and Y-axis represents the Number of participants. Maximum awareness response was among males(53). Bar chart shows an unequal distribution of participants. However the difference is statistically not significant. Chi square test P value= 0.319 (  $p > 0.05$ ) Hence not statistically significant

### Conclusion

The results of the present study indicates that the study participants have good knowledge on oral hygiene and practices. From the present study it can be inferred that among the general population both males and females had adequate knowledge on oral hygiene and practices.

**Acknowledgments:** The author would like to thank the study participants for their participation and kind cooperation.

**Conflict of Interest:** Conflict of interest none declared.

**Source of Funding:** Self.

**Ethical Clearance:** Not Required

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