

# Knowledge, Behavior and Attitude towards Oral Health among Population Visiting A Dental College and Hospital in South India, A Cross Sectional Study

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## ABSTRACT

**Objective:** This study was carried out to assess the oral hygiene knowledge, attitude and behavior amongst patients visiting the Department of Public health dentistry at MNR dental college and hospital, Sangareddy, which in turn helps to develop better oral health awareness programs and also aids in assessing the current oral health knowledge status.

**Materials and methods:** A cross-sectional study was carried out amongst the patients visiting the Department of Public health dentistry at MNR dental college and hospital, Sangareddy. A total of 216 patients were given a structured questionnaire with 15 questions. Responses from the patients were evaluated in terms of numbers and percentages.

**Results:** Most of the subjects had poor knowledge pertaining to oral hygiene practices. Nearly 47% do not consider using a tongue cleaner.

**Conclusion:** Implementation of various oral health programs highlighting the basic oral care regimen is necessary for improving the oral health care.

**Key words:** Oral health knowledge, oral health practices, questionnaire.

## INTRODUCTION

Humanitarian Martin Luther King Jr. once told the Medical Committee for Human Rights in 1966: *'Of all the forms of inequality, injustice in health-care is the most shocking and inhumane'*.<sup>[1]</sup> The oral healthcare status in India reminds us of the same. Oral health is as important as general health. In fact, it serves as an index of systemic health. Sadly, most of the populations particularly in India are underserved when it comes to knowledge pertaining to oral health and to some extent treatment accessibility too. Oral hygiene behavior and seeking oral health care depends on a number of factors. Patients comply better with oral health care regimens when informed and positively reinforced.<sup>[2]</sup> Dental diseases are a significant public health menace having a substantial impact on the quality of life which in turn affects the daily performance and general life satisfaction.<sup>[3]</sup> Those who have assimilated the knowledge and feel a sense of personal control over their oral health are more likely to adopt self-care practices.<sup>[4]</sup> The level of knowledge regarding oral health is worth assessing as it helps us derive a conclusion

that in turn helps in building the necessary oral care education programs and thereby bringing the actual change in the practices and attitude towards oral health among public.

Over the years, awareness regarding the importance of health literacy in dental profession has grown and efforts have been going on to adapt the concept of health literacy.

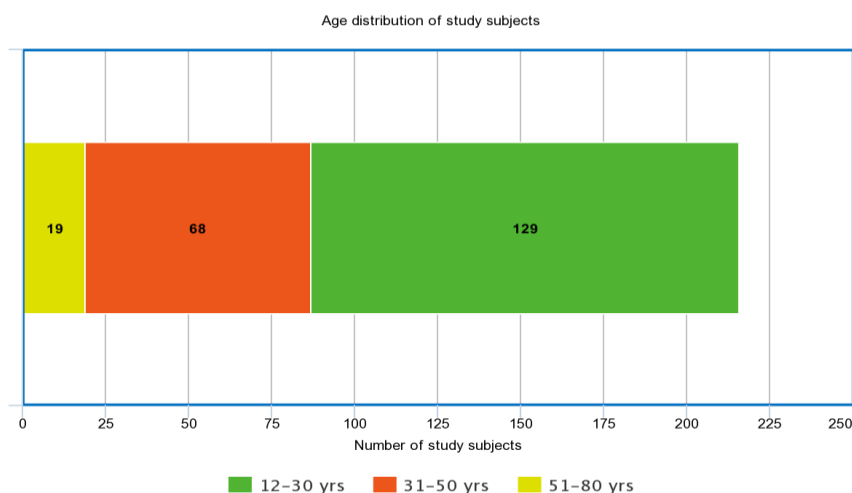
## MATERIALS AND METHODS

All the 216 subjects were given a structured questionnaire with 15 questions comprising of 6 behavior-based questions, 6 knowledge-based questions and 3 attitude-based questions. Subjects from various occupational backgrounds including daily wagers, farmers, primary school teachers, private job holders, government job holders,

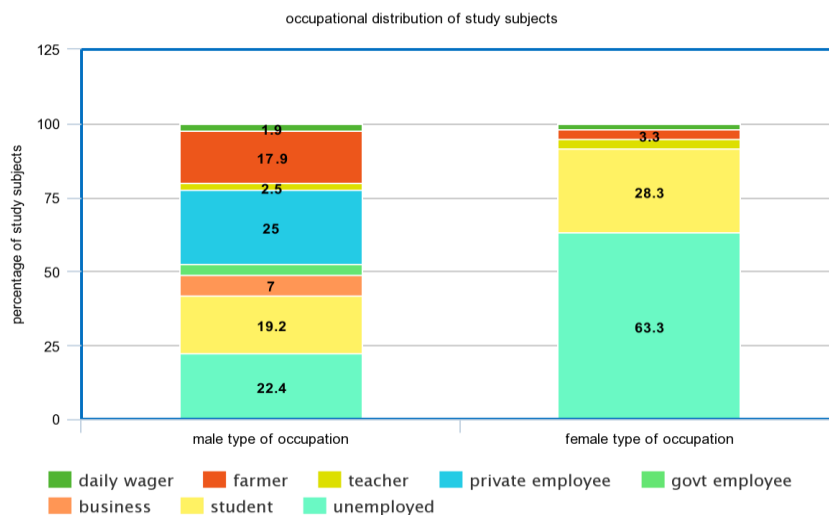
businessmen, students, unemployed people were included in the study. Various age groups were included in the study, of which numbers of males were 156 while females were 60. Upon receiving the responses, all the papers were analyzed and recorded. Apart from receiving the responses, patients were given education regarding the basics of oral hygiene maintenance. All the responses were analyzed by using the percentage frequency distribution method.

## RESULT

Our study included 216 subjects, of which 72.22% were males and 27.77% were females. Among them 59.7% belong to the age group 12-30years, 31.5% belong to age group 31-50years and 8.8% belong to age group 51-80years.



Graph 1: Bar graph showing the age distribution of the study subjects.



Graph 2 : Bar graph showing the occupational distribution of the study subjects.

### Knowledge based questions analysis:

Of the 15 questions 6 were knowledge-based questions. Responses of the same are depicted in the table form below.

**Table 1: Responses for the knowledge-based questions.**

Question	Option A	Option B	Option C	Option D
What do you think is most important for having clean teeth?	Toothpaste 44.2%	Duration of brushing 14.6%	Toothbrush 16.2%	Brushing technique 25%
Which type of toothbrush should you use?	Not sure 13%	Hard 14.3%	Medium 41.6%	Soft 31.1%
How long should you brush your teeth each time?	20 minutes 10.6%	1 minute 6.48%	5 minutes 48.6%	2-3 minutes 34.32%
When should your first dental visit be?	When there is pain 70.8	At 6-10 years of age 13.8%	At 3-4 years of age 11.1%	On the first birthday 4.3%
Does your systemic health condition affect your oral health status?	Yes 29.1%	No 16.6%	I don't know 54.3%	
How frequently should you change your toothbrush?	Once a year 0.9%	Once every six months 22.1%	Once every 3-4 months 76.38%	

### Attitude based questions analysis:

Of 15 questions in the questionnaire, 3 were attitude based. Responses for the same are presented in the table below.

**Table 2: Responses for the attitude-based questions.**

Question	Option A	Option B	Option C	Option D
Is it necessary to use a tongue scraper?	No 47%	Yes 53%		
Do you delay getting dental treatment done for yourself?	Yes 71.3%	No 28.7%		
For the above question, if yes why?	Time factor 35.6%	Negligence 22.47%	Fear of treatment 20.7%	Didn't find an apt dentist 21.23%

### Behavior based questions analysis:

Of the 15 questions 6 were behavior-based questions. Responses of the same are as follows.

**Table 3: Responses for the behavior-based questions.**

Questions	Option A	Option B	Option C	Option D	Option E
How often do you brush your teeth?	Once a day 78.2%	Twice a day 20.8%	After every meal 0%	Once a week 0%	
Which technique do you follow while brushing your teeth?	Horizontal 41.6%	Vertical 18.9%	Circular 31.4%	Other 8.1%	
On what basis do you buy a toothpaste?	Advertisement 41.7%	Cost 11.5%	Ayurvedic 21.3%	Fluoridated 25.5%	
Other than brushing your teeth, do you use any other products for maintaining oral health?	Mouth wash 21.2%	Toothpicks 29.3%	Dental floss 6.4%	I don't know 21.8%	I don't use any 21.3%
Do you use any tobacco products?	Yes 16.2%	Used in the past 26.4%	No 53.7%	I do, occasionally 3.7%	
When do you usually take sugar containing snack/drink?	In between meals 16.2%	With meals 16.3%	Before going to bed 4.6%	No particular time 62.9%	

## DISCUSSION

Oral health knowledge is usually obtained from information which subsequently translates into an action. Behavior is an outcome measure when an action is sustained. Attitudes toward oral health determine the condition of the oral

cavity. Oral diseases are clearly related to behavior, and the prevalence of dental caries and periodontal disease has decreased with improvements in oral hygiene and a decrease in the consumption of sugary substances. [5] This study presents an overview of oral health knowledge, attitude,

and the behavior of population visiting department of public health dentistry at the MNR dental college and hospital, Sangareddy. The promotion of good oral hygiene is advocated and supported by the World Health bodies. [6-9]

In our study 78.2% have reported to brush their teeth once a day which is quite higher compared to a study by Christensen LB et al [10] where only 32% brushed their teeth once a day and similar reports were noticed in other studies. [13][14] Only 25% were aware that it is brushing technique that is important for better cleaning of teeth. Large populations must be taught, correct brushing techniques depending on age and oral health conditions. We have noticed in our study that many participants nearly 75% using toothpaste were unaware of the fluoride content of the paste. This is unsatisfactory and indicates lack of awareness about the content of toothpaste which should be addressed urgently. [11] In the present study, 11.5% of the participants chose their toothpaste based on the cost, 41.7% based on the advertisements, 21.3% opted for ayurvedam based toothpaste and only 25.1% looked for fluoride content in toothpaste. These findings can be compared to another Nigerian study among hospital patients, where cost, taste, and fluoride content were the major factors influencing the choice of toothpaste. [12] When mentioned if tongue scraper is essential along with a toothbrush, 47% opted No. This gives a clear picture that the knowledge pertaining to importance of tongue cleaning is highly lacking among the study population. Tongue coating, a grayish-white deposit on the tongue, is the main cause of intra-oral halitosis, a socially unacceptable condition. Dental flossing is less practiced by the study participants as only 6.4% have reported to use dental floss and when it comes to taking sugary snack/drinks alarmingly 64% have reported to take at various times in a day. This is also a point of concern as its sugary snacks/drinks that nourish the oral bacteria and lead to dental caries. One of the most

depressing response which is visiting a dentist only when there is pain. This kind of mindset has to be changed among the populations because unless this kind of attitudes diminishes among the public, desired oral health conditions cannot be achieved. Serious efforts pertaining to improving the attitudes of individuals towards dental health maintenance have to be made from each and every corner of the globe. In a developing country like India, improving oral health conditions in rural populations brings a huge difference in lives of people, thereby overall growth. 71.3% have reported to delay their dental treatment stating the most common reason to be the time factor. Taking time out of busy schedules may not be easy but the importance of oral health has to be understood as health is wealth. 54.3% of study subjects were unaware of the relationship between oral health and systemic health. A healthy oral cavity is important for overall systemic health. The ultimate way to avoid diseases of the oral cavity and other systemic conditions begins with educating patients about this relationship. [15]

## CONCLUSION

Even after the advent of various oral health programs being implemented by government and private organizations, oral health conditions of rural populations are still at stake which may relate to knowledge, attitude and behavior of people towards oral health as observed in our study. Teaching basic techniques of brushing teeth and oral hygiene practices to the rural populations brings a huge difference in terms of oral health. Focus on the importance of tongue cleaning should also be highlighted.

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