

## Assessment and Evaluation of Patient's Practice, Perception and Awareness of Dental Care among Chennai Population: A Cross-sectional Study

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**ABSTRACT:** In the past, there has been a lack of public recognition of the decline in oral health, widespread acceptance of diseased mouths, broad occurrence of oral disorders, and a lack of affordable oral health-care services. The aim of the study was to assess and evaluate the practice, perception, knowledge, and awareness on dental care amongst patients reporting to Chettinad Dental College and Research Institute, Chennai which in turn contributes to oral health awareness education and understanding the existing scenario of oral health knowledge. This study seeks to analyse patients' attitude towards dental care, both optimistically and critically. This was a cross-sectional study which involved completion of a pretested, validated structured questionnaire in both English and vernacular language by the 278 participants who attended Chettinad Dental College and Research Institute. The survey consisted of 17 closed-ended questions comprised of practice, perception and awareness-based questions. Among all the 278 study participants, only 25% of them believed that cleaning teeth at least twice a day, replacing the toothbrush once in three months, using mouth rinse and visiting the dentist once in six months was necessary. Most of the participants agreed that their dental problems had reduced due to the periodic dental visit, periodic scaling had improved their oral health, oral health care is more important as that of the general health care and also general health can be compromised due to dental diseases. About 48.6% of the participants did not have any concern regarding the radiographic exposure and 34.9% of them disagreed that dental pain can be treated by medications itself. Majority of the participants were not aware of variety of dental treatments available, dental radiographs and recent advancements in dentistry. Our study results showed that dental health perception among the participants was better compared to dental practice and awareness. Henceforth, the introduction of educational interventions should enhance the dental care literacy among the general population.

**Keywords:** Oral health awareness, oral hygiene practices, dental treatment, health education.

### INTRODUCTION

Oral diseases are to be considered as important as those of systemic nature as they have an impact in maintaining the quality of life. However, those who are knowledgeable and positively reinforced follow better oral hygiene practices to maintain an optimal oral health. The remaining group of population that hardly pays any attention to their dental health may do so for a various of reasons (Watt *et al.*, 2019; Paul *et al.*, 2014; Fejerskov *et al.*, 2013; Steele, 2009). An individual's socioeconomic situation is one of the important factors comes into consideration followed by lack of education, environment, lifestyle. However,

some individuals care to get dental treatments done, but the treatment cost is found to be a burden for receiving dental care. The other aspects found to be inaccessibility to available dental health services, unavailability of time for dental care due to work pressure, and the attitude of visiting the dentist only when the dental disease progresses and result in pain (Shekar *et al.*, 2011; Kinirons and McCabe 1995). Besides these reasons, the lack of knowledge about preventable nature of dental diseases, false perception and various treatment options also does not allow the individuals to seek dental care (Szatko *et al.*, 2004). Keeping this in mind, the present study was done to determine the degree of knowledge, perception and

awareness on dental health and treatments are worth as they provide a complete picture of oral hygiene status of individuals and give a comprehensive idea for conducting oral health care programs among those population.

## MATERIAL AND METHODS

The present cross-sectional study was performed on the out patients reporting to Chettinad Dental College and Research Institute, Kelambakkam, Chennai. A pilot study was conducted after receiving approval from the Institutional Ethics Committee of Chettinad dental college and Research Institute. A structured questionnaire which was provided in both English and vernacular language among 20 voluntary participants and the questions were validated based on their level of knowledge towards dental treatment was found to be 55%. Based on which the sample size was calculated as 278 at 95% of confidence interval.

Patients aged between 18 to 65 years were included in their study after obtaining the informed consent. The study participants were included from various educational backgrounds such as students, housewives, farmers, driver, professor and other professionals were included. Validated questionnaire consisting of 17 questions grouped into 3 parts was given to a total of 278 participants. The first part consisted of 7 questions to assess the practice. The second part consisted of 8 questions to assess the perception, the questions were answered on a 5-point Likert scale and third part consisted 3 awareness-based questions.

**Statistical Analysis.** The obtained data was entered in MS Excel sheet. The descriptive statistics were analysed by IBM SPSS version 20.0 (IBM Corp. Released 2011. IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp). Frequency and Percentage was used to summarize the responses throughout the study.

## RESULTS

Of all the 278 participants, 53.6% were female and 46.4% were male. The participants aged from 18 to 65 years were split into 18 to 30 (31.7%), 31 to 40 (30.9%), 41 to 50 (21.9%) and 51 to 60 (15.5%) age groups respectively. Most of the study participants belonged to 18 to 30 age group and the least participants in the 51 to 60 age group (Fig. 1).

**Practice.** Most of the participants answered that they brushed once a day (64.4%), replaced their toothbrush once in every six months (46.8%) and never had used mouth rinses (36%) in their life. Most respondents (50.7%) indicated that the sole reason they went to the dentist only when there was dental issue (pain) and 46% of them cited lack of time as the reason for not being otherwise. About half of the participants (58.3%) felt uneasy while waiting at the dental office. Out of the all-study participants 48.6% expressed anxiety to the radiographic exposures and 51.4% of them reported that they had never had undergone radiographic procedures on them (Table 1).

**Perception.** Of the total participants, 52.5% of them concurred that going to the dentist had lessened the dental issues. A little over 34.9% of the participants disagreed that the dental discomfort could be managed by medications alone without the need of any dental procedures and 40.3% of them claimed that the dental procedures were painful. About 45.7% of them felt periodic scaling enhanced their dental health and also 46% participants believed that dental diseases can have an impact on their general health (Table 2).

**Awareness.** Most of the participants (45.7%) stated that they were unaware of the various dental treatment modalities and 67.3% were unaware regarding the recent advancements in the field of dentistry. About 58.6% of them were unfamiliar about the dental radiographs (Table 3).

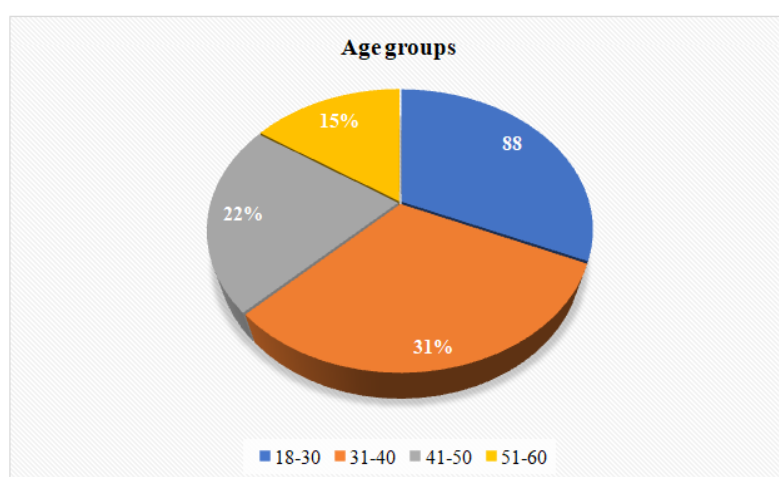


Fig. 1. Distribution of participants according to the age groups.

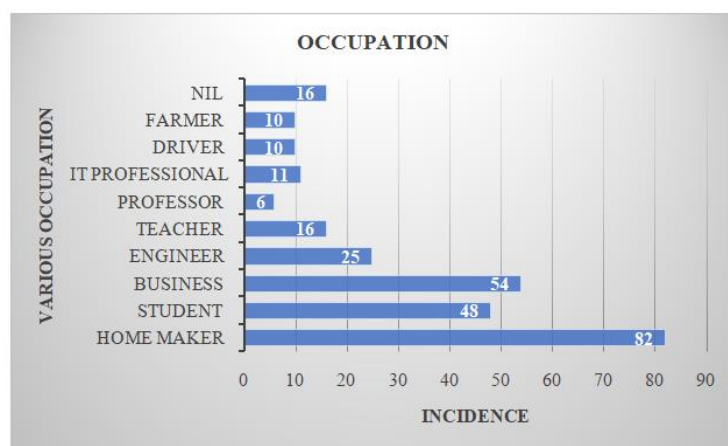


Fig. 2. Distribution of participants according to their occupations.

Table 1: Responses for Practice-based question.

How many times a day do you brush your teeth?	<b>Once daily</b>	<b>Twice daily</b>	<b>After every meal</b>	-
	64.4%	33.5%	2.2%	
How often do you change your toothbrush?	<b>Three months once</b>	<b>Six months once</b>	<b>Less than 3 months</b>	<b>Less than 6 months</b>
	27%	46.8%	18.3%	7.9%
Do you use mouth rinse regularly?	<b>Yes</b>	<b>No</b>	<b>Rarely</b>	<b>Sometimes</b>
	12.2%	36%	31.3%	20.5%
How often do you visit your dentist?	<b>When I have a dental problem</b>	<b>Once in 6 months</b>	<b>Once in a every year</b>	<b>Never</b>
	50.7%	16.5%	16.2%	16.5%
If not, what is the reason for not visiting the dentist?	<b>High cost</b>	<b>Lack of time</b>	<b>Fear of drill</b>	<b>Fear of needle</b>
	20.1%	46.0%	25.2%	8.6%
How do you feel while waiting at the dental office?	<b>Relaxed</b>	<b>A little uneasy</b>	<b>Anxious</b>	-
	16.9%	58.3%	24.8%	
Have you experienced radiographic procedures before?	<b>Yes</b>	<b>No</b>	<b>Not sure</b>	-
	28.1%	51.4%	20.5%	
Do you feel apprehensive about radiograph exposure?	<b>Yes</b>	<b>No</b>	<b>Don't know</b>	-
	10.4%	48.6%	41%	

Table 2: Responses for Perception-based question.

	<b>Strongly agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly disagree</b>
Visiting dentist periodically has reduced the dental problems	14%	52.5%	33.5%	-	-
Dental pain can be treated by medications itself without requiring any dental procedure.	2.5%	23.4%	34.9%	34.9%	4.3%
Dental treatments are painful	5%	35.6%	40.3%	16.9%	2.2%
Periodic scaling (professional tooth clean-up procedure by dentist) improves your dental health	9.7%	45.7%	43.9%	0.7%	-
Oral health care is as important as general health care	10.8%	48.6%	38.8%	1.8%	-
Dental diseases can have effects on the general health	11.5%	46%	40.3%	1.8%	0.4%

**Table 3: Responses for Awareness-based question.**

	Option A	Option B	Option C
Are you aware about various dental treatments?	<b>Yes</b> 41.4%	<b>No</b> 45.7%	<b>Don't know</b> 12.9%
Are you aware about newer treatment modalities in dentistry?	<b>Yes</b> 13.3%	<b>No</b> 67.3%	<b>Not sure</b> 19.4%
Are you aware about dental radiographs?	<b>Yes</b> 24.5%	<b>No</b> 58.6%	<b>Not sure</b> 16.9%

## DISCUSSION

Dental care is significantly overlooked in developing countries like India. There is a deficit of knowledge regarding the dental diseases, dental practices, newer trends in dentistry, and individuals understanding of all these concerns. Patients' perception is formed by their beliefs, since many of them believe that receiving a dental treatment is excruciatingly unpleasant, and thereby negligence of their oral health (Singh *et al.*, 2013). Hence, attempts were made in this study to assess the practice, perception and awareness of dental care by out-patients attending the dental hospital (Farghaly *et al.*, 2019). In this study, most of them responded that they brushed their teeth once a day and only one-third of the patients brushed at least two times a day which correlated with the other study findings (Marneedi *et al.*, 2020; Villa *et al.*, 2012; Al-Otaibi *et al.*, 2003; Christensen *et al.*, 2003). It was also revealed that two-fourth of the participants replaced their tooth brush once in six months and one-fourth of them changed once every three months which was in agreement with other studies (Marneedi *et al.*, 2020; Paul *et al.*, 2014; Dasgupta *et al.*, 2013; Praveen *et al.*, 2011; Zhu *et al.*, 2005). Henceforth, more oral health campaign should be undertaken to deliver necessary dental health messages to the general population regarding the significance of routine dental check-ups, the necessity of brushing at least twice a day.

Majority of the study participants responded that they haven't used mouthwash though 12.2% of them said they used mouthwash habitually which supported with study findings (Paul *et al.*, 2014; Jain *et al.*, 2012). Concerning visit to the dentist, the results were in agreement with Paul *et al.* (2014). About half of the study participants stated that they consulted dentist only when experienced dental problems whereas 16.5% participants visited dentist every half-yearly and most of them claimed that lack of time as the reason, they didn't visit the dentist. Hence, it is necessary to raise awareness to ensure the reduction of gum diseases and early loss of teeth. About half of the patients were dissatisfied with the length of time they had to wait at dental office which was similar to the study findings (Jain *et al.*, 2012). Maximum number of the participants mentioned that they had never received any radiographic procedures previously and felt anxious about the radiographic exposure which correlated with Al Faleh *et al.* (2020). Most of this radiation related information were obtained by the patients are misapprehended. Considering the above fact, dental professionals should address and educate all the patients concern about safety prior to the radiographic

investigations in order to diagnose, plan treatment and enhance the success of treatment (Al Faleh *et al.*, 2020). Most of the study participants had disagreed (34.9%) on the fact that dental pain can be managed with just medications itself without requiring a dental procedure. Our study revealed that about 45.7% of the participants agreed that routine scaling improved their dental health. Over 48.6% of them were conscious about the association between oral and systemic health, as well as the possibilities that dental diseases can have impact on the general health. The above statements prove us that most of the study participants perception towards dental treatment has been changed over the recent years showing positive attitude towards dental care (Tabassum *et al.*, 2017; Zhu *et al.*, 2005).

In this current study, most of the participants were not familiar with various dental procedures, newer treatment modalities or dental radiography. Therefore, educating the overall population about all the dental information will encourage individuals to have a optimistic approach and behaviour towards dental care (Steele, 2009).

## CONCLUSIONS

The findings of this current study highlight that dental health perception among the study population is better whereas the awareness and practices are poor and needs to be improved. According to this, public knowledge of broad systemic disorders is much more widespread than that of general dental health care. Additionally, the media has a big impact on how the general public views systemic health care, which can be strengthened to raise awareness of the need for dental care as well. Health education attempts to improve awareness thereby change behaviours by altering the individual's oral health practice. Hence, periodic comprehensive oral healthcare programs should be conducted by the professionals for the general population targeting community and schools. To enhance dental practices and raise awareness of the need to maintain acceptable oral health standards, well-structured dental health education programmes must be initiated by the government in rural as well as urban developed and implemented on a regular basis.

## LIMITATIONS

Our study to assess and validate the patients practice, perception and awareness of dental care showed that patient's perception towards dental health outshined over the dental practice and awareness which was poorly appreciated among the study participants. Considering this was a cross-sectional study conducted



in a hospital OPD, a community-based study would have been preferable for more comprehensiveness. Hence, we propose that further systematic community-based studies to be carried out in other geographical locations.

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