

## Attitudes of Patients Towards Replacement of Missing Teeth at Manubhai Patel Dental College, Vadodara

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### ABSTRACT

**Background:** In India, the attitude of patients towards the replacement of teeth has not yet been investigated as much as in Western countries. Therefore, the purpose of our study was to conduct a survey to assess patients attitudes towards the replacement of teeth among those who reported to Manubhai Patel Dental College, Vadodara, Gujarat, India.

**Methods:** A cross-sectional survey to determine patients attitudes towards replacement of teeth was conducted. 144 subjects were examined by a clinician (70 males and 74 females). A fourteen item, closed-ended questionnaire in two parts was recorded. This was followed by a clinical examination in which the subject's chief complaints were recorded and existing/missing teeth were charted.

**Result:** When subjects were asked if they were aware whether they could replace their missing teeth, 93% of them responded "yes," while 7% responded "no." Out of those who responded "no," subjects were found to be within different socio-economic classes and reported various reasons for not replacing their missing teeth such as financial reasons, lack of impairment in function, or lack of time.

**Conclusion:** In this study, a higher number of patients stated that the artificial teeth were equivalent to natural teeth. Attitudes of patients should be taken into consideration to improve patient compliance with acceptance of the prostheses. An emphasis on awareness should also be considered as most patients did not have the knowledge of the importance of replacing their missing teeth other than for esthetics or mastication purposes, especially in the lower socio-economic classes.

**Keywords:** Artificial Teeth, Attitudes, Awareness, Missing Teeth, Natural Teeth, Replacement

### Introduction

The face and smile plays an important role in the maintenance of positive attitudes about oneself. Teeth play an integral part in the maintenance of a positive self-image, so loss of teeth results in significant disabilities, which profoundly disrupts social activities. Tooth loss is very traumatic and is a serious life event that requires social and psychological readjustment.

The mentality towards the loss of teeth is gradually changing, as patients are now becoming more aware of the dental treatments available to them. Thus it is essential to evaluate their pre-existing awareness, preference of treatment and need before starting treatment as their expectations may influence their treatment options. Research has shown that several non-disease factors such as attitude, behaviour, dental attendance, and characteristics of the health care system play an important role in the decision to become edentulous. In addition, a significant relationship exists between the state of edentulousness and financial concerns that are usually associated with low socioeconomic classes. Thus it is reasonable to conclude that edentulism is due to a variety of factors such as; cultural, educational background, financial, and dental disease attitudinal determinants, as well as treatment received in the past<sup>2</sup>.

In its broadest sense, Prosthodontics is concerned with the replacement of partial or complete loss of teeth and oral function due to tooth or tissue damage<sup>3</sup>. Prosthetic treatment involves the replacement of few missing teeth in a healthy but incomplete dentition, the functional replacement of nearly all teeth in a badly damaged dentition, or restoring function by means of removable or fixed partial dentures, implants, complete dentures, or overdentures<sup>4</sup>. With the rapid improvement in oral health and the reduction of edentulism in many countries, increasing numbers of people are aware of the advantages of retaining more teeth later in life. Knowledge of subjects regarding prosthodontic treatment may play a role in their acceptance of the prosthesis<sup>5</sup>.

In India, the attitude of patients towards replacement of teeth has not yet been investigated as much as in Western countries. Therefore, the purpose of our study was to conduct a survey to assess attitudes towards the replacement of teeth among patients who reported to Manubhai Patel Dental College, Vadodara, which is located in the western Indian state of Gujarat. This institute provides selective basic dental treatments free of cost as a service to society.

## Materials and Methods

A cross-sectional survey to determine patient's attitudes towards the replacement of teeth was conducted. Ethical clearance and approval was obtained from Bhavnagar University before conducting this study. A fourteen-item closed-ended questionnaire was recorded, followed by a clinical examination in which the chief complaints were noted and existing and missing teeth were charted. Missing teeth were classified as anterior and posterior, so that a distinction could be made between esthetic and functional needs. Since premolars are important for both esthetics and function, they were included in both classifications. At least one missing anterior tooth (incisor, canine or premolar) constituted a need for esthetic restoration; at least three missing posterior teeth (premolar, first molar, second molar) constituted a need for functional restoration.

The questionnaire consisted of two parts. Part A included questions of sociodemographic factors based on Kuppaswamy's socioeconomic classification, which includes education level, monthly income and occupation, to classify the socioeconomic status of the patients. Accordingly, the subjects were divided into class I to class V: Upper (I), Upper Middle (II), Lower Middle (III), Upper Lower (IV) and Lower (V). Part B included six questions designed to determine the patient's attitudes regarding replacement of teeth. Of these six questions, four were on a three-point scale (yes, no, do not know). The remaining two questions had four options with the first being: financial reason, did not feel need, no time, did not know and the second being: appearance, speech, function, and combination.

All the patients who reported to the Department of Prosthodontics at Manubhai Patel Dental College,

Vadodara, over a period of two months with at least one missing tooth (excluding third molars), were included in the study after they were informed of the nature of the investigation and they had given their consent.

## Result

The questionnaire was answered by 144 subjects, which included 74 females and 70 males. About 38.2 percent of subjects were illiterate, followed by 22.2 percent of subjects had completed a primary school education, 29.2 percent of subjects had completed a high school education and 10.4 percent had completed some kind of higher education. Subjects of different socioeconomic classes reported with 13.2 percent of them belonging to upper class, 11.1 percent of upper middle class, 20.1 percent of middle/lower middle class, 36.1 percent of lower/upper lower class and 19.4 percent of lower class (Table 1). Approximately 6.9 percent of subjects were not aware they could replace their missing teeth and 93.1 percent were aware they could replace their missing teeth. Reasons for not replacing missing teeth included financial reasons which constituted 36.7 percent of subjects, 43.3 percent of subjects did not feel the need to replace their missing teeth and 20 percent of subjects did not have the time to come to multiple appointments (Table 2). The reasons for replacement of teeth varied with the socioeconomic class and included 32 percent of subjects replacing their missing teeth due to appearance, 12 percent due to speech, 19 percent due to function and 37 percent due to a combination of these factors (Figure 1). When asked whether artificial teeth are equivalent to natural teeth in appearance and function, 25.7 percent of subjects answered "no," 59 percent of subjects answered "yes," and 15.3 percent of subjects answered "do not know" (Table 3).

**Table:1**

Socio-economic Class	Subjects	Valid Percent
Upper	19	13.2
Upper Middle	16	11.1
Middle/Lower Middle	29	20.1
Lower/Upper Lower	52	36.1
Lower	28	19.4
<b>Total</b>	<b>144</b>	<b>100</b>

**Table:2**

Reasons for not replacing the missing teeth?	Subjects	Valid Percent
Financial reasons	11	36.7
Did not feel the need	13	43.3
No time	6	20
<b>Total</b>	<b>30</b>	<b>100</b>
Missing	114	

Table:2

Do you think artificial teeth are equivalent to natural teeth in appearance and function?	Subjects	Valid Percent
No	37	25.7
Yes	85	59
Do Not Know	22	15.3
<b>Total</b>	<b>144</b>	<b>100</b>

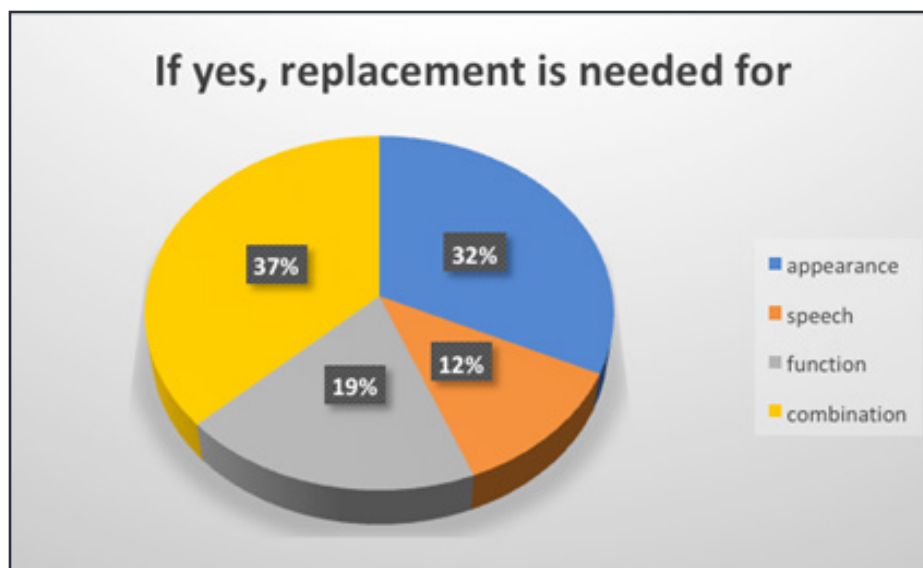


Fig. 1

## Discussion

In India, epidemiological data on patients attitudes towards tooth replacement is somewhat limited. Therefore, an attempt was made to find out the attitude towards replacement of teeth among patients reporting to Manubhai Patel Dental College, Vadodara. One hundred and forty-four patients reported for the study.

Most of the patients belonged to the forty-six to fifty-five years age group. There were fewer patients in the sixty-six to seventy-five and seventy-six to eighty-five years age groups because geriatric patients give a lower priority to dental health. Older people make extensive use of medical facilities, but they seem to underuse dental facilities. Mobility problems, lack of information, and misconceptions about the value of dental visits have been mentioned as contributing to this apparent disinterest in dental care among geriatric patients<sup>1</sup>. Perceptions associated with increasing age such as feelings that they are too old to adapt to dentures and lack of interest in esthetics may also be contributory factors for low perceived needs in the higher age group<sup>2</sup>.

The availability of free denture treatment at Manubhai Patel Dental College, Vadodara, may have influenced the results of this study as a majority of the patients reported from the Class IV socioeconomic status. Individuals with greater financial resources have better access to dental care. Those who have attained higher levels of education are more apt to have greater financial opportunity and to subsequently place a higher priority on dental health. Lack of education about the importance of oral health, the need for preventive services, and the consequences of neglect appear to constitute a significant barrier to dental health care<sup>3</sup>.

A majority of the patients reported that they had reserved money for health care, which is more likely to have been for general health rather than oral health due to most subjects not having dental insurance at their disposal. In India, overall health insurance coverage is low with less than 10 percent of the population is estimated to have access to health insurance. For the most part, the health care demands of the rural poor and informal workers have been largely unmet. However, several initiatives and experiments have been tried.

Since the patients in our study had reported on their own to the institute for replacement of teeth, it was not surprising to find that 93% subjects expressed that missing teeth had to be replaced. The results obtained in our study were in similar to the findings of Akeel<sup>4</sup>, whose study found only 82% of the subjects perceived a need for tooth replacement. The difference in the results may be because the investigator had selected subjects from the screening clinic of the King Saud University College of Dentistry.

The majority of the patients in our study gave the reason that they 'did not feel the need to replace missing teeth' followed by financial reasons. Cost was the main barrier for obtaining dentures and is in agreement with the findings of Macek et al<sup>5</sup>. Very few patients expressed lack of knowledge regarding replacement of teeth.

Osterberg et al<sup>6</sup>. reported that esthetic rather than functional factors determined an individual's subjective need for the replacement of missing teeth. The demand for replacement of missing teeth is strongly related to the position of the missing teeth. Replacement of missing posterior teeth and cosmetic dental treatment in general, depend on the perception of the patient. Even in countries with highly developed dental care systems, open spaces in the premolar and molar regions are well accepted by people of all ages. The prospect of a good esthetic result frequently motivates the patient to wear a new denture, as esthetics can be more important than function for many individuals.

In our study, patients who had lost teeth only in the anterior segment needed tooth replacement for esthetics; those who had lost teeth only in the posterior segment needed tooth replacement for mastication; and patients with teeth missing in both the anterior and posterior segment needed tooth replacement for mastication. These findings could be explained by the fact that most people in India are aware of only the mastication function served by their teeth. They are less aware of the esthetic and phonetic functions of teeth. Moreover, the geriatric population gives less priority to esthetics and more importance to mastication, according to Leake et al<sup>7</sup>.

The subjective need for prosthetic replacement of teeth, particularly posterior teeth, is often low because such replacements seldom improve the individual's social status. Moreover, as tooth loss usually occurs gradually over a period of time, it allows the individual to adapt to the situation with no apparent complaints. Therefore, many older individuals may not perceive a need for dentures in spite of losing significant numbers of teeth because they have adapted to their missing teeth over time<sup>2</sup>.

When a question regarding equivalence of artificial teeth to natural teeth was asked, it indirectly represented the

expectation of the patient. Expectations represent attitudes that are complex and often difficult to change. In our study, a higher number of patients said that artificial teeth were equivalent to natural teeth. They might have perceived this because of the matching of the color and anatomy of the artificial teeth to the natural teeth, the resiliency of the acrylic tooth material, or the care taken by the operator during tooth selection. The sense of touch may have been the reason for 26% percent of the patients expressing differences between artificial and natural teeth.

A majority of the patients knew that artificial teeth create no problems. Patient education before, during, and after prosthodontic treatment may have prevented the expected problems with the artificial teeth or prosthesis. Patients perceptions regarding replacement of teeth may have been better appreciated if differences in attitude among denture wearers and non denture-wearers had been analyzed in our study.

An appreciation for the perceptions and attitudes of patients towards the replacement of teeth would prepare a prosthodontist more completely to provide a satisfying prosthesis. Through increased awareness of patient expectations, prostheses can be planned, made, and placed in harmony with the hard and soft oral tissues and in harmony with the patient's expectations as well.

Future studies should determine how the dental profession and society might address an increased demand for services among people who have limited financial resources. These studies would provide important insights into the various types of assistance and insurance programs that might be designed and implemented to benefit older adults. Also, studies can be conducted that take into consideration various cultural aspects of a wider population to learn their influence on attitudes towards replacement of missing teeth.

## Conclusion

The results concluded from this study showed subjects from various socioeconomic classes with a majority of them being from the lower/upper lower, lower, middle/lower middle classes. This was directly related to their knowledge and/or awareness that missing teeth could be replaced by artificial teeth as well as the amount which could be allocated towards their health care, based on their monthly salaries. The findings from the questionnaire may serve as a true evaluation of the general population in this specific region of Gujarat and their attitudes towards the replacement of their missing teeth. This assessment of attitudes is important for patient acceptance and serves as a useful tool in educating the patient about the reasons

behind the need for replacement. The results obtained demand to raise more awareness regarding the need for replacing missing teeth, whether artificial teeth are a suitable equivalent to their natural counterpart, as well as clarifying patients' doubts on why they may not want to replace their missing teeth, because this perception can be easily changed with proper guidance.

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