

# **An Evaluation of Patients' Decision towards Replacement of Missing Teeth at Government Dental College Aurangabad, India**

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## **I. Introduction**

Today, a modern view of dentistry is one that recognizes the emotions or psychological essence of the patient in relationship to the dental situation, dental health care, and, especially, esthetics. Teeth play an important role in the maintenance of a positive self-image.

The loss of teeth results in significant disabilities, which can profoundly disrupt social activities. Tooth loss is very unpleasant and is regarded as a difficult life event that may require a complicated treatment. It has been suggested that adverse reactions towards edentulousness as well as the individuals' feelings about dentures are important for the acceptance of the new dentures.

The attitude towards tooth loss is changing. Adults desire better treatment for their dental health than in the past. Research has demonstrated that factors like attitude, behavior, dental attendance, and characteristics of the health care system may influence the decision towards the treatment. It is therefore reasonable to conclude that edentulism is due to various combinations of cultural, educational background, financial, and dental disease attitudinal determinants, as well as to treatment received in the past.

In general, the three major areas that determine the acceptability of treatment are comfort, function, and esthetics. Mechanical and biological factors determine comfort and function. However, a variety of social and cultural influences, attitudes, and beliefs may determine patients' acceptance of the esthetic aspects of prosthodontic treatment. More emphasis is being placed on patient-mediated concerns in prosthetic treatment planning. Consequently, more information has been published on realistic treatment needs and socio-dental treatment needs of different populations.

In India, very few investigators have assessed the attitude of patients toward replacement of teeth. In addition, results from such studies cannot be generalized as population sample varies according to geographical location. Therefore, the purpose of this study was to assess decisions toward replacement of missing teeth among patients who reported to our institute, Government Dental College Aurangabad which is located in the Marathwada region of the state of Maharashtra in the central region of India.

## **II. Materials and Methods**

A cross-sectional survey was carried out to find out patients' attitudes about replacement of teeth. Ethical clearance was obtained from the Institutional Ethical Committee.

This survey was performed with the help of a pre-validated questionnaire in two parts followed by a clinical examination in which the chief complaints were recorded and existing and missing teeth were charted.

Part A consisted of demographic information such as name, age, gender, educational status, marital status, and monthly income of the patients. This part of the survey facilitated analysis of decision-making process adopted by the patient.

Part B of the questionnaire consisted of a close-ended multiple choice question to be filled by the patient. It was prepared in English as well as in the regional language Marathi. Of these four questions, three were on a three-point scale (yes, no, do not know), and the last question had seven options.

All the patients reporting to the Department of Prosthodontics for the period of 30 days were evaluated. They were informed of the nature of the investigation and were included in the study after they gave their consent. Collected data were statistically analyzed using Chi-square test at a significance level of  $P < 0.05$ .

## **III. Results**

The questionnaire was answered by 200 patients, which included 110 females and 90 males; 93 patients were completely edentulous, 107 were partially edentulous; (Table 1). The distribution of the patients according to their age is given in Table 2.

All 200 patients stated that they had missing teeth that needed to be replaced. A total of 69 were in a waiting period for soft tissue healing after extraction of tooth/teeth.

176 patients (88%) rejected the treatment plan and chose alternate plan. 24 patients (12%) accepted the proposed treatment plan.

The number of patients willing for implant supported prosthesis was 21 (10.5%) and 161 patients (80.5%) opted for fixed prosthetic treatment. While 18 patients (9%) were satisfied with removable prosthesis.

The causes of respondents declining the proposed treatment plan are listed as 7 reasons in Table 5. Top 3 reasons included high expenditure (58.5%), long time of the treatment (15.3%) and need of quick treatment (9.7%).

**Table 1:** Distribution of patients according to gender and dentition status

Characteristic	Number of Patients	% of Patients
Male	90	45
Female	110	55
Completely edentulous	93	46.5
Partially edentulous	107	53.5

**Table 2:** Distribution of patients according to age

Age	Number of Patients	% of Patients
18 - 30	59	29.5
31 - 40	40	20
41 - 50	47	23.5
51 - 60	32	16
61 - 70	15	7.5
71 - 80	7	3.5

**Table 3:** Distribution of patients according to expectations about type of treatment

Type of treatment	Number of Patients	% of Patients
Removable prosthesis	18	9
Fixed prosthesis	161	80.5
Implant supported prosthesis	21	10.5

**Table 4:** Distribution of patients according to acceptance or non-acceptance of the treatment plan

	Number of Patients	% of Patients
Accepted	24	12
Not Accepted	176	88

**Table 5:** Reasons for not accepting the proposed treatment plan

Reason	Number of Patients	% of Patients
Not convinced about the plan	4	2.3
Treatment is time consuming	27	15.3
Treatment is expensive	103	58.5
Do not feel need of the treatment	11	6.3
Need quick treatment	17	9.7
Bad past dental experience (fear)	5	2.8
Have to travel long distance for treatment	9	5.1

#### IV. Discussion

Tooth loss is associated with esthetic, functional, phonetic, psychological, and social impacts for individuals, and hence patients express a desire to replace their missing teeth. Various treatment options are available for prosthetic reconstruction of teeth, which may be removable or fixed prosthesis. Removable prosthesis includes complete dentures, interim and cast partial dentures, whereas fixed prosthesis includes crowns, bridges, and implants.

The choice of prosthesis is a shared decision-making process between the dentist and the patient. Many investigators have studied the factors affecting clinical decision-making regarding choice of prosthesis by the dentists. Patients' satisfaction with prosthetic treatment once the treatment has been completed has also been studied. In literature, there are many research available which suggest effective training of dental graduates for better decision-making in prosthodontics.

However, the patients' decisions regarding the choice of treatment before beginning of treatment are less evaluated in the literature. This data is related to whether patients accept the best suitable treatment plan given to them by dentist or chose an alternative treatment and the reasons for their choice. Reasons can be many including age, cost, time, and fear of treatment.

The findings of the present study indicated that mostly females visited the department (55%), which points toward the fact that they are more aware of their dental prosthetic needs, confirmed further in this study [Table 1].

Majority of patients declined proposed treatment plan (88%) as seen in Table 4. The reasons given by them for doing so are enumerated in Table 5. Out of these, "high expenditure" was, overall, the most common reason people opted for when they chose to decline the treatment. Nearly, all of the people who opted for this reason were advised an implant supported prosthesis, but they opted for a fixed or removable one, which is a cheaper alternative.

The patients' who opted for the reason "do not feel need of the treatment" were all men which means that men are more likely to be unaware of the benefits of treatments.

Nearly, 9.7% patients' wanted quick treatment and they were not ready for time consuming treatments like fixed prosthesis or implant supported prosthesis.

Individuals with a bad past dental experience are more "fearful" of the treatment than the one with good dental experience. However, individuals with "no past dental experience" most commonly cited "fear" as the reason, which means that there is a dire need of basic awareness and confidence-building measures about various dental treatment modalities.

Most of the patients (80.5%) wanted fixed prosthesis when they were asked about their expectations for the type of the treatment. This shows that the patients lack the basic knowledge about their oral health and desire fixed prosthesis irrespective of the condition of remaining dentition and health of the oral tissues.

More studies from the patient's perspective should be conducted so that we can formulate better policies which will aid in achieving the ideal treatment plan for the patients.

## V. Conclusions

Within limitations of this study, we can conclude that:

- Most of the patients rejected the proposed treatment plan and accepted the alternate plan
- High expenditure is the most common reason for this rejection
- Females were more fearful regarding dental prosthetic treatment than men
- Men were less aware of the benefits of the treatment
- Therefore, to solve these issues, timely intervention in the form of efforts to increase prosthetic awareness of general population, provision of insurance policies, and research on economical materials is required.

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