

## Original Research

### Satisfaction and Patient related outcomes in patients with Fixed Partial Denture- A Questionnaire Based Original Study

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#### ABSTRACT:

**Background and Aim:** The aims of the present study were to evaluate the level of patients' expectations and satisfaction with fixed prostheses and to evaluate the post-operative complaints of patients having crowns and fixed partial dentures by means of a simple questionnaire. **Materials & Methods:** The study was carried out in patients who visited Rama Dental College and Hospitals as outpatients from January 2018 to February 2020. A total of One hundred patients were randomly selected and interviewed. A questionnaire was prepared which comprised of 10 questions pertained to the nature of complaint, number of units involved, and the type of materials used in fabrication of prosthesis etc. All were given a set of 10 questions and asked to respond. Response was recorded and data was processed statistically to estimate results. **Results:** The most common problem encountered was looseness and repeated dislodgement. Other complains such as food impaction, inability to maintain oral hygiene, sensitivity, pain and esthetic issues were also encountered. 70.1% patient were satisfied with fixed prosthesis. **Conclusion;** counseling the patients regarding unrealistic expectations should be taken care of right from the diagnosis and treatment planning stage to ensure high satisfaction level and overall success of the fixed prosthodontic treatment.

**Key Words:** Fixed partial dentures, Post-operative complaints, Crowns, Evaluation.

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#### INTRODUCTION:

The loss of teeth can impair function, esthetics and phonetics hence it should be restored with prosthesis. Despite the ongoing progress in the offered oral health service worldwide which lead to the drop in the number of partially dentate individuals, the demanding care has in reality widened.<sup>1</sup> Numerous prosthetic options are available for tooth replacement such as removable partial denture, fixed partial denture (FPD), or dental implant.

Fixed prosthodontics can be utilized to reestablish single or different teeth, crossing zones where teeth have been lost. By and large, the primary favorable circumstances of fixed prosthodontics when contrasted with direct restorations is the predominant quality when

utilized as a part of large restorations, and the capacity to make an aesthetic looking tooth. Likewise with any dental rebuilding, standards used to decide the proper reclamation includes thought of the materials to be utilized, degree of tooth demolition, orientation and area of tooth, and state of neighboring teeth.<sup>11</sup> Fixed partial denture (FPD) is characterized as a partial denture that is established to regular teeth or roots which outfit essential help to the prosthesis. FPD is indicated in short span edentulous arches, presence of sound teeth that can offer adequate help nearby the edentulous space. FPD are contraindicated in conditions with huge measure of blood loss as in injury, young teeth with vast pulp chambers, in periodontally traded off patients, in long span edentulous and bilateral

edentulous spaces. Medically and mentally compromised patients who can't coordinate to delicate medicines and furthermore in extremely old patients. Each prosthetic device has its specific advantages and disadvantages. Fixed prosthodontic treatment can vary from a restoration of a single destructed tooth with a crown, replacement of one or more missing teeth, with a conventional tooth-supported FPD, an implant-supported restoration, or a more sophisticated prosthesis for a number of teeth or for a whole dental arch.<sup>2</sup>Most of the time patients reported with post cementation complaints and complications in their fixed prosthesis, especially when the prosthesis was cemented on teeth with vital pulp. The incidence of post cementation complaints and complications is often underestimated by most clinicians. Knowledge regarding the clinical complications that can occur in fixed prosthodontics enhances the clinician's ability to communicate realistic expectations to patients, and plan the time intervals needed for post-treatment care.

The present study was conducted to assess common complications associated after placement of fixed partial denture. Here authors have genuinely attempted to explore the existing outcomes by processing their responses generated through pre-framed questionnaire.

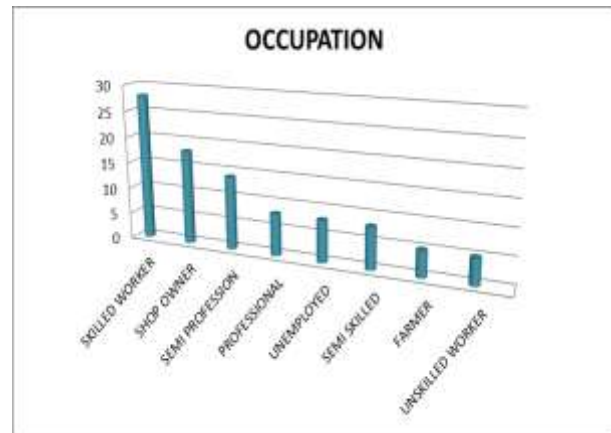
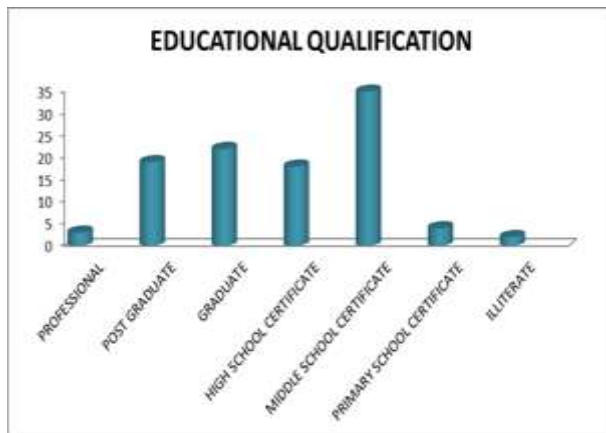
**MATERIALS AND METHODS**

The study was carried out in patients who visited Rama Dental College and Hospitals as outpatients from January 2018 to February 2020. All patients wearing fixed prosthesis (crowns, veneers, FPD) were invited to participate in this study (500 patients). A total of One hundred patients were selected according to oral health and interviewed. Verbal informed consents were obtained from the participants. Self-reported questionnaires were administered to patients wearing fixed prosthesis. The questionnaire was adjusted from similar undertaken surveys.

VARIABLES		NUMBER
AGE(Years)		45±10
Gender	Male	50
	Female	50
Types of FPD	With anterior teeth	35
	With posterior teeth	40

A questionnaire form was designed to determine the most common problem associated with fixed prosthesis. The questionnaire involved information about gender, age, type of material and based on related problems. We have proceeded with questionnaire based study model as they are extremely useful to obtain detailed information about personal and group perceptions and opinions. Furthermore, they also provide a broader range of information with better clarification.

The questionnaire included a unit on sociodemographic data comprising sex, age, and level of education.



**POST OPERATIVE COMPLAINT BASED QUESTIONNAIRE**

QUESTIONS	YES	NO
1. LOOSENESS AND REPEATED DISLODGEEMENT	54%	46%
2. UNABLE TO CHEW	17%	83%
3. FOOD GET STUCK	15%	85%
4. COLOR FADED AWAY	36%	64%
5. BREAKAGE OF PROSTHESIS	18%	82%
6. BREAKAGE OF TOOTH UNDER CROWN	36%	64%
7. PAIN UNDER PROSTHESIS	30%	70%
8. ARE YOU ABLE TO MAINTAIN PROPER ORAL HYGIENE	48%	52%
9. BAD BREATHE	20%	80%
10. PROBLEM WITH ESTHETICS	25%	75%

Results thus obtained was tabulated and subjected to statistical analysis

**RESULTS:**

The collected form involves 100 patients of which 50 were males and 50 were females having a male to female ratio of 1:1. The age distribution for the total patients ranges between 21-55 years of age. The number of single crown was found to be 66% and that of bridge wearers was 34%, the ratio being 1.94:1. Among these patients 70% of them had never replaced their prosthesis, 28% of them replaced once and 2% had replaced twice.

Regarding the nature of problems faced with the FPD and crown wearers, 54% of them reported with looseness and repeated dislodgment, whereas 46% of them had no such complaints. The second most common problem encountered with the patients was inability to maintain proper oral hygiene. Nearly 48% of the patients found it difficult to maintain oral hygiene, 15% of the patients reported with complaints of food impaction, and 30% of them had complaint of pain under the prosthesis. Almost 17% of them found difficulty in mastication, whereas the rest 83% were comfortable during mastication. Halitosis was also complained by 20% of the patients. Nearly 36% complained that the color of the prostheses faded away, 25% of them had problems with esthetics, and 18% of them reported with breakage.

**DISCUSSION**

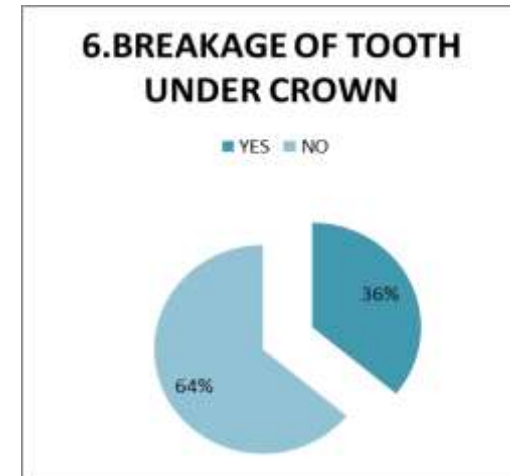
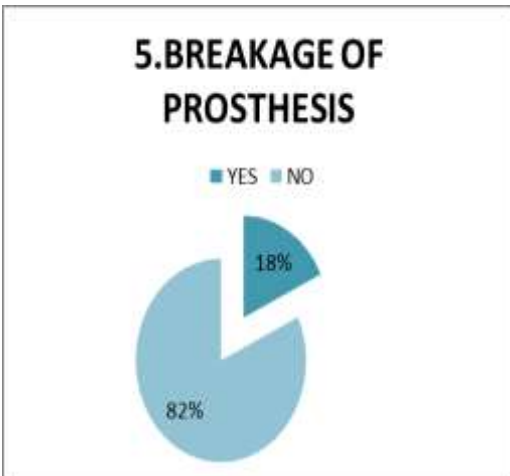
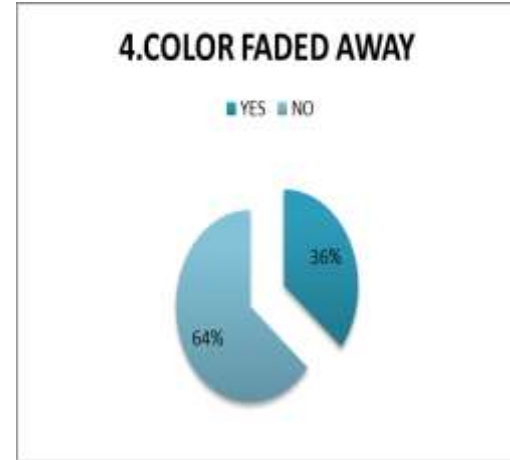
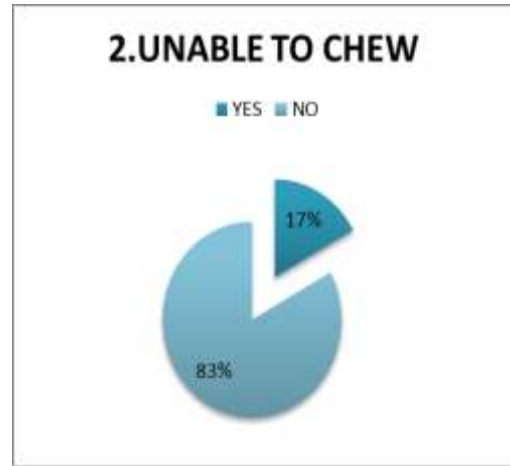
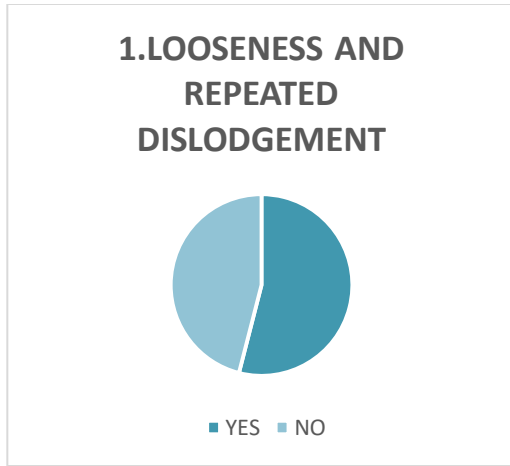
Baruch and Holtom<sup>3</sup> reviewed 1607 published questionnaire-based studies from 2000 to 2005. They concluded that an average response rate of 52.7% is considered to be acceptable. The response rate in the present study was 70.1%. However, Hakestam et al.<sup>4</sup> succeeded in achieving an excellent response rate of 88.2%, and Wagner and Kern<sup>5</sup> reported in their retrospective study a lower response rate of 50.3%. Aljabri et al.<sup>6</sup> described a much lower response rate of 11% in their Saudi phone interview survey.

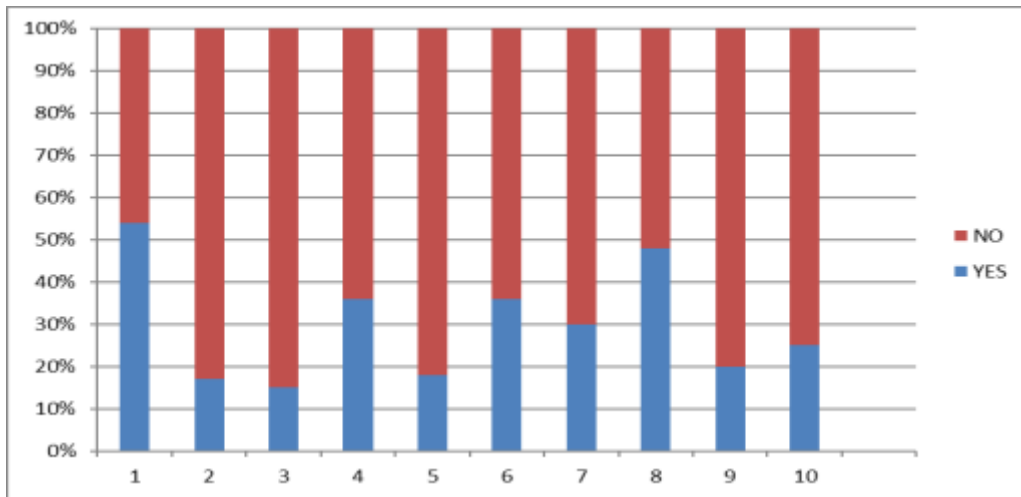
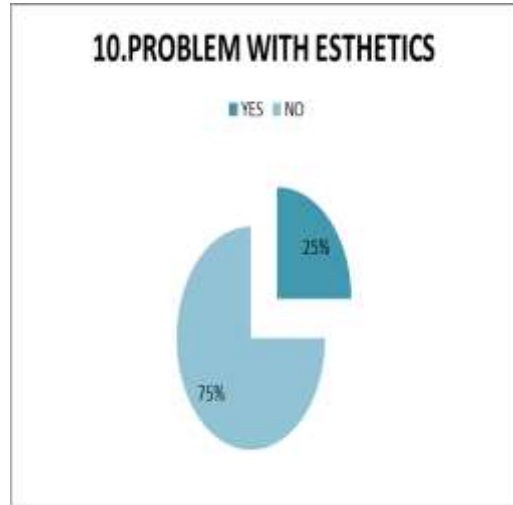
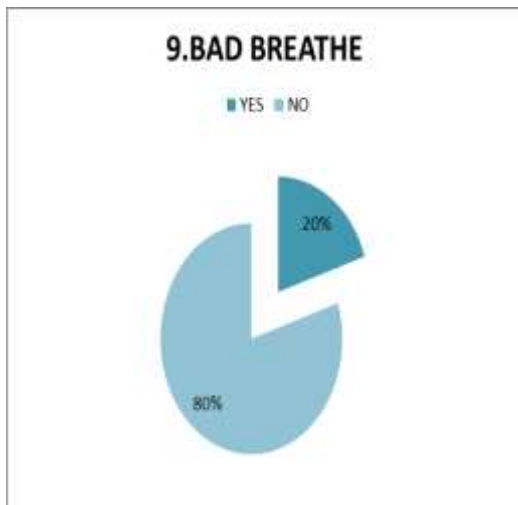
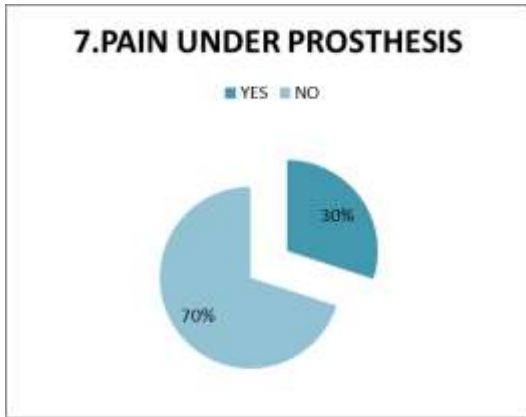
The present study found that the majority of the participants (70.1%) were satisfied with their prosthesis. This similar level of patient satisfaction with their fixed prosthesis was described in a number of other studies.<sup>7,8,9</sup>

Furthermore, patients who were using removable prosthesis preferred their FPDs. This was observed by Al-Quran et al.<sup>10</sup> who assessed patient satisfaction with several treatment options and the factors that Patient satisfaction with their prosthesis is usually related to esthetic, function, convenience, and phonetics.<sup>7,8,9</sup> Comparable published studies reported a variable hierarchy of patients' concerns relating to FPD. would affect the treatment decision to replace a single missing tooth. Attitude and awareness toward dental esthetics vary between different populations and individuals. Therefore, it is expected to find a disparity in the level of satisfaction with esthetics in the published investigations.

In the present study, about two-thirds of the participants were <50 years of age; this could be interpreted by that the young and middle age groups seeking to restore and replace their defected and missed teeth with fixed prosthesis more than the old age people. Whereas old age group may prefer to replace their missed teeth with a removable partial denture as it is simpler in the clinical procedures, sessions, time, and less cost when compared to a fixed one. In addition to the age and sex, this evaluation showed that there was no correlation between the level of education and patient satisfaction.

**Pie chart displaying the percentage of satisfied patients**





Bar chart displaying the percentage of satisfied patients with their fixed prosthesis and the percentage of each of the concerns of the unsatisfied patients.  
 [x axis – percentage, y axis – number of questionnaire]

patients did not utilize any type of dental aids' to keep up their prosthesis, which had demonstrated the absence of learning with respect to the significance of support of settled prosthesis; the real reason was the absence of post treatment guideline which typically been given by the treating dental practitioner. Post treatment guideline for cleaning aids should be given to patient.

According to Tan et al.<sup>12</sup>, 95% of their FPD examined patients would certainly or to some extent be willing to suggest the same management to relatives and friends. Most of the present participants (86%) as well were ready to advise their families and friends to use a fixed prosthesis for restoring their decayed teeth and replacing their missing teeth. This indicates that the participants' level of dissatisfaction was not up to the extent of not recommending the same treatment to their close circle.

## CONCLUSION

Our study results showed that fixed partial dentures are the treatment of choice for missing teeth. Common complaints associated are looseness of prostheses, unable to chew, stinking of food, color fade, esthetics problems and breakage of prostheses (least common). Pain, sensitivity and bad smell were other noticeable problems with long term FPD usage. Our study results could be treated as suggestive for predicting clinical outcomes for crucial situations. Though, we expect other demographic studies to be conducted that could further establish certain concrete guidelines in this field.

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