

Original Research

Assessment of patient satisfaction for retention, masticatory efficacy, aesthetics and comfort for removable partial denture

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ABSTRACT

Background: Patients look for a replacement for their missing teeth in order to enhance their appearance, speech, social confidence, and self-esteem, improve chewing comfort, and protect the remaining natural teeth. The present study was conducted to assess patient satisfaction for retention, masticatory efficacy, aesthetics and comfort for removable partial denture.

Materials & Methods: 120 patients who got removable partial denture (RPD) in the past were selected. The acceptance of RPD was categorized as excellent, good, or bad. The patients rated the acceptance of RPD based on aesthetics, comfort, masticatory efficacy, and retention.

Results: Out of 120 patients, 70 were males and 50 were females. About esthetics, response was excellent in 101, good in 6, regular in 14. About comfort, response was excellent in 98, good in 10, regular in 8 and bad in 4. About hygiene, response was excellent in 110, good in 2, regular in 2 and bad in 6. About masticatory efficiency, response was excellent in 105, good in 7, regular in 5 and bad in 3. About retention, response was excellent in 96, good in 14, regular in 5 and bad in 5. The difference was significant ($P < 0.05$).

Conclusion: For most cases, using a removable partial denture to treat partially edentulous ridges is satisfactory. Only a few cases have been reported as having a negative experience with RPD.

Keywords: aesthetics, comfort, retention

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Introduction

Patients look for a replacement for their missing teeth in order to enhance their appearance, speech, social confidence, and self-esteem, improve chewing comfort, and protect the remaining natural teeth.¹ In the case of Indians, aesthetics has been pointed out as a key factor for replacing teeth that are absent.² A variety of treatment options, each with its own benefits and drawbacks, can be used to achieve functional and aesthetic restoration of a partially edentulous mouth. The alternatives consist of removable partial dentures (RPDs), fixed partial dentures, and dental implants.³ Periodontal status, aesthetic requirements, cost, anatomical constraints, and patient acceptability are among the factors that can influence the choice of prosthesis used. Due to their accessibility for lower socioeconomic groups, which have the highest rates of tooth loss, RPDs are more prevalent than conservative implant tooth

replacements.⁴

RPDs can be constructed from cast metal, acrylic resin (with or without a wrought metal component), acrylic resin featuring some cast units, and thermoplastic resin. All-acrylic RPDs for replacing missing teeth are used with varying frequency across countries, being more common in developing nations. Adults show a very high prevalence of using the all-acrylic RPD, as it is more cost-effective and easier to produce.⁵ However, the use of all-acrylic resin dentures comes with certain drawbacks, including a higher risk of caries, gingivitis, and periodontal disease compared to other RPD frameworks. There is also difficulty in choosing a suitable path of insertion while maintaining close adaptation to the tissues in the presence of soft and hard tissue undercuts. In addition, acrylic dentures are made in thicker sections to compensate for its low impact strength, and this makes them bulky.⁶ The present study was conducted

to assess patient satisfaction for retention, masticatory efficacy, aesthetics and comfort for removable partial denture.

Materials & Methods

The study was carried out on 120 patients who got removable partial denture (RPD) in the past. All gave their written consent to participate in the study.

Data such as name, age, gender etc. was recorded. All patients were provided with the questionnaire, and the

response was recorded. The acceptance of RPD was categorized as excellent, good, or bad. The patients rated the acceptance of RPD based on aesthetics, comfort, masticatory efficacy, and retention. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

Results

Table I Distribution of patients

Total- 120		
Gender	Male	Female
Number	70	50

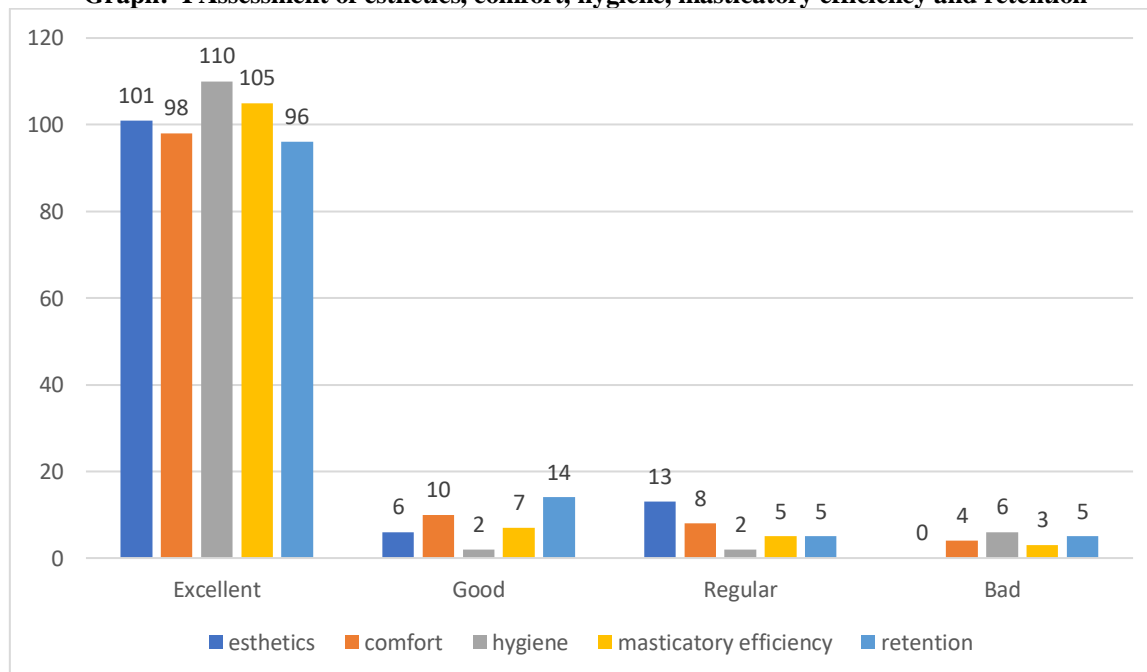
Table I shows that out of 120 patients, 70 were males and 50 were females.

Table II Assessment of esthetics, comfort, hygiene, masticatory efficiency and retention

Response	esthetics	comfort	hygiene	masticatory efficiency	retention	P value
Excellent	101	98	110	105	96	0.01
Good	6	10	2	7	14	
Regular	13	8	2	5	5	
Bad	0	4	6	3	5	
P value	0.01	0.04	0.02	0.05	0.03	

Table II, graph I shows that about esthetics, response was excellent in 101, good in 6, regular in 13 and bad in 0. About comfort, response was excellent in 98, good in 10, regular in 8 and bad in 4. About hygiene, response was excellent in 110, good in 2, regular in 2 and bad in 6. About masticatory efficiency, response was excellent in 105, good in 7, regular in 5 and bad in 3. About retention, response was excellent in 96, good in 14, regular in 5 and bad in 5. The difference was significant ($P < 0.05$).

Graph: I Assessment of esthetics, comfort, hygiene, masticatory efficiency and retention



Discussion

The loss of teeth can impair function, esthetics and phonation and is restored most of the time with prosthesis.⁷ Although preventive dentistry helps protecting teeth, the demand for prosthodontic treatment is expected to rise even in developed

countries as a result of a rapid increase in their elderly population. Many countries are facing an aging population, which will cause a ratio of individuals over 65 years of age up to 50% in the coming decades.⁸ The number of edentulous patients even in countries with a high standard of dental health care is

significant. According to the World Health Organization (WHO) Global Oral Data Bank the prevalence of edentulism older than 65 years was shown as 58% in Canada, 41% in Finland and 46% in the United Kingdom.⁹

We found that out of 120 patients, 70 were males and 50 were females. Sharma et al¹⁰ evaluated patient satisfaction for retention, masticatory efficacy, aesthetics and comfort for Removable Partial denture. The acceptance of RPD was marked as excellent, good or bad. They found that majority of patients reported excellent aesthetics, comfort, hygiene, masticatory efficacy and retention. 11 patients in total reported bad experience with Removable partial denture.

We found that about esthetics, response was excellent in 101, good in 6, regular in 14. About comfort, response was excellent in 98, good in 10, regular in 8 and bad in 4. About hygiene, response was excellent in 110, good in 2, regular in 2 and bad in 6. About masticatory efficiency, response was excellent in 105, good in 7, regular in 5 and bad in 3. About retention, response was excellent in 96, good in 14, regular in 5 and bad in 5. Bharti et al¹¹ evaluated patient satisfaction for retention, masticatory efficacy, aesthetics and comfort for Removable Partial denture. They observed that majority of patients reported excellent aesthetics, comfort, hygiene, masticatory efficacy and retention. 23 patients in total reported bad experience with Removable partial denture. The results were statistically significant.

Bilhan H et al¹² assessed the occurrence and nature of prosthetic complications concerning the type and characteristics of removable dentures, as well as examine how these complications and various data regarding the existing dentures affect patient satisfaction. The study included ninety-nine patients (55 females and 44 males) who wore removable dentures. The patients' complications were documented; using a Visual Analog Scale (VAS), patient satisfaction was assessed and the correlation between complications and patient satisfaction with various denture-related data, including denture age, denture type, centric relation, and vertical dimension, was examined. The necessity for adding artificial teeth to dentures with correct centric relations was significantly lower compared to those with incorrect centric relations ($P < .01$). The VAS chewing ability scores were negatively impacted by retention loss, ulcerations, and an increased vertical dimension; ulcerations also adversely affected the VAS phonation scores. This study's results suggest that retention loss, ulcerations, and a high vertical dimension led to patient dissatisfaction.

The shortcoming of the study is small sample size.

Conclusion

Authors found that for most cases, using a removable partial denture to treat partially edentulous ridges is satisfactory. Only a few cases have been reported as having a negative experience with RPD.

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