

## ORIGINAL ARTICLE

### A Retrospective Study to Assess the Patient's Satisfaction for Aesthetics, Comfort, Masticatory Efficacy and Retention of Removable Partial Denture

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#### ABSTRACT:

**Background:** Patient's dissatisfaction with removable partial denture also depends on some of reasons such as risk to local damage of the remaining teeth, for e.g. caries, periodontal disease, plaque accumulation, oral candidiasis, denture stomatitis, etc. **Aim:** The assessment of patient's satisfaction with removable partial dentures (RPDs). **Materials and method:** The present study was conducted in the department of prosthodontics of the dental institution. For the study sample, we contacted 30 patients from the previous medical records of 6 years who got treatment for partially edentulous ridge with removable partial denture. The age of the patients ranged from 18 to 60 years. It was made sure that each patient had either one of the maxillary or mandibular RPD for the evaluation. The patients were asked to fill up a questionnaire. The acceptance of RPD was marked as excellent, good or bad. The patients were asked to rate the acceptance of RPD for aesthetics, comfort and masticatory efficacy. **Results:** The majority of patients reported excellent aesthetics, comfort, hygiene, masticatory efficacy and retention. Only 5 patients in total reported bad experience with Removable partial denture. The results were statistically significant. **Conclusion:** The treatment for partially edentulous ridge with Removable partial denture is satisfactory for majority of cases. Only few cases reported to be having bad experience with RPD.

**Key words:** Removable partial denture, retention, stability, edentulous.

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#### INTRODUCTION:

Removable partial denture (RPD) remains the primary form of dental restoration in Kosovo's population, since it is one of the cheapest treatment options for patients who are unable to afford treatment with implants either due to anatomical or economic reasons.<sup>1,2</sup> This relates to the fact that Kosovo is a country which is underdeveloped and has low levels of income compared to people in the developed countries. Satisfaction with RPD depends on individuality of patients, attitude towards RPD, previous RPD experience, encouragement for denture and design and fabrication procedure for RPD.<sup>3, 4</sup> Retention, chewing ability, aesthetics, seem to be the most important factors for RPD acceptance.<sup>5, 6</sup> Patient's dissatisfaction with removable partial denture also depends on some of reasons such as

risk to local damage of the remaining teeth, for e.g. caries, periodontal disease, plaque accumulation, oral candidiasis, denture stomatitis, etc. Also, RPD is an aesthetic problem for most people and can affect the appearance and interpersonal communication.<sup>7, 8</sup> Hence the present study was planned for the assessment of patient's satisfaction with removable partial dentures (RPDs).

#### MATERIALS AND METHOD:

The present study was conducted in the department of prosthodontics of the dental institution. The protocol of the study was approved from the ethical committee of the institute prior to starting the study. For the study sample, we contacted 30 patients from the previous medical records of 6 years who got treatment for partially edentulous ridge with removable partial denture. The

patients were recalled. All the patients responded and visited the department on the desired date. The protocol and procedure of the study was explained to the patients and an informed consent was obtained from them. The age of the patients ranged from 18 to 60 years. It was made sure that each patient had either one of the maxillary or mandibular RPD for the evaluation. On the day of reporting at department, the patients were asked to fill up a questionnaire. The acceptance of RPD was marked as excellent, good or bad. The patients were asked to rate the acceptance of RPD for aesthetics, comfort, masticatory efficacy and retention. After completion of questionnaire, the patients submitted them to the operator. The data was analyzed and data was tabulated for further evaluation. The statistical analysis of the data was done using SPSS program for windows. Student's t test and chi square test were used for checking the significance of the data. The statistical significance was predefined at  $p < 0.05$ .

### RESULTS:

**Table 1** shows the evaluation of aesthetics, comfort, hygiene, masticatory efficacy and retention according to patient. We observed that majority of patients reported excellent aesthetics, comfort, hygiene, masticatory efficacy and retention. Only 5 patients in total reported bad experience with Removable partial denture. The results were statistically significant ( $p < 0.05$ ).

### DISCUSSION:

In the present study, we assessed the patient's satisfaction to the Removable partial denture after 6 years. We observed that majority of patients reported excellent experience with RPD. Very few patients reported bad experience. The patients were highly satisfied with respect to aesthetics, comfort, hygiene, masticatory efficacy and retention. Similar studies conducted by other authors also reported similar results. Cosme DC et al conducted a study exploring technical, biological, and satisfaction variables for the functioning of RPDs after five years, and compared the evaluation by the patient and by the clinician. Fifty adults (39 females, 11 males) were re-examined after five years of RPD service. Data were collected through clinical examination and a structured questionnaire to record the conditions of supporting soft tissues, prosthesis acceptance and technical characteristics, mastication, esthetics, comfort, hygiene, and need for professional intervention. Data were analyzed by descriptive statistics and Spearman correlation. More than 50% of patients classified their RPDs as excellent regarding retention, mastication, esthetics, comfort, and hygiene. In the professional evaluation, retention and stability were considered excellent in more than 66% of cases, and hygiene of teeth and prostheses was considered good in 52% and 46%, respectively. The metallic framework and acrylic base were considered adapted in 92% of cases. Prosthesis acceptance was associated with retention, mastication,

esthetics, hygiene, and comfort evaluated by the patient, and with retention, stability, and condition of the framework evaluated by the clinician. Retention and mastication/comfort evaluated by the patient had moderate positive correlation with retention and stability measured by the clinician. There was no association of hygiene evaluation by the patient and by the clinician. The authors concluded that after five years, the oral rehabilitation with RPDs was satisfactory for most cases. Frank RP et al examined 15 aspects of patient satisfaction and explored the factors found to be associated with dissatisfaction. A questionnaire was mailed to people whose dental insurance claims included CPT Code 5214 within the last 5 years. A composite measure of treatment outcome was created by combining the responses to the 15 satisfaction items, and 10 factors were then tested statistically to determine their relationship to dissatisfaction. A majority of the respondents were satisfied with the prosthesis, but a substantial amount of dissatisfaction existed. Dissatisfaction was greater when there was no previous wearing experience or when there was an opposing maxillary removable partial denture. Respondents under the age of 60 expressed more dissatisfaction than did those over the age of 60, and subjects with lower levels of general health also reported less satisfaction. One third of the respondents believed their prosthesis required adjustment or replacement, and one fourth said the removable partial denture had caused a problem with the natural teeth. The authors concluded that a majority of survey respondents treated with a mandibular removable partial denture in private dental practice were satisfied with the prosthesis, but a substantial amount of dissatisfaction existed. Dissatisfaction was related to age, health, prior experience with a prosthesis, and the type of opposing dentition.<sup>9,10</sup>

Shams A et al determined complication and satisfaction rates in patients wearing RPDs. Patients that were treated with RPDs at the Prosthodontic Department in the last 4 years (2010-2014) were invited for a clinical examination. Demographic information and RPD characteristics (Kennedy classification; edentulous jaw: Upper versus lower; clinician: General dental students or prosthodontic residents; denture type: Cobalt-chromium or full acrylic) were recorded. The patients' satisfaction was measured on the basis of four criteria: Mastication, esthetic appearance, speech, and comfort components by a visual analog scale. A total of 60 patients (30 men and 30 women, age range, 37-64 years) were evaluated. The most common complications were food impaction (68.3%), ridge resorption (63.3%), loss of support (36.7%), abutment caries (36.7%), loss of retention (35%), and pain and discomfort (30%). The patients reported a moderate level of satisfaction (6.2 out of 10). Higher satisfaction scores were significantly associated with older age, upper RPDs, and RPDs fabricated by prosthodontic residents. Gender, Kennedy classification, and denture type had no

significant effect on patient satisfaction. The findings of this study revealed that RPD complications were not uncommon. The clinicians' experience can influence post insertion patient satisfaction and complication rates. Zlatarić DK et al studied patient's satisfaction with their partial dentures in relation to some socio-economic variables. Patient's satisfaction with denture retention, speech, aesthetics, comfort of wearing dentures, chewing ability was also studied in relation to different denture classification, construction, material, denture base shape (major connectors), denture support and the number of missing teeth. A total of 165 patients, 59 males and 105 females between 38 and 87 years took part in this study. A questionnaire, devised for a purpose of the study, was divided into three parts. In the first part, patients answered questions about age, gender, marital status, education, general health, socio-economic status, self-supporting life, period of tooth loss and number of previous denture experiences and in the second part, patients graded their partial dentures, depending on the level of satisfaction, by using a scale from 1 to 5. In the third part a dentist determined Kennedy classification and their modifications, denture material and denture support, denture base shape and the number of missing teeth and graded a denture construction. Influence of these factors on patient's satisfaction was analyzed. A majority of the examined patients were satisfied with the partial prosthesis, but a small amount of dissatisfaction existed. More than half of them scored all the examined parameters to the best score category. Considering chewing with lower partial dentures, women were more satisfied than men. Patients with more missing teeth gave lower grades for the comfort of wearing dentures. Patients of higher education gave lower grades for the aesthetics. Patients were not satisfied with speech if the dentist graded a construction of a lower partial denture low. Dissatisfaction was related to mastication, aesthetics, number of missing teeth and ability of speech.<sup>11, 12</sup>

#### CONCLUSION:

From the results of present study, we conclude that the treatment for partially edentulous ridge with Removable partial denture is satisfactory for majority of cases. Only few cases reported to be having bad experience with RPD.

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