

Satisfaction and Complaints of Patients with Removable Partial Dentures: In Sample at Baghdad City, Iraq

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Abstract

Objective: This study examined patients' complain regarding pain on eating, esthetic and speech problems and gag reflex with various types of removable partial dentures (RPDs).

Method: The study sample included 60 RPD wearers (36 females and 24 males) aged between (25-60) years old. Sex, age, occupation, any experience with previous RPDs, and the complaint with RPDs were recorded. Data were analyzed using Chi-square test was applied for comparison among different variables of oral complaints related to removable prosthesis; an independent a sample *t*-test was utilized. A *P*-value < 0.01 was the criterion for rejection of the invalid hypothesis.

Results: the results show 60 patients, 16 (47.05%) were satisfied on acrylic and 14 (77.77%) were satisfied on flexible. And 6 (75%) were satisfied on metallic. The mean level of satisfaction among the three types of RPDs was significantly different ($P < 0.01$). In cases satisfaction between flexible and acrylic RPDs was significantly different. But, between either metal or acrylic, or metal and flexible RPDs no significant differences ($P < 0.01$) were recognized.

Conclusions: Within the limitations of this study, approximately half of cases that took a removable partial dentures treatment were satisfied with it, showing that the quality of RPDs (in Iraq/Baghdad city) was suitable for patients. Pain in eating is the most common complaint that shows that dental treatments with RPDs should be provided with care when patients have pain in eating.

Keywords: *Patient satisfaction, Removable partial denture, oral complaint, Aesthetics, Dental prosthesis.*

Introduction

The missing tooth structure either carries attacks or injury or other pathological conditions makes researchers and scientists strive to find a suitable material or dental prosthesis to replace the tooth structure in terms of both function and esthetics⁽¹⁾. This is because tooth loss has a negative consequence on facial appearance, speaking and masticatory function and still one of the major oral health problems in the world.^(2,3)

Now a day, there has been an increase in the number of patients who need prosthodontics treatments⁽⁴⁾. As a consequence, the demand for complete or partial dentures also has been raised. This is because of increasing the number of older people among the population as the result of rising life expectancy⁽⁵⁾. Thus; there are various alternative treatment modalities available for replacement for partially edentate patients. These treatment involve prosthesis supported by implants, bridges supported by teeth, and removable partial dentures (RPDs)^(6,7).

Therefore, choices, like as dental implants, can be not easy to apply because of general and/or patient preferences, oral limitations and financial issues.^(8,9)

Many studies in different countries have found that the cost of treatments plays a crucial role during the construction of dental prosthesis for partially edentate

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patients^(10,11). For these reasons, the removable partial denture is still the most common way of restoring the missing teeth^(12,13).

A survey of 260 Iraqi volunteers based on 2018, whose loosening teeth had been effectively restored with RPDs, It is believed that the quality of prosthodontics treatments may affect significantly on quality of life related to oral health⁽¹⁴⁾.

Despite easy construction, managing (RPDs), minimally invasive treatment choice, reasonably low cost but (RPDs) are still related to many oral complains such as mastication, speaking difficulties, pain and esthetic concerns⁽¹⁵⁾. The satisfaction of patients with a prosthesis therapy has become an increasingly significant factor in prosthetic treatment⁽¹⁶⁾. Thus, many studies have examined the relation between RPDs and cases satisfaction and their dentures quality^(16,17). It is believed that the quality of prosthodontic treatments may affect significantly on quality of life related to oral health^(18,19).

It is not easy to expect the patient's satisfaction with RPDs therapy because it is a multifactor characteristic. It has been reported that patients' attitude towards RPDs, patient's personality, any contact with the previous RPD, patients believe the RPDs therapy or forced to do this treatment as well as denture design and fabrication procedures are related to RPDs satisfaction. In addition, there are other important factors, which are strongly correlated with RPDs acceptance by the patients such as, retention, stability, chewing ability and esthetics⁽²⁰⁾. However, there is a gap in the information on patients' satisfaction and complaint among (RPDs) wearers in

Baghdad city, Iraq. This study aims to explore the patient's satisfaction with comfort or presence of pain, esthetic, retention, mastication, as well as speaking with RPDs.

Various bases have been progressed for making RPD. Flexible, acrylic polymers (polymethyl methacrylate [PMMA]) and metallic (chrome cobalt alloys) materials. And due to the noticeably cheap, manipulated easily with utilization of low-price tools, acrylic RPDs are the

most accepted material for denture framework creation. Therefore, in flexibility term, nylon-derived denture base material make a revolution as a functional alternative material to overcome some restriction and came back to acrylic dentures.^(21,22)

Correspondingly, in interview by telephone with 260 Iraqi male and female cases who had got RPDs at College of dentistry/Baghdad University, college of dentistry/Al-Anbar University and private clinics.

Even though RPDs are reversible and a non-invasive therapy, with a suitable price and easy oral hygiene method in most cases, they are related to number of oral complaints, like speech problem, pain, mastication, as well as esthetic issues.^(23,24,25) Therefore, this survey aimed to detect the complaints and satisfaction level among patients using the three types of RPDs in Baghdad/Iraq.

Materials and Method

This survey done at three places (College of dentistry/Baghdad University, College of dentistry/Al-Anbar University, private clinics) the dental data was searched for surveying (cases) participants the following criteria for cases included: the age group was (from 25 to 60), telephonic communication, complete and accurate dental data, and available therapy plan of action details. Cases with chronic disorder or systemic diseases which could give an effect on oral health, like oral cancer and uncontrolled diabetes, were excluded.

All of 260 cases treated with RPDs from January 2018 to January 2019, these cases got interviewed by phone. 100 cases of them took a call. Of the 100, sixty cases (24 female and 36 male cases) agreed to be a participant in this study as seen in Figure 1. Two questions were asked to each participant over the phone interview to detect their complaints and satisfaction levels of with RPD wearers, speaking, eating as well as esthetics. The first question is "Do you have any complaints (comments)" The second question was: "how satisfied are you with the RPD?" cases (sex and age) and information on the type of RPD (acrylic, flexible, or metal) demographics were obtained from the cases dental data.

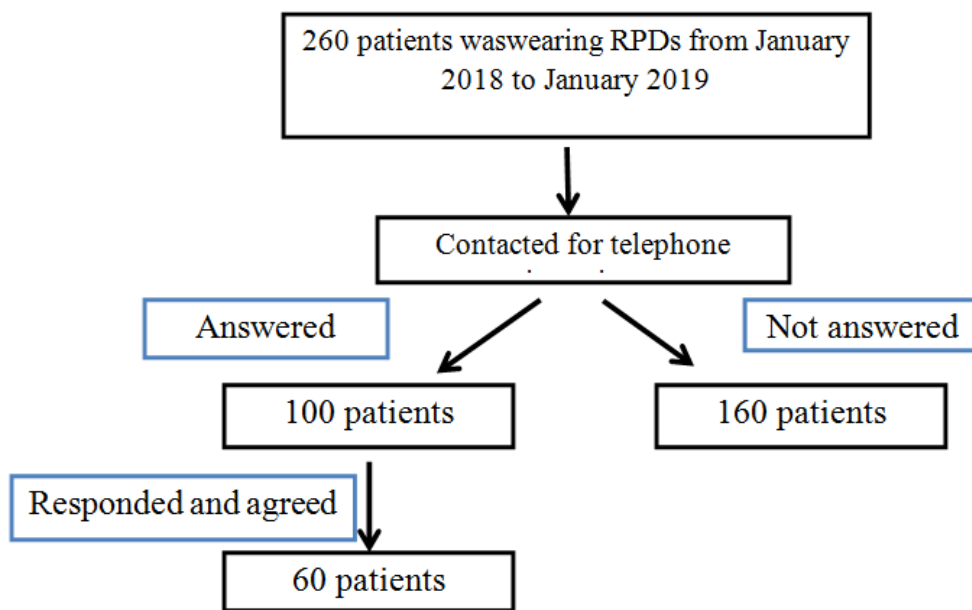


Figure (1) Patient’s participation in study.

Statistical Analysis: The resulting data were entered into a statistical software program (Statistical Package for the Social Sciences, version 16.0; SPSS), which was used for all the statistical analyses. Mean ± standard deviation (SD) counts and percentages are used for recording variables. Chi-square test was applied for comparison among different variables of oral complaints related to removable prosthesis; a sample *t*-test was utilized. A *P*-value < 0.01 was the criterion for rejection of the invalid hypothesis. Data were collected from cases electronic files into a Microsoft Excel 2010.

Results

For the 260 patients who wear RPD from the three places from January 2018 to January 2019. Sixty cases (24 male and 36 female cases) participated in this survey with three types of RPDs. 34(56.66%) wore acrylic RPDs, 18 (30%) had flexible RPDs, and 8 (13.33%) wore metallic RPDs; variable information was obtained

from all patients. The mean ± SD age of the cases was 49.8 ± 8.3 years for wore acrylic, 47.8 ± 8.9 years for wore flexible and 47.2 ± 7.7 years for wore metallic (range: 25–60 years) as shown in Table 1.

In table 2 Shows, the symptoms were: 23(38%) pain in eating,6(10%) esthetic problems, 16(26.66%) problems in speech, and 10(16.66%) gag reflex where 5(8.33) only had no complaint.

Table 3 shows 60 patients, 16(47.05%) were satisfied on acrylic and 14 (77.77%) were satisfied on flexible. And 6 (75%) were satisfied on metallic.

The mean level of satisfaction among the three types of RPDs was significantly different (*P* < 0.01). In cases satisfaction between flexible and acrylic RPDs was significantly different. But,between either metal or acrylic, or metal and flexible RPDs no significant differences (*P* < 0.01) were recognized.

Table 1 Patient’s demographics

Type of RPD	No. of Patients	Gender		Age (Mean±SD)
		Female	Male	
Acrylic	34	19	13	49.8 ± 8.3
Flexible	18	12	8	47.8 ± 8.9
Metal	8	5	5	47.2 ± 7.7
Total	60	36	24	-

Table 2 Patient's symptoms and complaint

Type of RPD	Symptoms				
	Pain on eating	Esthetic problems	Speech problems	Gag reflex	No complaint
Acrylic	14 (41%)	3 (9%)	10 (30%)	7 (20%)	0
Flexible	8 (44%)	3 (17%)	5 (28%)	2 (11%)	0
Metal	1 (12.5%)	0	1 (12.5%)	1 (12.5%)	5 (62.5%)
Total	23	6	16	10	5

Table 3 Patient's satisfaction

Type of RPD	No. of patients satisfied	P values	
		Flexible	Metal
Acrylic	16/34	0.03	0.15
Flexible	14/18	-	0.87
Metal	6/8	-	-

*P value < 0.01.

Discussion

In this study observed the rate of complaints and satisfaction among sixty cases wearing three kinds of RPDs in Baghdad city/Iraq. According to the result of this survey indicates that the approximately half of cases were fulfilled with their RPDs. That result was in agreement with other surveys on RPDs.^(26, 27) the mean age of RPD wearers in this study was 48.2 years (range: 25–60). Others studies also had the same age range.^(28,18,19)

Flexible RPDs are a good therapy choice for partially edentulous cases due to their definitely better esthetics given by bases that copy gums and teeth, also due to them being more comfortable for cases with changing oral tissue, severe cases with microstomia, as well as decrease of function.⁽²²⁾ and because of that, flexible RPDs can appropriately satisfy patients displeased with the common recovery therapy since they give an excellent fix for the cases esthetics or physical limitations.⁽²⁹⁾ It is in agreement with Sharma & Shashidhara (2014), flexible RPDs produce acceptable outcomes but short duration.⁽²²⁾ due to that flexible RPDs haven't been commonly used as a substitute material for denture fabrication as shown in this survey .

It is observed that patient satisfaction between different RPDs materials was varied. Acrylic resin (PMMA) RPDs were had a lowest satisfaction level,

followed by metallic (chrome cobalt alloys), while the higher level of satisfaction was shown inflexible nylon-base material. These results are in agreement with those of Yoshida et al. (2011), who indicate that cases with acrylic RPDs have had a lower satisfaction levels than of those with flexible nylon-base material RPDs.⁽³⁰⁾ in spite of these results the Iraqi samples not prefer flexible RPDs because of its low duration.

Moreover, shown that a low satisfaction levels with acrylic resin base in comparison with metallic base, acrylic resin base RPDs were frequently used in this survey 34 (56.66%). These results are similar to other studies in countries in Middle East. Ismail and Hussien (2009) proposed that over 97% of Iraqi patients wore acrylic RPDs.⁽³¹⁾ in agreement with Rahdi et al. the Kingdom of Bahrain Indicates that 89% of RPDs determine were acrylics.⁽¹⁵⁾

Although, RPDs are commonly used for the substitute of losing teeth, The most frequent complication have been reported among different countries .⁽²⁷⁾ In this survey, pain during eating followed by speech problems are the most common complaints for RPD wearers in Iraqi cases, that are in agreement with Akeel, in KSA, (2010).

Additionally, this survey was managed within one year of RPD utilization, that may be seen as not enough time to predict the accurate levels of case

satisfaction. a sample of KSA cases, Akeel et al. (2010) indicated that 36% of RPD wearers discontinued using the RPDs one year after wearing it.⁽²³⁾ It was proposed that an observational study based on frequent recall time had to be developed.

Conclusion

Within the limitations of this study, approximately half of cases that took removable partial dentures treatment were satisfied with it, showing that the quality of RPDs (in Iraq/Baghdad city) was suitable for patients. Pain in eating is the most common complaint that shows that dental treatments with RPDs should be provided with care when patients have pain in eating.

Ethical Clearance was obtained from Alfarahidi University, Baghdad, Iraq.

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