

Original Article

Patient Complaints and Satisfaction with Removable Partial Dentures Therapy in Sulaimani City, Iraq

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Abstract

Objective: This study examined patients' complain regarding pain, retention and stability, food accumulation, mastication, and speaking with removable acrylic partial dentures (RPDs). Furthermore, the influence of sex, age and duration of the use of current RPDs on patient satisfaction.

Methods: The study sample included 156 RPD wearers (107 females and 49 males) aged between (27-81) years old. Sex, age, occupation, any experience with previous RPDs, and the duration of the use of current RPDs were recorded. Then, patient satisfaction with food accumulation, presence of pain, retention and stability, mastication as well as speaking with RPDs were recorded. Data were analyzed using the Spearman's correlation, independent t-test, and Pearson correlation test.

Results: A statistically significant relation was found between overall satisfaction and age ($P=0.013$). However, no significant relation of sex and wearing days of RPDs with satisfaction was observed. Eating with RPDs was the most significant complaint about most of the patients, followed by food impaction under or around the prosthesis. By contrast, speaking with RPDs was the least problem for participated patients. In addition, in the present study patients were more satisfied with RPDs that were fabricated by dentists in comparison with dental technicians ($p=0.001$).

Conclusions: Age has a remarkable impact on patient satisfaction with RPDs. Chewing and eating recorded the highest complain. Patients were more satisfied with RPDs constructed by a dentist. A good communication between dentists and dental technicians is recommended to improve the quality of RPDs, hence raising the patient's oral health and quality of life.

Keywords: Patient satisfaction, Removable partial denture, Sulaimani city.

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Introduction

The missing tooth structure either by caries attack 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 aesthetics⁽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^(2,3,4).

Now a day, there has been an increase in the number of patients who need prosthodontics treatments^(5,6). 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⁽⁷⁻¹⁰⁾. Thus, there are various alternative treatment modalities available for rehabilitation for partially edentulous patients. These options involve implant-supported prostheses, teeth-supported bridges, and removable partial dentures (RPDs)^(11,12).

On the other hand, dental implants treatment procedures may not be suitable for every patient. This is because many factors interfere with the procedure of dental implants such as general or oral limitation factors, financial reasons and patient selection⁽¹³⁾. 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 patients⁽¹⁴⁻¹⁷⁾. For these reasons, the removable partial denture is still the most common way of restoring the missing teeth^(18,19).

Despite easily 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^(20,21). The satisfaction of patients with removable partial denture (RPD) therapy has become an increasingly significant factor in prosthetic treatment⁽²²⁻²⁴⁾. Thus, many studies have examined the relationship between RPDs and patient's satisfaction with their dentures quality⁽²²⁻²⁶⁾. It is believed that the quality of prosthodontic treatments may affect significantly on oral health-related quality of life⁽²⁷⁾.

It is not easy to expect the patient's satisfaction with RPDs therapy because it is multifactor characters. 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 aesthetics^(28,29).

However, there is a gap in the information on patients' satisfaction and complaint among (RPDs) wearers in Sulaimani city, Iraq. This study aims to explore the patient's satisfaction with comfort or presence of pain, aesthetic, retention, mastication, as well as speaking with RPDs. At the same time is to find the influence of factors such as sex, age, any experience with the previous acrylic (RPD) and the duration of the use of current acrylic (RPDs) on patient satisfaction with RPDs.

Patients and methods

A cross-sectional study included nearly 156 patients were taken, including both male and female who received conventional removable partial denture (RPD). All dentures should be made of heat cure acrylic. Patients who were able to answer the questions were received. For this purpose, participants should have good physical and mental health (do not have mental problems and psychological disorders) that might affect their ability to understand and to score the questionnaires. These patients attended Piramerd dental center in Sulaimanin city in the Kurdistan region of Iraq.

Then the study was designed to ask written questionnaires to each patient through a personal interview. For this reason, a questionnaire was prepared as previous studies⁽³⁰⁻³²⁾. The questionnaires have been divided into two main parts. The first part of the questionnaires involves the information about the patient's sex, age, occupation, any experience with the previous acrylic (RPD) and the duration of the use of current acrylic (RPDs). For the second part of the questionnaires, patients have to grade (RPDs) in terms of comfort or presence of pain, aesthetic, retention, mastication as well as speaking with (RPDs). The scoring system of 0 to 4 was used depending on their satisfaction level in which 0= satisfied, 1= very satisfied, 2=reasonably satisfied, 3= not satisfied, 4= not at all satisfied.

Statistical analysis

The collected data were analyzed by statistical software package SPSS 24 (SPSS Inc., Chicago, IL, USA), using descriptive analysis of patient's information. Spearman correlation was used to show the relation of age and sex with partial dentures satisfaction. The comparison was made between the mean values of patient satisfaction in each field (eating satisfaction, loose denture, pain, food accumulation, speech problems, and retention of the dentures). Another point is the relation between the constructions of the denture (either by dentist or

technician) with the satisfaction of the patient with the denture using the independent t-test. Another comparison using the Pearson correlation test, which is the relation between the duration of wearing the dentures and the satisfaction of patients as this may reflect the complaint of patients with the newly constructed dentures. The p value ≤ 0.05 has been accepted as statistically significant.

Results

The sample was composed of 156 patients (107 females and 49 males) that are wearing partial dentures, Table 1 showing the mean of each variable (eating problems, loose denture, pain during eating, insertion and removal, food accumulation, speech problems, and retention of the denture) and the highest value was for eating satisfaction, and the least value was discomfort during

speech. The relationship of patient satisfaction with age and sex is summarized in Table 2. There was no statistically significant relationship between gender and satisfaction, while the age has a significant relation (p-value: 0.013) as shown in the Figure 1, as the age increased the satisfaction of the observers increased.

Table 3 is showing that the dentures fabricated by technicians are less satisfied and accepted by the patients, the data, and the statistical analysis showing this difference at a significant level. The duration of wearing the denture and discomfort experience is analyzed and there was no significant relation, as shown in Table 4. The mean value for the overall satisfaction was 2.42, which lies in the reasonably satisfying category of scoring the satisfaction of patients.

Table 1: Descriptive statistics showing the distribution of age and other variables in the data collected.

	n	Range	Minimum	Maximum	Sum	Mean	Std. Error
Age	156	54	27	81	7086	45.42	0.682
Wearing since (days)	156	3283	2	3285	16443	105.40	33.301
Eating satisfaction	156	4	0	4	488	3.13	0.093
Food accumulation around or under prosthesis	15	3	1	4	429	2.75	0.087
Loose denture	156	4	0	4	343	2.20	0.101
Pain during insertion or removal	156	4	0	4	316	2.03	0.095
Discomfort during speak	156	4	0	4	315	2.02	0.115
Retention and stability	156	3	1	4	378	2.42	0.069

Table 2: Spearman correlation test showing the relation between the age and gender with the overall satisfaction of the patients.

		Overall satisfaction
Age	Correlation Coefficient	0.199*
	Sig. (2-tailed)	0.013
	n	156
Gender	Correlation Coefficient	-0.005
	Sig. (2-tailed)	0.954
	n	156

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed)

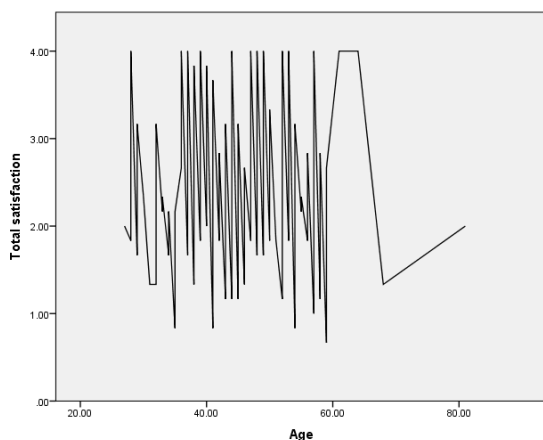


Figure 1: A graphical illustration showing the relationship between age and total satisfaction of the observers.

Table 3: Independent t-test showing the comparison between overall satisfaction and the fabrication of dentures either by dentist or technician.

	Bias	Std. Error	p value
Overall - fabricated by dentist or technician	-0.0019	0.0551	0.001

Table 4: Spearman correlation between the wearing days and the overall satisfaction.

Correlation Coefficient	0.69**
Sig. (2-tailed)	0.392
n	156

** Correlation is significant at the 0.01 level (2-tailed).

Discussion

Nowadays, many efforts have been made to improve the oral quality among those patients who need prosthodontics treatments but these attempts are still not enough⁽³³⁾. This is because understanding patient’s perception, the method for assessing patients' feedback on satisfaction, care experience and treatment outcomes are very crucial^(34,35).

This retrospective study observed the rate of satisfaction and patients complain among 156 patients using acrylic RPD in Sulaimani city, Iraq. According to the result of this study as age increased the rate of satisfaction has been increased. This finding is in agreement with other studies in different countries on patient satisfaction with RPDs. The mean age of RPD users in the present sample was 45.42 years (range: 27-81), which was similar to the previous studies^(21,36). Moreover, the statistical relationship between the patient’s gender and overall satisfaction was not found in this study. This result is also comparable to that shown by other studies.^(21,29)

Despite the widespread use of acrylic RPD to replace missing teeth, but the wearing of RPDs may initiate some problems as it was recorded by other studies^(20,21,29). For the reason of assessing the patient satisfaction with removable prosthodontics therapy the most frequent questions, which are related to the parameters of chewing problems, pain during insertion and removal, food accumulation, speech problems, and retention of the denture was used as previous studies^(37,38). In this study, eating was recorded as one of the most frequent complains among RPD wearers, followed by food impaction under or around the prosthesis. However, discomfort during the speech was the least suffering problem for most of the patients. Similar results have been recorded in other studies.^(20,39)

In addition, in the present study, patients were more satisfied with RPDs that were fabricated by dentists in comparison with dental technicians. As many studies supported that there is a remarkable relation between patients satisfaction, and the quality of the RPDs such as retention, stability, the accuracy of vertical dimension, extension.^(22,23,27)

According to the survey of this study, no relation was found between the previous experience with RPDs and

patients' discomfort and acceptance with RPDs, wearing of RPDs arranged between (2-3285) days. It means that no statistical difference was seen between newly inserted RPDs and patients with old RPDs with regards to satisfaction, which is following previously conducted studies^(40,23,28). However, in other studies wearing the age of RPDs had a significant impact on patient satisfaction⁽³⁶⁾.

Furthermore, in this study, those patients who used acrylic RPDs even for two days were included which may be considered a short period to determine the precise level of patient satisfaction. Fortunately, with limitations of this study, the mean value of overall satisfaction showed that all the patients were reasonably satisfied concerning mastication, speaking, discomfort during insertion and removable, retention and stability and food accumulation variables.

Conclusions

Despite the limitation of this study, patients were more satisfied with their RPDs as age increased while sex and wearing age did not make any influence on a patient's overall satisfaction. Eating was the most commonly encountered issue among RPD wearers, which suggests that more care is needed by dentists during the construction of RPDs to reduce eating difficulties. Moreover, regarding the quality of the RPD, the rate of patient satisfaction was higher for those partial dentures, which are designed and constructed by the dentist than constructed alone by dental technicians. Good communication between dentists and dental technicians is recommended to improve the quality of RPDs, raising patient oral health and quality of their life.

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