

Evaluation And Comparison Of Patient Satisfaction Tendencies And Acceptance For Different Prosthodontic Treatment Modalities

Mohammad Salim Malik*, Sadiyah Fruitwala Malik**.

*Sr. Lecturer, Dept. of Prosthodontics including Crown & Bridge and Implantology,

Manubhai Patel Dental College & Hospital, Vadodara, Gujarat, India, **Private Practitioner, Vadodara, Gujarat, India.

Abstract: Objective: To evaluate and compare the denture satisfaction tendencies for and between the completely and partially edentulous patients, with different prosthodontic treatment modalities. Methodology: The study was conducted to include twenty eight patients that were fit to the criteria of the research, asked to answer some questions, reflect their satisfaction with the newly received dentures, which were delivered to patients according to their conditions and needs (complete removable denture, conventional metal frame RPD, RPD with flexible esthetic clasps and RPD with attachments). Results:The data collected from these patients was grouped and the questionnaires values were calculated to estimate the most satisfied group, which was seen with the group who received RPD with flexible esthetic clasps. But the significant difference analysed by Mann-Whitney Test, was focused on the satisfaction of prostheses' appearance, that was clearly revealed for the patients who received RPD with resilient attachments; followed by the group who received complete dentures and RPD with esthetic flexible clasp (at the same level), supported by the family and friends positive opinions. Also the same group that received RPD with attachments achieved optimum level in prosthesis' satisfaction for retention. Conclusion:The results of this research directed the attention to the recent treatment modalities in fabrication of dentures, like using flexible esthetic clasps and attachments; the patients that received RPD with flexible esthetic clasps appeared to be more satisfied with their prostheses, mostly this was related to the comfortability, esthetic and retention traits, followed with group that received RPD with attachments that showed significant differences in esthetic and retention scores than other groups. While the complete denture wearers were the less satisfied group, related obviously to the difficulty to gain the retention in relation to the partial once, as well as the uncomfortable feelings. [Malik M S. NJIRM 2016; 7(2):24-30]

Key Words: Denture satisfaction, satisfaction scale, flexible esthetic clasp, extra-coronal attachment, removable partial denture (RPD)satisfaction.

Author for correspondence: Mohammad Salim Malik, C 51/52, Alif Nagar Society - 2, Opposite Tandalja Water Tank, Old Padra Road, Vadodara – 390020, Gujarat, India. Email:mdssalimmalik@gmail.com

Introduction:The rehabilitation of the edentulous oral cavity provides one of the most perplexing challenges in dentistry^{1,2}.

The loss of all teeth is a traumatic event in a person's life, that is frequently accompanied by adverse functional and cosmetic consequences, which are varyingly perceived by the affected patient^{3,4}. The change to the oral environment is so great when a large foreign body like "denture" is inserted into the oral cavity that a substantial positive effort commonly has to be made to come to terms with it. The wearing of it must be under the complete control of the patient. If not the patient's main response to this, is feeling of strangeness and the adaptation to the dentures will not occur, so the treatment is likely to fail in future and because of most prosthodontic treatment will be centered on older people, it becomes more complex⁵.

The dentists will continue to use all skills that can be gained⁶. To assist dentists in recognizing such problems, various questionnaires have been designed to measure

characteristics of personality and the levels of the satisfaction⁵.

The aim of this research is to evaluate and compare the denture satisfaction tendencies for and between the completely and partially edentulous patients, with different prosthodontic treatment modalities.

Material and Methods: Twenty eight patients were diagnosed and selected according to the criteria of the study, by using the basic method of dental examination.⁷

The collected sample was grouped to four groups, each one had seven members, dentures were made for each one and delivered according to this categorization:

Group I: Completely edentulous group (males and females), were taken from the community, aged between (45–65) years, who received a removable complete denture, seen in Figure 1 (A & B).

Group II: Partially edentulous group (Kennedy Class I), who received lower conventional metal frame-work RPD, aged between (45–60) years. Figure 2 (A & B).

Group III: Partially edentulous group (Kennedy Class I) that underwent prosthodontic treatment with lower RPD retained by esthetic flexible clasps, age between (45–60) years. Figure 3 (A & B).

Group IV: Kennedy Class I, Partially edentulous group who received RPD supported by resilient extracoronary attachments, their age (48–60) years. Figure 4 (A – D).

Each patient were asked to answer some questionnaire to determine his/her satisfaction with the prosthesis that were delivered. (Appendix 1)⁵.

Figure 1: Completely edentulous patient, who received complete removable denture.

Figure 1(A)

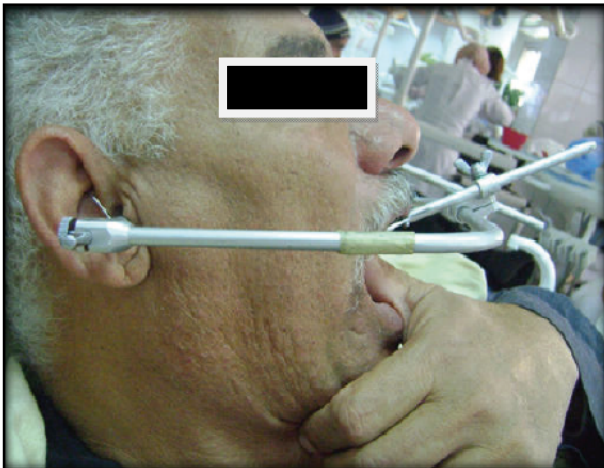


Figure 1(B)



Figure 2: Partially edentulous patient, who received conventional metal frame-work RPD.

Figure 2(A)



Figure 2(B)



Figure 3: Partially edentulous patient, who received RPD retained using esthetic flexible clasps.

Figure 3(A)



Figure 3(B)

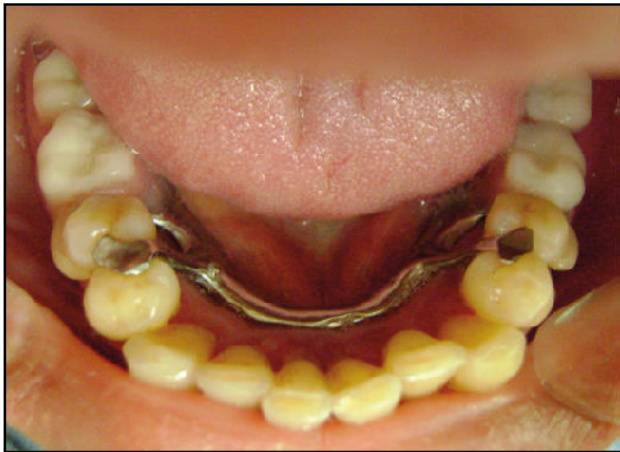


Figure 4(C)



Figure 4: Partially edentulous patient, who received RPD supported by extra-coral attachments.

Figure 4(A)



Figure 4(D)



Figure 4(B)



Discussion and Results: Twenty eight patients were involved in this research, with age ranged between 40-65 years (average: 54.2 years).

The data collected from these patients was grouped and the questionnaire values were calculated to estimate the most satisfied group with their treatment option.

The patient-denture satisfaction index was introduced to completely and partially edentulous patients, who received the prostheses suitable for their condition.

This questionnaire consists of six questions about general denture satisfaction⁽⁸⁾. Each question could be answered in four grades that represent the degree of satisfaction with the dentures. The four answers of each question were scored as follows:

- Answer "a", the patient is totally satisfied = 4 points.

- Answer “b”, the patient is fairly satisfied = 3 points.
- Answer “c”, the patient is fairly dissatisfied = 2 points.
- Answer “d”, the patient is totally dissatisfied = 1 point.

The satisfaction grades for the patients in each group were collected, added and classified in [Table \(1\)](#); also the total satisfaction index score was calculated for each group to explain the tendency of patients for each treatment modality in this research⁵.

Table 1: The denture satisfaction grading for the questions’ answer, in each group

Groups	Questions	Answer “a”	Answer “b”	Answer “c”	Answer “d”	Total score
Group I	q 1	4	9	2	2	130
	q 2	20	6	0	0	
	q 3	4	6	6	1	
	q 4	8	9	2	1	
	q 5	16	9	2	0	
	q 6	20	6	0	0	
Group II	q 1	16	6	2	0	138
	q 2	4	6	8	0	
	q 3	16	6	2	0	
	q 4	16	6	2	0	
	q 5	24	3	0	0	
	q 6	8	9	4	0	
Group III	q 1	16	6	2	0	151
	q 2	20	6	0	0	
	q 3	16	6	2	0	
	q 4	12	9	2	0	
	q 5	24	3	0	0	
	q 6	24	3	0	0	
Group IV	q 1	8	9	4	0	144
	q 2	24	3	0	0	
	q 3	20	6	0	0	
	q 4	12	6	4	0	
	q 5	16	9	0	0	
	q 6	12	9	2	0	

Answer “a”: the patient is totally satisfied;
 Answer “b”: the patient is fairly satisfied;
 Answer “c”: the patient is fairly dissatisfied;
 Answer “d”, the patient is totally dissatisfied.

Table 1 observed that the patients with Group II appeared to be more satisfied with their prostheses more than other groups, mostly this was related to good esthetic values and other functional traits.

Followed with Group IV, related to retention and esthetic properties inherited by this treatment modality. The less satisfied group was the group who received the complete dentures, related obviously to difficulty in gaining the retention for such dentures compared to the partial once, especially during chewing the food. This is may be due to the ability of patients to stabilize the new complete removable dentures as they acquired additional sets of dentures, causing neuromuscular control to become more complex¹.

A Mann-Whitney Test was used as statistical analysis method to compare each question score, between the four groups when P<0.05.

[Table 2](#), showed a significant difference within the denture’s appearance satisfaction, between group I and II. Group I patients were accommodate positively to their prostheses, more than patients of group II, that the last ones were not very interested “how the denture appeared”, since it’s a partial denture not a complete one. This was agreed by Basker and Davenport⁵.

Table 2: Mann-Whitney Test, to compare between Group I patient’s satisfaction tendency, with Group II patients.

*Group I vs. II	q1	q2	q3	q4	q5	q6
Mann-Whitney U	11.500	6.500	10.500	16.500	17.000	12.000
Asymp. Sig. (2-tailed)	.081	.014**	.061	.275	.227	.080

Group I: This group patients received complete removable dentures; Group II: This group patients received the conventional metal framework partial denture; ** P<0.05.

According to Celebic’s and Knezovic-Zlataric, a majority of complete denture and RPD wearers were satisfied with their dentures⁹. Whenever the self esteem was improved, so no significant difference appeared between the questions of the scale, when a comparison was made between group I and III, as seen in [Table 3](#), because both groups reach the same level of satisfaction, according to their needs.

Table 3: Mann-Whitney Test, to compare between Group I patient’s satisfaction tendency, with Group III patients.

*Group I vs. III	q1	q2	q3	q4	q5	q6
Mann-Whitney U	11.500	24.500	10.500	19.000	17.000	21.000
Asymp. Sig. (2-tailed)	.081	1.000	.061	.453	.227	.530

*Group I: This group patients received complete removable dentures; Group III: This group patients received partial denture with flexible esthetic clasps.

The retention of the RPD retained by attachments, play a significant role in the satisfaction, when a comparison between group I and IV was made, the group IV patients were completely satisfied with the retention of their prostheses, ([Table 4](#)). This may be related to the popular using of resilient extra coronal

attachments that is more economic, easily replaced and it provides different degrees of retention¹⁰.

Table 4: Mann - Whitney Test, to compare between Group I patient's satisfaction tendency, with Group IV patients.

*Group I vs. IV	q1	q2	q3	q4	q5	q6
Mann-Whitney U	17.500	21.000	6.500	21.000	23.000	16.500
Asymp. Sig. (2-tailed)	.347	.530	.015**	.638	.827	.244

*Group I: This group patients received the complete removable dentures; Group IV: This group patients received dentures retained by extra-coronal attachments; ** P<0.05.

Flexible esthetic clasps when added to the metal framework RPD, instead of the conventional metal clasps, they enhance the tendency of patients getting satisfied more with their prostheses (from the aspect of esthetic and appearance), this was showed with a significant value related to the second question at Table (5). This result was supported by the significance related to the sixth question at the same table, that revealed the positive opinions of the relatives and friends with the prostheses. The flexible esthetic clasps described in this study, have other advantages more than the esthetic view, including: biocompatibility, nearly unbreakable and can be built with different shapes and contours, this make it the most favourable alternation to the cast metal clasp^{11,12,13,14}.

Table 5: Mann-Whitney Test, to compare between Group II patient's satisfaction tendency, with Group III patients.

*Group II vs. III	q1	q2	q3	q4	q5	q6
Mann-Whitney U	24.500	6.500	24.500	21.500	24.500	9.500
Asymp. Sig. (2-tailed)	1.000	.014**	1.000	.674	1.000	.031**

*Group II: This group patients received the conventional metal framework partial denture; Group III: This group patients received the partial denture with flexible esthetic clasps; ** P<0.05.

The esthetic positive values were detected with group III more than group II, but it was optimized with group IV patients, that this point had the highest scores between all groups (Table 6). This is because such treatment modality (extra-coronal resilient attachments) can be used with a greater freedom in designs that are favourable and unique esthetically for each case¹⁵.

Table 6: Mann-Whitney Test, to compare between Group II patient's satisfaction tendency, with Group IV patients

*Group II vs. IV	q1	q2	q3	q4	q5	q6
Mann-Whitney U	17.000	5.000	20.000	20.000	17.500	19.500
Asymp. Sig. (2-tailed)	.304	.007**	.496	.532	.254	.493

* Group II: This group patients received the conventional metal framework partial denture; Group IV: This group patients received dentures retained by extra-coronal attachments; ** P<0.05.

Table (7) showed no significant difference at any question, between the patients who received removable partial dentures with flexible esthetic clasp, or patients who received removable partial dentures with extra-coronal attachments. This was thought to be related to the balanced esthetical and biological advantages, that can be gained from such both treatment modalities^{12,16-18}.

Table 7: Mann-Whitney Test, to compare between Group III patient's satisfaction tendency, with Group IV patients.

*Group III vs. IV	q1	q2	q3	q4	q5	q6
Mann-Whitney U	17.000	21.000	20.000	22.500	17.500	13.500
Asymp. Sig. (2-tailed)	.304	.530	.496	.784	.254	.096

*Group III: This group patients received partial denture with flexible esthetic clasps; Group IV: This group patients received dentures retained by extra-coronal attachments.

Conclusion: The results of this research directed the attention to the recent treatment modalities in fabrication of dentures, like using flexible esthetic clasps and attachments; and try to save the remaining teeth with wearers of partially removable partial dentures (RPDs) via such modalities, before turning to completely edentulous patients, with compromised treatment satisfaction. The significant difference was focused on the second question that related to the satisfaction with the appearance of the prosthesis. It was an important factor that affect the positive tendency of the patients towards the denture, through improving their self esteem.

This was clearly revealed with the patients who received RPD with attachments; followed by the group who received complete dentures and RPD with flexible esthetic clasp, supported by the family and friends positive opinions.

A significant difference related to the retention of the prosthesis, was seen at an optimum level with the group who received RPD with resilient extracoronal attachments, especially when compared with the removable complete denture wearers, as well as esthetic enhancement ability.

Generally, the group that was most satisfied was with their prostheses and achieved the highest collective score was the third group, in which the patients who received RPD with flexible esthetic clasps, it was special in different ways.

APPENDIX 1: PATIENT DENTURE SATISFACTION INDEX

1) Are you satisfied and comfortable with your denture?

Yes, it's comfortable and satisfactory in all aspects.
 Yes, it's satisfactory in most ways but have some faults.
 No, it has several faults but I can wear it.
 No, it's uncomfortable with many faults, I can't wear it.

2) Are you satisfied with the appearance of your denture?

Yes, it has a pleasant, natural appearance.
 Yes, it has a nice appearance but, I would change some things if I could.
 No, it's not what I would like, but I wear it.
 No, it doesn't look real or are ugly looking.

3) Are you satisfied with how well your denture stays in place?

No, the denture is so loose I don't like to wear it.
 No, the denture often comes loose while I am eating or speaking but, I can wear it.
 Yes, the denture stays in place most of the time.
 Yes, the denture always stays in place.

4) Are you satisfied with how well you chew food with your denture?

Yes, I am able to chew all foods.
 Yes, I am able to chew all but a few foods.
 No, I am not able to chew food very well.
 No, I am able to chew food with the denture.

5) Are you satisfied with how well you speak with your denture?

Yes, I have no trouble speaking.

Yes, once in a while I have a few problems while speaking.

No, speaking is always a little difficult.

No, speaking is always very difficult.

5) Are you satisfied with how well other people (family and friends) like your denture?

Yes, all comments have been very favourable.

Yes, I have received no unfavourable comments.

No, I have received some unfavourable comments.

No, all comments have been unfavourable.

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