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The satisfaction of patient with removable partial denture therapy from point of the comfort and chewing efficiency

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Abstract

The aim of this study was to assess relation of satisfaction level of RPDs related to comfort and chewing efficiency of patients who seeking treatment of removable partial denture. Thirty two patients with a removable partial dentures, were examine, age range (30-60) years. After construction of the prosthesis, we ask the patients questions about comfort and chewing efficiency and the satisfaction of patient was evaluated by using scale range from 1 to 5. Results found that the largest percentage of the female were satisfy (55%) with the comfort of her denture compared with the male patients and the differences significant. The largest percentage recorded in the employed patient (52.6%) were satisfied compared with the non-employed patient who have (46.2%) were satisfied. About chewing efficiency, the largest percentage recorded for the male patient (50%) was satisfied compared with the female patients. Among age groups, the largest percentage was for the G.I satisfy compared with the G.II. The largest percentage recorded in employed patients compared with the non-employed patient. About comfort, the largest percentage of the female were satisfy of her denture compared with the male patients, the largest percentage for G.II was satisfy compared with the G.I, and the largest percentage recorded in the employed patient were satisfied compared with the non-employed patient. About chewing efficiency, the male patients were more satisfied than female patients, in relation with age, the largest percentage was for the G.I satisfy compared with the G.II, and the largest percentage recorded in employed patients were satisfied compared with the non-employed patients.

Keywords: Removable partial denture, comfort, chewing efficiency patients, Satisfaction.

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Introduction

Patient's appearance affected by tooth loss which have a negative effect on chewing ability, and speech, tooth loss may be due to trauma, dental diseases, pathology, or else, will disturb the esthetics and phonetics of patient and also alters the psychological attention of the patients.⁽¹⁻³⁾ Dental implant, fixed bridges, and removable prostheses, all these options for

treatment the partially edentulous patients,^(4,5)but then again, there are many side effect related with some treatment line like dental implant such as cost, patient needs ,or oral difficulties.⁽⁶⁾Removable partial denture (RPD) have many advantages like chewing capability even after missing of teeth and restore facial appearance, chewing is the main occupation of teeth and the science which is responsible for restoring structural integrity for teeth, and stomatognathic system is dentistry⁽⁷⁾. The patients masticatory function can be improve by restoration of losing teeth with RPD⁽⁸⁾.The first cause of construction of RPD should include preserved of the remnants, not only replacement of missing teeth (grounded by De Van's), therefore, the reasonable option of treatment was the construction of RPD which improve speech and retain masticatory efficiency⁽⁴⁾. Since Satisfaction with RPDs based on personality of patients, attitude, any previous experience, design and methods of fabrication process of RPD⁽⁹⁻¹¹⁾. So the particular factors for acceptance of RPD werechewing efficiency, aesthetics and retention.^(12,13)

The objective of the current study was to assess relation of satisfaction level of RPDs related to comfort and chewing efficiency of patients who search for treatment of RPD in Hilla city of Iraq.

Materials and Methods

The subjects in this study were (32) patients with a removable partial dentures, were examine at the special dental clinic in Al-Hilla city, Iraq, (12) males and (20) females, the age from (30) to (60) years. The insertion standards contained patients from both genders, who have partially edentulous areas in one or two arches. All the patients have RPD. The study period (February 2019 to June 2019).Common information like name, gender, and age were obtained from patient, the patient in our study should be with good oral and general health, and tempromandibular joint should be in normal state. Some question should be asked to patient after RPD construction about comfort and chewing efficiency and the satisfaction of patient was estimated by using scale range from 1 to 5, (scale 1mean unsatisfied, 2 satisfy, 3 good,4 very good, 5 excellent), and the patient distributed into two age groups ,1st group (less than 40 years G.I), and 2nd age group (from 41 to 60 years G.II).

The study was conducted in accordance with ethical principles that have their origin in the Declaration of Helsinki. The study protocol and subject information were reviewed and approved by a local Ethics Committee.

Results

Table (1) shows that the age group distribution. About the comfort, table (2) and figure (1) showing that the relation between sex and comfort, the largest percentage of the female were satisfy (55%) with the comfort of her denture compared with the male patients who have (41.7%), and the differences between the gender was significant ($p < 0.05$). Among age groups, table (3) and figure (2) the largest percentage was for the G.II (older than 40 years) about (52.4%) was satisfy compared with the G.I (younger than 40 years) about (45.5%) and the least percentage was recorded for the G.I about (4.8%) was unsatisfied with the comfort of the RPD, also the differences between the age groups was significant ($p < 0.05$).

Table (4) and figure (3) show the relation between employment and comfort, it obvious that the largest percentage recorded in the employed patient (52.6%) were satisfied compared with the non-employed patient who have (46.2%) were satisfied,

but the differences between the groups was non-significant ($p > 0.05$). About chewing efficiency, table (5) and figure (4) show the relation between gender and chewing efficiency, we see that the largest percentage recorded for the female patient (30%) was very satisfied compared with the male patients who have (0%), and the differences between the gender was significant ($p < 0.05$). Among age groups, tab.6, fig.5 show that the largest percentage was for the G.I about (45.4%) who satisfy compared with the G.II about (28.6%). Table(7) and figure (6) show the relation between employment and chewing efficiency, it obvious that the largest percentage recorded in employed patients (42.1%) and (26.3%)were satisfied and very satisfied respectively compared with the non-employed patient who have (23.1%) and (7.7%), and the differences between the groups was significant ($p < 0.05$).

Table (1): age groups:

Groups (gr.)	Age
G.I	Less than40 years
G.II	(41-60)years

Table (2): relation between sex and comfort:

Sex	dissatisfied	Accepted	satisfied	very satisfied
Male(12)	8.3%	41.7%	41.7%	8.3%
Female(20)	5%	10%	55%	30%
p-value: Less than0.05				

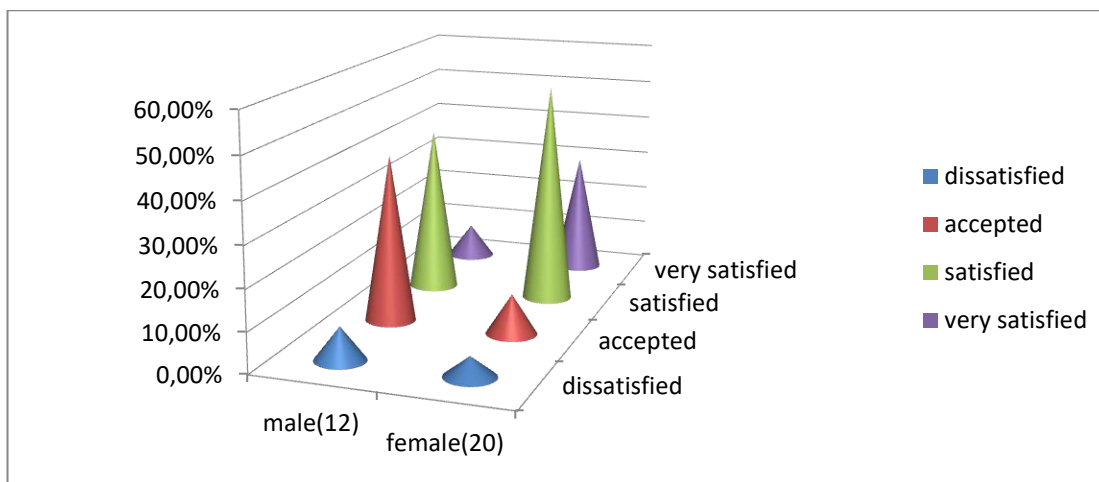


Figure (1): Relation between sex and comfort

Table(3): relation between age and comfort

Ages	dissatisfied	Accepted	satisfied	very satisfied
40-30years (11)	9%	18.2%	45.5%	27.3%
More than40(21)	4.8%	23.8%	52.4%	19%
p-value: Less than0.05				

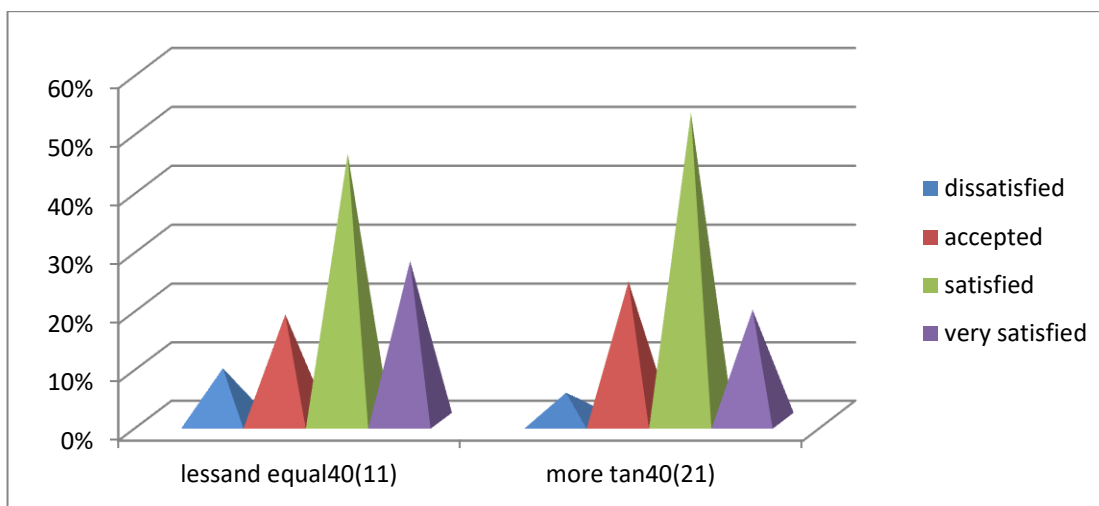


Figure (2): Relation between age and comfort.

Table (4): Relation between employment and comfort

employment	dissatisfied	accepted	satisfied	very satisfied
Employee	0%	21.1%	52.6%	26.3%
Non employee	15.4%	23%	46.2%	15.4%
p-value: More than 0.05				

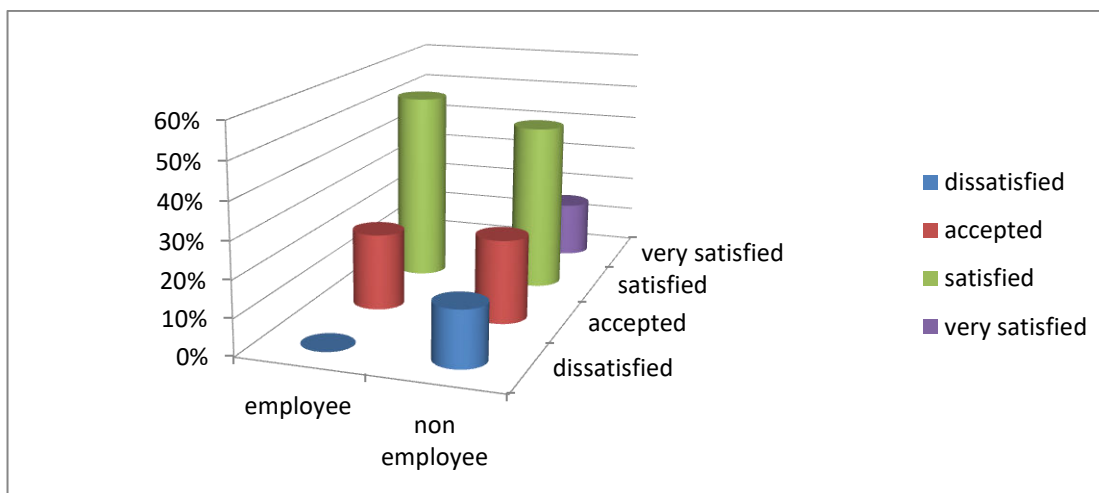


Figure (3): Relation between employment and comfort

Table (5): Relation between sex and chewing efficiency

sex	dissatisfied	Accepted	satisfied	very satisfied
Male(12)	8.3%	41.7%	50%	0%
Female(20)	5%	40%	25%	30%
p-value: Less than 0.05				

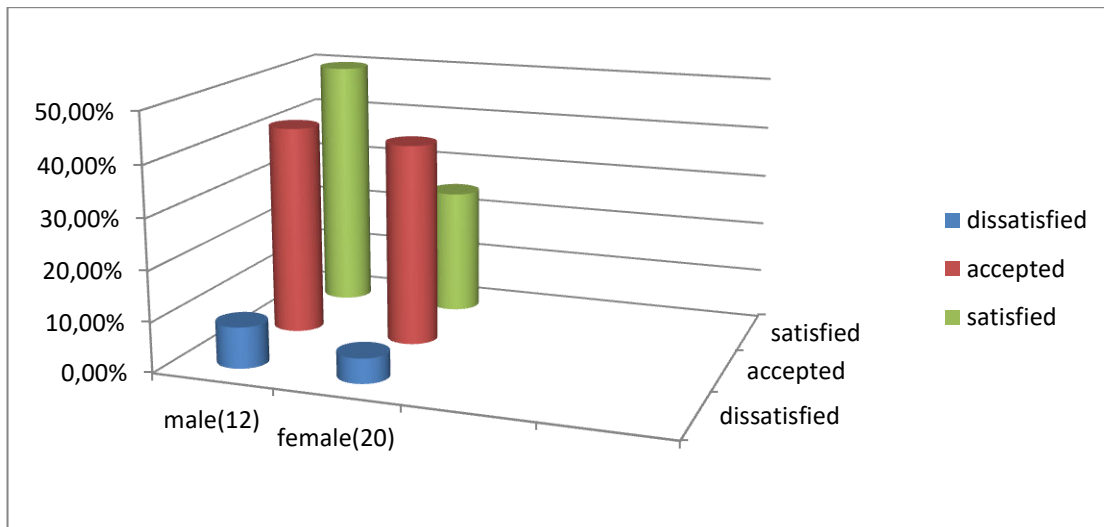


Figure (4): Relation between sex and chewing efficiency

Table(6): Relation between age and chewing efficiency

ages	dissatisfied	accepted	satisfied	very satisfied
40-30years (11)	0%	27.3%	45.4%	27.3%
More than40(21)	9.5%	47.6%	28.6%	14.3%
p-value: More than0.05				

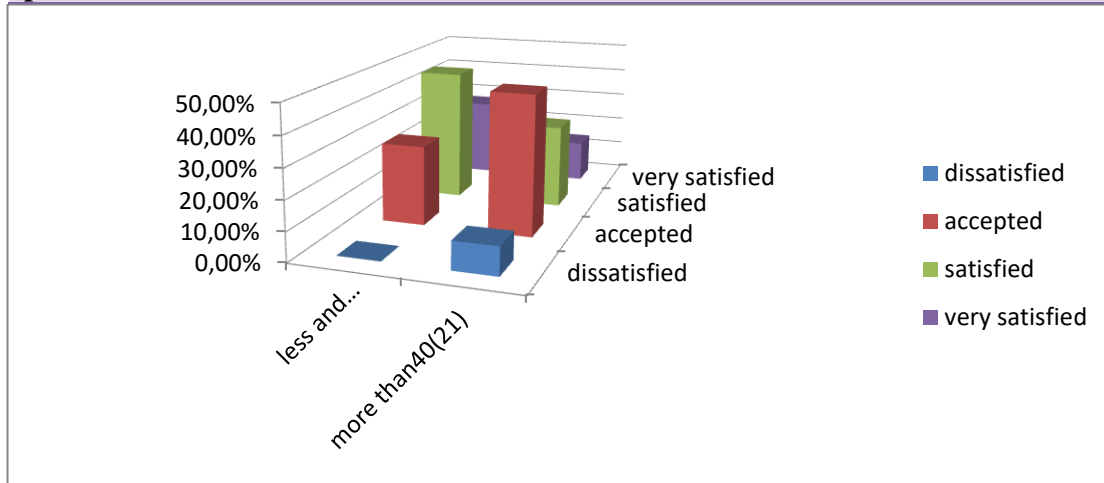


Figure (5): Relation between age and chewing efficiency.

Table (7): Relation between employment and chewing efficiency

employment	dissatisfied	accepted	satisfied	very satisfied
Employee (19)	0%	31.6%	42.1%	26.3%
Non employee(13)	15.4%	53.8%	23.1%	7.7%
p-value: Less than0.05				



Figure (6): Relation between employment and chewing efficiency

Discussion

The most important function of RPD therapy was “conservation of that which remains, not the meticulous replacement of what has been lost” according to De Van's, so the appropriate option of treatment with RPD that gives an improved range of restorative options: preserving or adjusting speech, improving chewing efficiency, stabilizing dental relationships and improving aesthetics ⁽³⁾. The RPDs use is severely affected by the satisfaction of patient, several factors like attitude of patient and personality, provided RPDs quality, oral hygiene of patient, tolerance, comfort level, esthetic, and speech can affect satisfaction of patient with RPD therapy. ⁽¹⁴⁻¹⁶⁾ Regarding the relation between the gender and the comfort, we found that the largest percentage of the female were satisfy with the comfort of her denture compared with the male patients and the differences between the gender was significant ($p < 0.05$), and this may be related to the fact that the women have a tendency to be did not accept their edentulous state and she tend to improve their appearance while men are less inclined to search for treatment for edentulism or may be due to the larger women component in the sample, and this was agree with Mallika *et al*⁽¹⁷⁾ who found that there was a significant difference between men and women in the satisfaction level with their RPD comfort but the women were less satisfied with comfort then men, as well as the result of Wakabayashi *et al*.⁽¹⁸⁾ and Kamber-Ćesir *et al*⁽¹⁹⁾ study. Regarding the relation between the age and the comfort, the largest percentage for G.II was satisfy compared with the G.I, and the differences between the age groups was significant, this result was disagree with Abdel Salam *et al*⁽²⁰⁾ study who found that no significant difference was discovered between different age groups patients, and with Mallika *et al*⁽¹⁷⁾ who found that the dissatisfaction was viewed mostly with older age.

Regarding the relation between employment and comfort, the largest percentage recorded in the employed patient were satisfied compared with the non-employed patient, but the differences between the groups was non-significant ($p > 0.05$), and this agree with a Turkish ⁽²¹⁾ and two Brazilian ^(22,23) studies, and disagree with Aditi and Asra ⁽²⁴⁾ study. A Croatian study ⁽²⁵⁾ confirmed this common assumption: it found a negative correlation between educational levels and function with patient satisfaction for comfort. Results of chewing efficiency revealed that the relation between gender and chewing efficiency, we found that the female patients were more satisfied than male patients, and the differences between the gender was significant ($p < 0.05$), this agree with Knezovid-Zlatarid *et al*.⁽²⁶⁾ and Kamber-Ćesir *et al*⁽¹⁹⁾ study who found that females were more satisfied than males. Among age groups, the largest percentage was for the G.I satisfy compared with the G.II,

this may be due to the anatomical factor that the young age have good bone, resorption rate less, good muscle, etc. so good retention, support and stability so the chewing was best than old age group ,and this agree with study by Abdel *et al*⁽²⁰⁾ assessed chewing and found that younger patient were more satisfy, whereas Mallika et al⁽¹⁷⁾who found that the satisfaction was more among older patients. The relation between employment and chewing efficiency, the largest percentage recorded in employed patients were satisfied and very satisfied compared with the chewing efficiency than non-employed patients, and the differences between the groups was significant, no previous study to see the agreement and disagreement.

Conclusion

Regarding comfort, the largest percentage of the female were satisfy of her denture compared with the male patients and the differences between the gender was significant, the largest percentage for G.II was satisfy compared with the G.I, and the differences between the age groups was significant, and the largest percentage recorded in the employed patient were satisfied compared with the non-employed patient. Results of chewing efficiency revealed that the female patients were more satisfied than male patients, and the differences between the gender was significant, in relation with age, the largest percentage was for the G.I satisfy compared with the G.II, and the largest percentage recorded in employed patients were satisfied compared with the non-employed patients, and the differences between the groups was significant.

Conflicts of interest: None of the authors have any conflicts of interest relevant to this research subject.

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