

## ASSESSMENT OF THE RELATION BETWEEN PATIENTS ATTITUDE AND PATIENTS SATISFACTION WITH COMPLETE DENTURES

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### ABSTRACT

*The aim of this study was to investigate the relationship between patients attitude before receiving denture and his satisfaction with complete denture after three months of using it. A total of 450 new complete denture wearers took part in the study. In each case patient's attitude before receiving denture were evaluated by a questionnaire which contained 12 questions in a yes-no tic box pattern. The patient's satisfaction with his new denture was evaluated by means of a questionnaire also consisting of 12 questions using an analogue scale from 1 to 5 (1: strongly disagree, 5: strongly agree). The satisfaction test took place 3 months after denture insertion. Multiple correspondence analyses demonstrated close correlation between patient's expectation of their future denture and appreciation of their new denture after three months of use. Majority of complete denture wearers were significantly satisfied and expressed general satisfaction, as regards to comfort, retention, stability, speech, chewing, taste, the appearance, and showed no pain on wearing the denture. Accepted the treatment modality. Moreover, they expressed that they would advise other people to get similar treatment when needed.*

**Key words:** Complete denture, patient satisfaction, prosthetic dentistry, dental success

### INTRODUCTION

Becoming edentulous is an unpleasant event in patient's life and complete denture can be of great disappointment to many edentulous patients<sup>1</sup>. Dentists consider dentures successful when they meet certain technological standards, however, patient evaluate denture from the point of view of his satisfaction<sup>2,3,4</sup>. A major challenge in prosthetic practice continues to be the successful management of complete denture in patients who experience difficulties with their dentures<sup>5</sup>.

It is often expectation or attitude factors of patients rather than the prosthodontic technique or patient psychologically which can lead to therapeutic failure<sup>4,7</sup>. Although patient attitude towards denture is often mentioned as an important factor for the acceptance of complete denture, many denture wearers have unrealistic expectations about the functional and aesthetic values of the denture. Bell<sup>8</sup> pointed out that dentists have to educate their patients to realistic view on the limitation of denture wearing.

A number of studies have reported on the relationship between the professionally judged and accepted quality of complete denture and the subjective judg-

ment of the patients<sup>1-4,7,9-11</sup>, among them many authors indicate interest in a proper attitude towards denture, very little who investigated this relationship with satisfaction<sup>6,12-15</sup>, however Van Waas<sup>1</sup> found a moderate relationship between denture satisfaction and their attitude toward that denture. Jonkman et al<sup>3</sup> reported that attitude toward wearing denture was a prospective tool for assessing the denture as when the attitude is positive and the patient expect a positive result; the patients will be more satisfied with their denture.

### METHODOLOGY

A total of 450 patients from Prince Hashim Bin Al Hussein (Zarqa, Jordan) and Prince Rashid Bin Al Hassan (Irbid, Jordan) hospitals, between August 2005-August 2007 took part in this study. The study population consisted of 230 men and 220 women ranging from 32 to 81 years of age. The mean age was 51.3 years.

In order to participate in the study, patients had to answer two sets of questionnaires after the purpose of the study was explained to them at two different times (one before starting the treatment and the other three months after wearing of his complete denture). Moreover, only ordinary patients were selected. Physically and/or psychologically handicapped patients were not included in this study.

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The questionnaire developed was based on questions of previous comparable studies. Questions chosen were easy.

Prior to the starting of this process, the dentists working in the prosthetic clinic (two residents and one senior specialist) witnessed reading the question on 20 patients to see if there is sufficient consistency between their grading; after that it was decided that only the senior specialist should make all the recordings for all the patients. Dentures were made for the patient by the standard conventional methods of denture construction

The patient attitude or expectation toward their dentures was tested by means of a questionnaire. Care was taken to collect these data before starting the treatment.

The questionnaire starts collecting information about socioeconomic variables such as age, gender, occupation and marital status. The attitude toward denture was measured by mean of a questionnaire consisting of 12 questions: the first two of them try to explain patient expectation towards general satisfaction and his thinking of comfortability he/she might feel with the denture; seven other questions concerned the functional performance and esthetic aspects; the last three tried to explore some of the psychological performance with the treatment, the questions were answered by yes/no answers.

After 3 months of insertion of the new denture, the satisfaction of the patient with their new denture in general was measured by a questionnaire consisting of 12 questions. First two questions were asked to express their satisfaction or otherwise about the comfort

with the denture. The next seven questions were related to functional aspects of the denture: namely retention, stability, speech, mastication, taste, pain and appearance with the dentures. The last three questions provided grades on the psychological aspect of denture in form of accepting the denture as part of themselves, social relation activity with denture and if they recommend such treatment for other people. The questions were answered on a five point scale.

Tabulated analysis using the Statistical Package for the Social Sciences (SPSS) computer software, for significance differences was used to find the correlation between different variables.

**RESULTS**

A total of 450 patients took part in this study. The first two questions in the questionnaire tried to test general satisfaction and comfort feelings of the patient on wearing the denture; the next seven questions were constructed with the intention to evaluate relevant aspect of satisfaction and the last three questions tried to explore some of the psychological outcome of denture performance. Table 1 shows the distribution of answers with response alternative and percentage distribution of responses concerning the variables assisted in this study.

The attitude toward dentures showed that 394 (87.5%) of patients thought that they will have good denture in general and 301 (66.8%) suspected to have comfortable feeling and performance with the dentures. When the functional aspect of denture was tested 380 (84.4%) thought they will have a retentive denture where as 411 (91.3%) suspected to have stable denture. Speech thought

TABLE 1: SHOW RESULTS OF PATIENT ATTITUDE AND CORRELATION TO SATISFACTION

Questions	Attitude				Correlation P*
	Yes	%	No	%	
<b>General Satisfaction</b>	394	87.5	56	12.4	0.868
<b>Comfortable</b>	301	66.8	149	33.1	0.866
<b>Retention</b>	380	84.4	70	15.5	0.892
<b>Stability</b>	411	91.3	39	8.6	0.808
<b>Speech</b>	336	74.6	114	25.4	0.871
<b>Chewing</b>	412	91.5	38	8.5	0.808
<b>Taste</b>	438	97.3	22	2.7	0.843
<b>Appearance</b>	432	96	18	4	0.866
<b>Pain</b>	405	90	45	10	0.877
<b>Foreign Body</b>	252	56	198	44	0.593
<b>Communication with People</b>	439	97.5	11	2.5	0.641
<b>Recommendation</b>	430	95.5	20	4.5	0.832

\*= correlation is significant at the 0.01 level.

TABLE 2: SHOW RESULTS OF PATIENT SATISFACTION

Questions	Stron- gly Dis- agree	%	Dis- agree	%	I don't know (not sure)	%	Agree	%	Stron- gly agree	%
General Satisfaction	<b>55</b>	12.22%	<b>63</b>	14.00%	<b>30</b>	6.67%	<b>133</b>	29.56%	<b>169</b>	37.56%
Retention	<b>17</b>	3.78%	<b>35</b>	7.78%	<b>10</b>	2.22%	<b>256</b>	56.89%	<b>132</b>	29.33%
Stability	<b>67</b>	14.89%	<b>69</b>	15.33%	<b>86</b>	19.11%	<b>121</b>	26.89%	<b>107</b>	23.78%
Speak	<b>17</b>	3.78%	<b>62</b>	13.78%	<b>8</b>	1.78%	<b>298</b>	66.22%	<b>65</b>	14.44%
Chewing	<b>78</b>	17.33%	<b>77</b>	17.11%	<b>33</b>	7.33%	<b>167</b>	37.11%	<b>95</b>	21.11%
Taste	<b>52</b>	11.56%	<b>89</b>	19.78%	<b>27</b>	6.00%	<b>199</b>	44.22%	<b>83</b>	18.44%
Comfortable	<b>53</b>	11.78%	<b>76</b>	16.89%	<b>26</b>	5.78%	<b>242</b>	53.78%	<b>53</b>	11.78%
Appearance	<b>15</b>	3.33%	<b>62</b>	13.78%	<b>78</b>	17.33%	<b>197</b>	43.78%	<b>98</b>	21.78%
Pain	<b>45</b>	10.00%	<b>42</b>	9.33%	<b>25</b>	5.56%	<b>196</b>	43.56%	<b>142</b>	31.56%
Foreign Body	<b>135</b>	30.00%	<b>187</b>	41.56%	<b>88</b>	19.56%	<b>22</b>	4.89%	<b>18</b>	4.00%
Communication with People	<b>121</b>	26.89%	<b>165</b>	36.67%	<b>113</b>	25.11%	<b>39</b>	8.67%	<b>12</b>	2.67%
Recommendation	<b>12</b>	2.67%	<b>98</b>	21.78%	<b>14</b>	3.11%	<b>205</b>	45.56%	<b>121</b>	26.89%

to be problem for 114 (25.3%), 412 (91.5%) thought they will eat well and 22 (4.8%) thought they may loose taste due to denture. Only 18 (4%) thought they will look older and dentures will not improve their appearance, 45 (10%) suspected to feel pain when using dentures. 252 (56%) will feel dentures as parts of themselves, while 439 (87.5%) said communication with other people will improve and the same number thought they may advise the treatment to friends. Table 1.

After having worn their new denture for three months, 302 (67.1%) of patients were satisfied with their new dentures in general, 295 (65.5%) of the patients felt comfortable while using their dentures. Three hundred eighty eight (86.2%) of patients found their dentures to be retentive, regarding stability 228 (49.8%) found it to be stable, as for speech, eating and taste performance with dentures: 363 (80.6%), 262 (58.2%), 282 (62.6%) respectively were satisfied with these items and 295 (65.5%) were happy with their appearance. Results for the psychological acceptance of treatment showed that 322 (71.5%) felt dentures as parts of themselves, 286 (62.6%) found it easy to communicate with other people, 326 (72.4%) felt they will recommend the treatment to others (Table 2).

**DISCUSSION**

Since patients satisfaction in evaluating their own dentures is necessary condition for success of complete denture treatment, the sample size (450 patients) participated in this study was controllable and convincing to see the effect of patients attitude towards satisfaction with complete denture therapy.

Although the patient's participated in this study were treated in the Jordanian hospitals of the Royal Medical Services, which are military public hospitals serving for their patients free of charge, only persons with good physical and mental conditions (normal patients) were chosen. In addition, since this study also suggests that the patients can discriminate between the different variables of satisfaction as questions chosen were easy for administration and can be evaluated by any normal person; the importance of giving steady answers was emphasized upon the patients. Moreover attitude of patients toward their new dentures and satisfaction rated by the patients was recorded by the senior specialist who supervised the construction of the dentures.

Since this study was designed to determine the correlation relationship between patient expectation and satisfaction with individual aspects of the denture, initially before starting the treatment, patients were asked to express their expectation about general satisfaction and comfort ability of their denture, when comparing the results with that found after 3 months of use, a significant positive relation was found between the two variables. Both of these variables (general satisfaction and comfort) are the most important variables that may explain satisfaction with the function aspects of denture in general<sup>16-17</sup>, the results of this study agree with the findings of previous studies and papers that examined patient attitude and satisfaction towards their dentures<sup>6, 13-15</sup>.

When patients were asked to express their expectation about the functional performance with the future denture, and compared the results with that found

three months after use, also a strong relation was found between the different variables, may be the general satisfaction and finding the denture retentive, stable and esthetically acceptable gave rise to such findings, a statement which is supported by many other studies<sup>1-6,18</sup>.

The last 3 questions addressed some psychological aspects. All the patients had overall positive views of their future dentures which was found to be in agreement with that found with their newly inserted dentures after three months of use, other studies found similar results<sup>1,6</sup>.

As seen from the variables previously mentioned, a powerful relationship was demonstrated between the measures of attitude before insertion and patient satisfaction after 3 months of use. This result was supported by other studies<sup>2,3,11,13</sup> which found such a strong relation; other studies found a moderately positive relation<sup>6-7</sup> while still others found no significant relation between them<sup>9</sup>. Langer et al<sup>2</sup> pointed out that success and patient acceptance of the complete denture is determined by an interplay of different functional, psychological, and constructional factors which is in agreement with this study. Moreover, Van Waas<sup>1, 6-7</sup> stated that patients attitude toward denture prior to receiving them may appear to play an important role in satisfaction with their future dentures as those who thought positively most often had positive responses towards their dentures. Jonkman et al<sup>3</sup> stated that the attitude toward wearing denture was a prospective tool for assessing the satisfaction with complete denture wearing.

**CONCLUSION**

- 1 A good positive correlation was found between patient attitude before receiving the denture and satisfaction with the new denture.
- 2 This study supports other studies which reported that attitude of the patient toward denture is a prospective tool to predict patient dissatisfaction with new denture.

**REFERENCES**

- 1 Van Waas M. A. J. Determinants of satisfaction with denture: A multiple regression analysis. *J. Prosthet. Dent.* 1990;64: 569-572

- 2 Langer A., Michman J., Salfert I. Factors influencing satisfaction with complete dentures in geriatric patients. *J. Pros. Dent* 1961; 11:1019-1031
- 3 Jonkman R.E.G., Van Waas M.A.J., Hof M.A., Kalk W. An analysis of satisfaction with complete immediate (over) dentures. *J. Dent.* 1997, 25:107-111
- 4 Fenlon M. R., Sherriff M., Walter J. D. Comparison of patients appreciation of 500 complete dentures and clinical assessment of quality. *Eur. J. Prosthodont. Rest. Dent., Vol.7, No.1, PP* 11-14
- 5 Sheppard I.M., Schwartz L.R., Shappord S.M. Survey of the oral status of complete denture patients. *J. Prosthet. Dent.* 1972;28:121-126
- 6 Van Waas M. A. J. The influence of psychologic factors on patient satisfaction with complete denture. *J. Prosthet. Dent.* 1990;63:545-548
- 7 Van Waas M. A. J. The influence of clinical variables on patients' satisfaction with complete denture. *J. Prosthet. Dent.* 1990;63: 307-310
- 8 Bell DH Jr. Prosthodontics failures related to improper patient education and lack of patient acceptance. *Dent Clin North Am* 1972;16:109-118
- 9 Fenlon M.R., Sherrif M. Investigation of new complete denture quality and patients' satisfaction with and use of denture after two years. *J. Dent* 2004; 32; 327-333.
- 10 de Baat C., Kalk W., felling A.J.A., Hof M.A. Elderly people's adaptability to complete denture therapy: usability of a geriatric behavior-rating scale as a predictor *J. Dent.* 1995;23; 151-155
- 11 Hakestam U., Soderfeldt B., Ryden O., Glantz E., and Glantz P-O. Dimension of Satisfaction Among Prosthodontic Patients. *Eur. J. Prosthodont. Rest. Dent., Vol.5, No.3, PP* 111-117
- 12 De Baat C., Van Aken A. A. M., Mulder J., Kalk W. "Prosthetic condition" and patients' judgment of complete dentures. *J. Prosthet. Dent.* 1997;78:472-8
- 13 Hakestam U., Soderfeldt B., Ryden O., Glantz P., Personality Factors Versus Expectation And Self-Reported Symptoms Among Patients Awaiting Advanced Prosthodontic Treatment. *Eur. J. Prosthodont. Rest. Dent., Vol.5, No.3, PP* 105-110
- 14 Alvi H. A., Agrawal N. K., Chandra S., and Rastogi M.R. Comparative analysis of personality characteristics of dental patients in relation to their natural and artificial dentitions. *J. Prosthet. Dent.* 1986;56:369-379
- 15 Misch L. S., Misch C. E., denture satisfaction- a patient perspective. *Int. J. Oral Implant.* 1991; 7:43-48
- 16 Smith M. Measurement of personality traits and their relation to patient satisfaction with complete denture. *J. Prosthet. Dent.* 1976;35:492-503
- 17 Berg E. A 2-year follow-up study of patient satisfaction with new complete dentures. *J. Dent.* 1988;16:160-165
- 18 Frank P. R., Brudvik J. S., Leroux B., Milgrom P., Hawkins N. Relationship between the standards of removable partial denture construction, clinical acceptability, and patient satisfaction. *J. Prosthet. Dent.* 2000;83:521-7