

Denture Satisfaction – The Most Wanted Key to Successful Complete Denture Therapy.

Abstract:

Background: The dilemma of patient satisfaction vs. non-satisfaction with dentures is another never-ending debate in dentistry. The fabrication of optimal dentures is possible with appropriate prosthetic laboratory techniques along with patients' anatomic and physiologic requirements assessed by a dentist.

Aim : The purpose of this study was to evaluate the patient's priority and mean satisfaction scores of the patient and dentist during complete denture therapy.

Material and methods: After selecting the subjects based on decided inclusion and exclusion criteria, the patients were asked to fill the proforma with VAS. The proforma contained a questionnaire. The patients rated their dentures using a scale ranging from 1-5.

Results: According to the patient's priority the majority of the patients preferred mastication. The highest mean dentist satisfaction score was concerned with the extension of a denture. There was no statistically significant difference with age and gender for mean denture assessment, aesthetic, phonetics, mastication and comfort satisfaction score. However, the employed patients have aesthetic, phonetics and mastication satisfaction score higher than unemployed patients and the relationship was statistically significant.

Conclusion: Majority of the patients was concerned with better chewing function with their dentures. Age and gender do not affect patient satisfaction. However, employed patients were less satisfied with their dentures as compared to unemployed patients. In addition, patients who were educated had better phonetics with their dentures as compared to uneducated patients. Strong dentist-patient communication is necessary to be able to satisfy a patient.

Keywords: Complete denture, Satisfaction, Patient communication.

Introduction:

According to surveys by WHO, the age group of people more than 50 years is increasing worldwide. A number of agencies are also working on increasing the life expectancy of the population in many countries. [1]. For a dentist point of view tooth loss is considered as mortality, in other words, it is the ultimate death of a tooth or an end of oral disease in a patient. World wide elderly patients are more often presented with a complaint of complete edentulism. In Canada, 17% of the population was edentulous in 1990 and currently is 9.7% in the US among the age group greater than 18 years [2]. The study reported a dramatic increase in edentulism, 33.1% of the population aged 65 years or above was suffering from the condition [2]. Study in Riyadh in 2014 among a sample of 279 female reported that 231 (82.8%) of subjects were completely edentulous in both arches and rest of the patients were having

missing teeth in as in glenoid [3]. In spite of various advances in dentistry and in the era of dental implants completed dentures has its own significance in Geriatric dentistry. The dilemma of patient satisfaction vs non-satisfaction with dentures is

¹SOMMYA KUMARI, ²MUKESH KUMAR, ³PANKAJ KUMAR, ⁴PRAGYAN DAS, ⁵SHRIMALI SUMI.

¹In Practice, Patna Dental Clinic, Patna, Bihar.

²Department of Dentistry, AIIMS, Kalyani, West Bengal.


³Specialist, Tata Central Hospital, Jamadoba, Jharia, Dhanbad, Jharkhand

⁴Department Oral Medicine and Radiology, Awadh Dental College and Hospital, Jamshedpur, Jharkhand

⁵Awadh Dental College and Hospital, Jamshedpur, Jharkhand

Address for Correspondence : Dr. Mukesh Kumar
Associate Professor,
Department of Dentistry,
AIIMS, Kalyani, West Bengal.
Email : mukukishnaut@yahoo.com

Received : 7 Dec., 2021, **Published :** 31 March, 2022

Access this article online	
Website: www.ujds.in	Quick Response Code 
DOI: https://doi.org/10.21276/ujds.2022.8.1.9	

How to cite this article: Kumari, S., Mukesh Kumar, Pankaj Kumar, Pragyan Das, & Shrimali Sumi. (2021). Denture Satisfaction – The Most Wanted Key to Successful Complete Denture Therapy . UNIVERSITY JOURNAL OF DENTAL SCIENCES, 8(1). 50-53

another never-ending debate in dentistry. The fabrication of optimal dentures is possible with appropriate prosthetic laboratory techniques along with patients' anatomic and physiologic requirements assessed by a dentist [4]. The study evaluating patient feedback regarding satisfaction of their dentures found that a large number of patient are completely satisfied with an average denture while in spite of appropriate denture fabrication according to prosthetic criteria, many patients are still not satisfied with functions of their denture [5,6].

Literature review suggests that successful rehabilitation with a complete denture does not only depend on factors modulated by dentist and lab fabrication, patient-dependent factors are also a major concern [7].

Consistency of saliva, anatomical stability of alveolar ridge and overlying soft tissue, depths of sulci and limitations of the neutral zone are the important factors which affect the stability of the denture [8]. Ultimately effects patient's satisfaction negatively. A survey by Bhat VS9 in India evaluated the clinical factors affecting the patient's level of satisfaction with the incomplete dentures. This questionnaire-based survey grades the patient as very happy, happy and average satisfaction. It is found that 21% of patients were very happy with the retention of upper dentures while 23% were very happy with the retention of lower dentures. Similarly, Fenlon MR, also found that retention and stability are dependent on the condition of the mandibular alveolar ridge and its reproducibility thus supposed to be the major determinant for patient's adaptability and satisfaction with new dentures [9,10]. Facial aesthetics and phonetics are also considered as major determinants of satisfaction considered in the current study and previous literature as well. The same Indian study found that 53% were very happy with a physical change in the face and only 13% were unsatisfied. However, 25% were very happy with adaptation in speech while 35% were not able to attain optimal phonetics with their dentures. Another factor which is considered as an essential requirement for patient satisfaction is proper mastication needs. About 22% were happy with their masticatory needs while 3% were not happy with mastication with new complete dentures [9].

A discussed earlier various psycho social, psychological and socio-cultural factors are also implemented in assessment of the success of completed denture treatment. Ali, HI, also in a study indicated that literacy rate, individual's perception,

mental status and socioeconomic status of the patient also negatively or positively affect the patient's satisfaction with a denture [8]. A study in Saudi Arabia investigated the prevalence of edentulism among females of vary in socioeconomic status and demand for prosthetic rehabilitation [3]. It found that 59.1% of the population that belongs to low socioeconomic status are susceptible to tooth loss and demands complete and partial dentures. Moreover in such cases, long term tooth loss and compromised dental hygiene are the factors responsible for anatomical changes in the oral cavity and ultimately lack of satisfaction with prosthetic rehabilitation. For a healthcare provider, it is important to consider that the patient is the one who already suffered the burden of disease and any complications and dissatisfaction increasing the trouble for him [3].

The ultimate goal of any treatment is to provide maximum benefit to the patient. Therefore studies have been done to improve the quality of complete denture by investigating the patient's feedback. The purpose of the current study is to evaluate the satisfactory parameters for both patient and dentist and assess the patient's priority during denture provision. Thus the aim of the study was to enhance the healthcare quality of patient and ultimately the quality of life after prosthetic replacement of teeth.

Materials and methods:

This observational, descriptive study was conducted in a private clinical setup, at Patna dental clinic, Patna Bihar. The study was conducted between September 2018 and March 2020. An informed and written consent was taken from the participating subjects prior to the commencement of the study.

The sample size was estimated using the WHO sample size calculator taking statistics for patient satisfaction score as 3.98 ± 1.12 [11], the margin of error as 0.205 and 95% confidence level. The calculated sample size came out as 115. Patients were recruited through non-probability sampling technique post-ethical approval and implied consent was obtained. Edentulous patients requiring complete dentures from age 48-65 years of either gender having no systemic disease were included in the study. The patients who were mentally incapacitated and did not provide consent were excluded from the study.

The data was collected through a validated questionnaire having Cronbach's- α validity of 85%. The proforma was

divided into socio-demographic, patient's priority, dentist satisfaction through denture assessment and patients satisfaction. This proforma was to be filled by both the patients and the dentist independently. The patients and dentist rated their satisfaction for dentures using Likert-Scale ranging from 1-5 (5=very satisfied; 4=satisfied; 3=neither satisfied nor dissatisfied; 2=dissatisfied; 1=very dissatisfied).

SPSS version 16 was used to analyze data. Mean and SD was calculated for quantitative variables like age whereas frequencies and percentages were calculated for qualitative variables like gender, employment status, and education. Descriptive analysis for the dentist and patient satisfactions core was also done. The independent t-test was used to compare denture assessment, aesthetic, phonetics, mastication and comfort parameters with age, gender, and employment and education status. *SULTS:* The *p* > 0.05 was taken as statistically significant.

Results:

Total of 115 participants was included in the study. The mean age of the patients was 58.28 ± 7.02 years. The majority of the patients were males (52.2%) whereas 47.8% were females. Most of them were unemployed (73%) and had primary schooling (74.8%) (Table 1).

Quantitative Variables	Mean	SD
Age (Years)	58.28	7.02
Qualitative variables	n	%
Gender		
Male	60	52.2%
Female	55	47.8%
Employment Status		
Unemployed	84	73.0%
Employed	22	19.1%
Self-employed	9	7.8%
Educational status		
Uneducated	6	5.2%
Primary schooling	86	74.8%
Postgraduate	23	20.0%

The result outcome of the questionnaire survey is described in table 2.

	YES			NO		
	MEAN	SD	%	MEAN	SD	%
Any problem in wearing or removing?	4.833333	1.462494	0.29	11.833333	12.53551	0.71
Maintaining cleaning and hygiene problems?	4.166667	3.28718	0.25	12.5	10.99621	0.75
Pain and discomfort?	7	6.191392	0.42	9.666667	8.013877	0.58
Denture does not fit properly?	6	8.563488	0.36	10.66667	6.574361	0.64
Denture is loose?	8.333333	8.938058	0.5	8.333333	5.34374	0.5
Pain while eating?	5.833333	5.145116	0.35	10.83333	9.136313	0.65
Food gets stuck?	7.5	4.112988	0.45	9.166667	9.719682	0.55
Change in eating habits?	4.5	2.929733	0.27	12.16667	11.40784	0.73
Chewing difficulty?	8.166667	6.914156	0.49	8.5	7.112196	0.51
Difficulty in speech?	8.166667	7.174414	0.49	8.5	6.849574	0.51
Difficulty in opening mouth?	1.166667	1.067187	0.07	15.5	13.25079	0.93
Limitation of facial expression due to denture?	2	1.414214	0.12	14.66667	13.03414	0.88
Problem in size of teeth?	0.833333	0.897527	0.05	15.83333	13.87344	0.95
Problem in color of teeth?	3.666667	1.795055	0.22	13	12.4499	0.78
Problem in color of denture?	1.666667	1.490712	0.1	15	12.93574	0.9
Problem in quality of denture?	1.833333	1.067187	0.11	14.83333	13.27173	0.89
Bad breath due to denture?	3	2.94392	0.18	13.66667	10.88832	0.82
Stress and discomfort due to pain?	3.166667	1.771691	0.19	13.5	12.1758	0.81
Decreased self confidence?	1.333333	0.745356	0.08	15.33333	13.62188	0.92
Have you gotten any ulcer due to wearing denture?	7.666667	5.617433	0.46	9	8.504901	0.54

Discussion:

The replacement of missing teeth can be achieved by fixed or removable appliances, but generally it is accepted that removable dentures have a higher retention rate in a shorter time period, [8] even though there are studies indicating more favorable results by careful planning, regular recall appointments, patient instruction and prosthetic adjustments [9,10,11].

The most frequent complication in the present study was the loss of retention which is in agreement with previous reports [12,13,14].

Most of the patients in the present study complained about the looseness and misfitting of their dentures. This complication is the main reason of need for replacement of their dentures. Additionally, loss of retention caused dissatisfaction of patients related to function. The loss of retention of the dentures may have impaired the patients' ability to chew. A denture sore spot which is the second frequent counter complication might also be related to the misfitting of the dentures. Sheppard et al. [15]

Revealed denture looseness as the main cause of complaints of denture wearers, followed by pain which corroborates the results of our study. Regular patient follow up by the dentist is of utmost importance as it helps rule out most of the post operative complaints as mentioned above. And the patients interest also is of importance as they have to attend to their regular checkups as called by the dentists.

Conclusion:

The study indicates that the maximum number of patients were moderately satisfied with their complete denture prosthesis.

The clinician should modify the laboratory procedures to improve patient's overall satisfaction with their denture.

Therefore, it is highly recommended that the technician & Dentist should incorporate modifications into their procedure for fabrication of dentures as it reduces patient's dissatisfaction.

References:

1. Huuemonen S, Haikola B, Oikarinen K, Soderholm AL, Remes-Lyly T, Sipila K (2012). Residual ridge resorption, lower denture stability and subjective complaints among edentulous individuals. *Journal of Oral Rehabilitation* 39:384-390
2. Gjengedal H, Berg E, Boe OE, Trovik TA. Self-reported oral health and denture satisfaction in partially and completely edentulous patients. *International Journal of Prosthodontics*. 2011; 24:9-15.
3. Allen PF. Assessment of oral health related quality of life. *Health and Quality of Life Outcomes*. 2003; 1:40.
4. Ikebe K, Nokubi T, Ettinger RL, Namba H, Tanioka N, Iwase K, Ono T. Dental status and satisfaction with oral function in a sample of community-dwelling elderly people in Japan. *Special Care Dentistry*. 2002; 22: 33-40.
5. Evren BA, Uludamar A, Iseri U, Ozkan YK. The association between socioeconomic status, oral hygiene practice, denture stomatitis and oral status in elderly people living in different residential homes. *Archives of Gerontology and Geriatrics*. 2011; 53:252-257
6. Battistuzzi P, Kaizer A, Kanters N. Partial edentulism, prosthetic treatment and oral function in a Dutch population. *J Oral Rehabil* 1987; 14:549-55.
7. Witter DJ, van Elteren P, Kaizer AF. Signs and symptoms of mandibular dysfunction in shortened dental arches. *J Oral Rehabil* 1988; 15:413-20.
8. Wetherill JD, Smales RJ. Partial denture failures: a long-term clinical survey. *J Dent* 1980; 8:333-40.
9. Bergman B, Hugoson A, Olsson CO. Caries, periodontal and prosthetic findings in patients with removable partial dentures: a ten-year longitudinal study. *J Prosthet Dent* 1982; 48:506-14.
10. Rissin L, Feldman RS, Kapur KK, Chauncey HH. Six-year report of the periodontal health of fixed and removable partial denture abutment teeth. *J Prosthet Dent* 1985; 54:461-7.
11. Drake CW, Beck J D. The oral status of elderly removable partial denture wearers. *J Oral Rehabil* 1993; 20:53-60.
12. Petersen PE, Yamamoto T. Improving the oral health of older people: the approach of the WHO Global Oral Health Programme. *Community Dent Oral Epidemiol* 2005; 33:81-92.
13. Hobkirk JA, Abdel-Latif HH, Howlett J, Welfare R, Moles DR. Prosthetic treatment time and satisfaction of edentulous patients treated with conventional or implant-supported complete manibular dentures: a case-control study (part 1). *Int J Prosthodont* 2008; 21:489-95.
14. Hobkirk JA, Abdel-Latif HH, Howlett J, Welfare R, Moles DR. Prosthetic treatment time and satisfaction of edentulous patient treated with conventional or implant-stabilized complete manibular dentures: a case-control study (part 2). *Int J Prosthodont* 2009; 22:13-9.
15. Sheppard IM, Schwartz LR, Sheppard SM. Oral status of edentulous and complete denture-wearing patients. *J Am Dent Assoc* 1971; 83:614-20.