

A Survey to Assess Patients' Satisfaction After Complete Denture Rehabilitation in Lenora Institute of Dental Sciences, Rajahmundry, Andhra Pradesh

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ABSTRACT

Introduction: Edentulism is a devastating and irreversible condition and is described as the “final marker of disease burden for oral health”. Teeth loss effects mastication, speech, and may result in poor esthetics which in turn affect the quality of life. As Successful rehabilitation with a complete denture does not only depend on factors altered by dentist and lab fabrication, patient-dependent factors are also a major concern.

Aim: To assess patients' satisfaction after complete denture rehabilitation.

Objectives: To evaluate the satisfactory parameters of patient and assess the patient's priority during denture delivery.

Methodology: A cross sectional study was conducted on eighty geriatric patients who have received full mouth rehabilitation- complete removable dentures and have visited for follow up and maintenance were included. Patients who were suffering from systemic medical conditions and not willing to participate are excluded. A structured questionnaire was designed to rate the status of denture satisfactory parameters using five-point Likert's scale. Data was analyzed by using SPSS software v.29.0. The independent t-test was employed to compare denture satisfactory parameters with age, gender and duration of denture usage. The $p \leq 0.05$ was taken as statistically significant.

Results: The present study shows there is 68% of overall patient satisfaction. after denture rehabilitation. It was found that pain while wearing new denture and swallowing difficulty have gradually decreased with the duration ($p= 0.000$ and $p= 0.008$ respectively). 65% of the subjects felt slight difficulty in articulation and 47.5% of the subjects confronted discomfort like clicking dentures in the beginning which gradually reduced with duration ($p=0.000$; $p= 0.117$ respectively). The present study concluded that the esthetic, speech, comfort, functional and overall satisfaction parameters of complete denture treatment were satisfied and significant. Hence assessment of patient satisfaction should be a routine part of dental practice.

Keywords: Patients' satisfaction, Full mouth Rehabilitation, Geriatric Patients, Edentulism, Complete Removable Dentures.

INTRODUCTION

World Population Ageing report¹ found that the number of older adults above 60 years in the world has increased considerably in recent years and that growth is expected to be more in the coming decades. The recent evidence shows 12.4% of elderly population

in Andhra Pradesh state of India² and expected to grow to 21% by 2030. As there is an increase in the life expectancy of the population in many countries. Edentulism is a devastating and irreversible condition and is described as the “final marker of disease burden for oral health”. Patients who are

suffering from edentulism exhibit a wide range of physical variations and health conditions. Teeth loss effects mastication, speech, and may result in poor esthetics which in turn affect the quality of life³.

The fabrication of appropriate dentures is possible with relevant prosthetic laboratory techniques along with patients' anatomic and physiologic necessities assessed by a dentist. As Successful rehabilitation with a complete denture does not only depend on factors altered by dentist and lab fabrication, patient-dependent factors are also a major concern⁴.

A survey by Vinaya S. Bhat in India evaluated the relationship between patient satisfaction and the newly constructed denture prostheses⁵. Along with the mastication needs important determinants of satisfaction like facial aesthetics and phonetics are also considered in the current study and previous literature as well.

In an Iranian study showed that 66% of edentulous patients are dissatisfied with their lower jaw denture; the primary reason included the lack of retention that causes pain and discomfort, respectively⁶.

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 dentures by studying the patient's feedback. The current study is intended to evaluate the satisfactory parameters of patient and assess the patient's priority during denture delivery. Thus, the goal of the study was to enhance the quality of health and oral care after prosthetic rehabilitation.

AIM:

To assess patients' satisfaction after complete denture rehabilitation.

OBJECTIVE:

To evaluate the satisfactory parameters of patient and assess the patient's priority during denture delivery

MATERIALS & METHODS

A cross sectional study was conducted among geriatric patients of Lenora institute of dental sciences Rajahmundry, Andhra Pradesh. By using convenience sampling technique, a total of 80 Geriatric patients who have received full mouth rehabilitation-complete removable dentures and have visited for follow up and maintenance were included. Patients who were suffering from systemic medical conditions and not willing to participate are excluded. Duration of the study was six months.

Prior to the start of the study a structured Questionnaire were designed and validated. Through Cronbach's alpha internal reliability attained was 82%. Designed Questionnaire comprised demographic details, subscale questionnaire items like Function of denture; Aesthetics and phonetics; Patient's expectation on received denture; Importance of denture and overall satisfaction. Five point Likert's scale was used to rate the patients denture satisfaction status. Data was analyzed by using SPSS software v.29.0. The independent t-test was done to compare denture functional status, aesthetic, phonetics, mastication and comfort parameters with age, gender, and employment and education status. The $p \leq 0.05$ was taken as statistically significant.

RESULTS

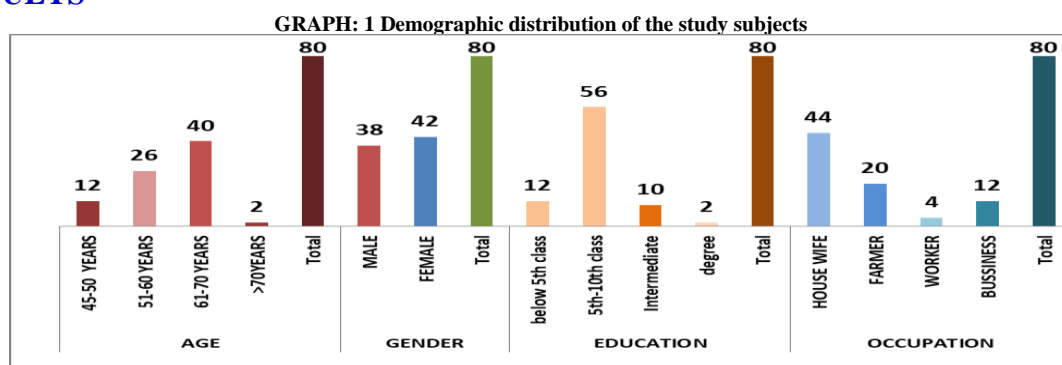


TABLE 1: Comparison of overall satisfaction with Age and Gender

GENDER		OVERALL SATISFACTION				CHI SQUARE	P VALUE
		Very Happy	Happy	Averagely satisfied	Total [N]		
MALE	AGE 45-50 YEARS	0	2	0	2	3.773	.438
	51-60 YEARS	2	6	8	16		
	61-70 YEARS	2	12	6	20		
	Total	4 (5%)	20 (25%)	14 (17.5%)	38 (47.5%)		
FEMALE	AGE 45-50 YEARS	4	6	0	10	13.020	.043*
	51-60 YEARS	0	4	6	10		
	61-70 YEARS	6	8	6	20		
	>70 YEARS	0	2	0	2		
	Total	10 (12.5%)	20 (25%)	12 (15%)	42 (52.5%)		
Total	AGE 45-50 YEARS	4	8	0	12	14.272	.027*
	51-60 YEARS	2	10	14	26		
	61-70 YEARS	8	20	12	40		
	>70 YEARS	0	2	0	2		
	Total	14 (17.5%)	40 (50%)	26 (32.5%)	80 (100%)		

p<0.05 is Statistically significant

Table: 2 Comparison of functional aspect of denture with duration of denture usage

	DURATION	DURATION OF DENTURE USAGE					Total	Chi square value	P value
		Recent (Below 6months)	6-12 months	1-5years	6-10years	> 10 years			
FUNCTIONAL COMPONENT: Pain	Severe	18	4	6	6	6	40	36.435 ^a	.000*
	Moderate	16	14	0	0	0	30		
	Low	2	4	0	0	0	6		
	Very Low	2	0	0	0	2	4		
	Total	38	22	6	6	8	80		
Swallow	Easy	0	2	2	0	0	4	26.975 ^a	.008*
	Slightly Difficult	16	14	0	0	4	34		
	Difficult	12	4	2	4	2	24		
	Very Difficult	10	2	2	2	2	18		
Enjoy Meals	Happy	0	2	2	0	2	6	22.024 ^a	.037*
	Neutral	20	16	2	2	2	42		
	Satisfactory	2	0	0	0	0	2		
	Not Satisfactory	16	4	2	4	4	30		
Denture wear	Total	38	22	6	6	8	80	28.048 ^a	.000*
	Highly Reduced	22	2	4	0	0	28		
	Reduced	12	12	2	4	4	34		
	Neutral	4	8	0	2	4	18		
Total	38	22	6	6	8	80			

Table: 3 Aesthetic and Articulation component with Duration of Denture Usage

Aesthetic component	DURATION OF DENTURE USAGE	DURATION OF DENTURE USAGE					Total	CHI SQUARE	P VALUE
		Recent	6-12 months	1-5years	6-10years	> 10 years			
Worried About People Watching	Highly Worried	18	4	0	2	0	24	44.223 ^a	.000*
	Worried	6	8	4	2	2	22		
	Neutral	10	4	0	0	4	18		
	Not Worried	4	6	2	2	0	14		
	Not At All Worried	0	0	0	0	2	2		
	Total	38	22	6	6	8	80		
Speech	Easy	2	4	2	2	2	12	17.958 ^a	.117
	Slightly Difficulty	22	16	4	4	6	52		
	Difficult	8	2	0	0	0	10		
	Very Difficult	6	0	0	0	0	6		
	Total	38	22	6	6	8	80		
Worried About Ur Mouth	Highly Worried	12	4	0	0	2	18	26.580 ^a	.009*
	Worried	20	10	0	4	4	38		
	Neutral	6	6	6	2	2	22		
	Not Worried	0	2	0	0	0	2		
	Total	38	22	6	6	8	80		
Denture Click (Comfort)	Very Often	10	0	2	0	0	12	51.674 ^a	.000*
	Often	16	6	2	6	8	38		
	Less Often	10	14	0	0	0	24		
	Do Not Click	0	2	0	0	0	2		
	Never Click	2	0	2	0	0	4		
	Total	38	22	6	6	8	80		

Table: 4 Aesthetic and Articulation component with Denture rehabilitation among different age groups.

Aesthetic and Articulation component:		AGE				Total	CHI SQUARE	P VALUE
		45-50 YEARS	51-60 YEARS	61-70 YEARS	>70YEARS			
WORRIED ABOUT PEOPLE WATCHING	highly worried	6	8	10	0	24	15.224 ^a	.229
	worried	0	10	10	2	22		
	neutral	4	4	10	0	18		
	not worried	2	4	8	0	14		
	not at all worried	0	0	2	0	2		
Total		12	26	40	2	80		
SPEECH	easy	0	4	8	0	12	17.534 ^a	.041
	slightly difficult	6	18	26	2	52		
	difficult	2	4	4	0	10		
	very difficult	4	0	2	0	6		
	Total	12	26	40	2	80		
WORRIED ABOUT UR MOUTH	highly worried	2	4	10	2	18	20.141 ^a	.017
	worried	10	10	18	0	38		
	neutral	0	12	10	0	22		
	not worried	0	0	2	0	2		
	Total	12	26	40	2	80		
DENTURE CLICK	very often	0	4	8	0	12	11.238 ^a	.509
	often	8	10	18	2	38		
	less often	4	8	12	0	24		
	do not click	0	2	0	0	2		
	never click	0	2	2	0	4		
	Total	12	26	40	2	80		

TABLE: 5 Correlation of Overall satisfaction of denture rehabilitation with duration of denture usage

DURATION		Recent (Below 6months)	6-12 months	1-5years	6-10years	> 10 years	Total	Chi squarevalue	P value	Pearson's Correlation coefficient (r)
OVERALL SATISFACTION	Very Happy	10	0	0	0	4	14	25.393 ^a	.001*	0.68
	Happy	22	8	4	4	2	40			
	Averagely satisfied	6	14	2	2	2	26			
	Total	38	22	6	6	8	80			

Results

The study population comprised of 80 geriatric patients who have visited the hospital after receiving the dentures. Majority of the subjects N= 40 are in 61-70 years of age. Among the participants 52.5% are females and 47.5% are males. More than half of the female participants N=44 (55%) are house wives and N=25 (45%) are farmers. Most of the participants N=56 (70%) are secondary school qualified [Table :1]

The present study shows there is 68% of overall patient satisfaction after denture rehabilitation. Improved overall denture satisfaction with increasing age was observed (p=0.027) and females showed better overall satisfaction than males (p= 0.43) [table: 1].

Comparison of functional aspect with duration of denture usage it was found that pain while wearing denture and swallowing

difficulty have gradually decreased with the duration of denture usage (p= 0.000 and p= 0.008 respectively). Overall there is moderate level of denture wear reported among users (p= 0.000) [table:2].

Regarding aesthetic component and articulation, denture wearers showed great worry about their appearance during initial days of denture usage and majority N=52(65%) of the subjects felt slight difficulty in articulation which gradually improved with duration of denture usage (p= 0.117). 47.5% of the subjects confronted discomfort like clicking dentures in the beginning and gradually became comfortable (p=0.000) [table:3]

Most of the Subjects N=52 (65%) faced slight difficulty in speech with denture are in the age group of 60-70years (p=0.41) [table:4]

Overall satisfaction among subjects was found to be moderately correlated ($r= 0.68$) with duration of denture use [table: 5]

It was found that there was good sense of satisfaction in the beginning days with dentures in terms of their importance, ease to wear and maintenance [table: 6].

DISCUSSION

The study aims to evaluate the patient's satisfaction with the fabricated dentures in functional-mastication, aesthetic, phonetics, importance and comfort aspects. The study also determined overall satisfaction after denture rehabilitation.

The present study found an overall satisfaction 68.3% among patients after receiving the complete dentures which is moderate when compared with similar study undertaken in Gaza which showed 92.1% of overall satisfaction⁷. Elderly subjects in age group of 61-70 years were happy and satisfied and satisfactory response was more from females than males and is statistically significant. This finding is in converse with the study done by Shoaxia Pan where elderly females are less satisfied than elderly male⁸. The reason may be attributed to doctors' skill and patient's level of satisfaction.

Denture wearers have found that pain while wearing denture and swallowing difficulty have gradually decreased with the duration of denture usage. Possible causes of denture pain include occlusion, denture base (fit and contour), and Vertical Dimension, Infection, a systemic disease or condition, or an allergy (rare). Occlusion and poor fit of the denture base encourage repeated visits for denture-related pain than the other causes listed⁹.

Denture wearers showed great worry about their speech during their initial days of denture usage and gradually became comfortable. Production of sounds with the prosthesis placed on a movable tissue like oral mucosa has always been challenging. However well adapted dentures showed less movements on a movable base. Hence, speech with new denture is not satisfactory

always, especially during initial days of denture wearing¹⁰. E Berg also in his assessment of 74 denture patients stated that major Prosthodontic problem during period of adaptation was related to speech. However, with the persistent wearing and practice, all patients get accustomed to good speech^{11,12}. There was a positive correlation ($r=0.68$) observed between overall satisfaction and duration of denture usage, hence indicates as the duration increases adaptation to dentures will be more.

Dewi FD et al. concluded that priority should be given to the dentist's communication and dental assistant's knowledge of patient's needs to enhance the service quality¹³. Aldosari MA et al also reported that patient satisfaction is increased with friendly and understanding staff. Moreover, meeting patient expectations by taking time to understand the needs and giving the right instructions is associated with higher satisfaction, and the fact that patients were highly satisfied with the clinician's communication abilities indicates that clinicians in this facility pay proper attention to explaining treatment options/procedures to patients¹⁴. Dental institutes must work constantly to find a balance between meeting the needs of the patient and meeting the needs of the dental students, all the while knowing that "patients and their satisfaction are critical to the education of the dental students as well"¹⁵.

The present study is limited to evaluate patient's satisfaction, has not explored the clinical aspect of denture fabrication. Anderson asserted that the level of satisfaction of both clinician and patient have to be taken into consideration¹⁶. Denture satisfaction should have been evaluated for some more time as it is time dependent to procure better results.

CONCLUSION

Successfulness of denture is based upon the patient's satisfaction. The present study concluded that the esthetic, speech, comfort, functional and overall satisfaction

parameters of patient undergone complete denture treatment were satisfied and significant. Hence assessment of patient satisfaction should be a routine part of any practice after the treatment is complete. This will help in constant improvement in the quality of services provided by healthcare professionals.

Declaration by Authors

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