

ORIGINAL ARTICLE

Patient Esthetics and Functional Satisfaction with Complete Denture Therapy

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ABSTRACT

Objective: To evaluate patient esthetics and functional satisfaction with complete denture therapy.**Study Design:** Cross-sectional observational study.**Place and Duration of Study:** The study was conducted at Lahore Medical and Dental College from 10th February 2023 to 10th August 2023.**Materials and Methods:** Sixty-seven edentulous patients who have undergone complete denture therapy of tooth losses using complete denture for at least six months were enrolled. Patients' satisfaction was recorded having variables regarding socio demographic features and questions regarding esthetic and functional satisfaction of complete denture.**Results:** Forty-four patients (65.7%) have satisfied esthetics whereas 23 (34.3%) patients have no esthetics satisfaction. Forty patients (59.7%) were functionally satisfied, and 27 patients (40.3%) were not functionally satisfied. 89.5% patients were between 6-12 months and 7 (10.4%) patients were between 13-20 months of duration of use of denture.**Conclusion:** Patients appeared to be largely satisfied with their dentures, indicating that patient happiness is a key factor in the success of denture delivery.**Key Words:** Complete Denture, Edentulism, Esthetics, Functional Satisfaction, Patient Satisfaction.

Introduction Edentulism (is the state of being edentulous, or without natural teeth) has plagued individuals throughout the world for centuries and has been characterized as "The dental equivalent of mortality". Severe caries or periodontal disease is often the predisposing factor.¹ Historically, edentulism has been declining as people have in general, taken better care of their teeth.^{2,3}

The common treatment for edentulism worldwide is complete denture therapy.⁴ It is mainly due to economic reasons, health, and psychological conditions of elderly edentulous patients.^{5,6} Complete denture can restore some functions that were lost along with teeth. Important of them are esthetic and mastication.⁴

Edentulism is a major disease which remains world-

wide especially in older adults is due to lack of knowledge about oral health.⁷ Prevalence of edentulism is 16.3% in France, 58% in Canada, 21.7% in Mexico, 9% in China, 3% in Ghana while in urban and rural areas there were 48.6% and 51.4% of edentulism is present.⁸ It is estimated that the number of older people increasing more rapidly than other age groups. The dental treatment involves attaining the patient's satisfaction while also restoring and enhancing oral health and functioning.⁹ Losing teeth can have a negative impact on speech and appearance, therefore maintaining oral health required for replacing missing teeth with appropriate prosthetics. Teeth loss, whether from caries, trauma, diseases of the mouth, pathology, or other causes, not only affects the patients' psychological state but also interferes with their appearance, phonetics, and functional occlusion.^{10,11} Knezović et al.,¹² discovered that a number of factors, including dental loss, esthetics, retention, phonetics, and oral hygiene practices, had an impact on the patient's level of satisfaction. For some patients, the esthetics and phonetics of their dentures were linked to their level of satisfaction, but for other patients, mastication was more crucial.¹³

Patients who plan to wear complete dentures are concerned about comfort and esthetics because

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they want to have a more youthful appearance.⁶ A key component of complete dentures is denture esthetics, or the esthetic effects of a dental prosthesis that impact a person's desired beauty, attractiveness, character, and dignity. Completely edentulous patients typically have low self-esteem, widespread discomfort, and difficulties in efficiently chewing a variety of foods.¹⁴

A patient's self-esteem and self-worth can be improved with the use of complete denture to such a degree that these deprived people will feel much better about themselves and become a part of society, able to communicate easily.¹⁵ Several authors have found evidence that esthetics is the predominant factor in complete denture success. The psychological importance of a pleasing dental appearance is clear and is often discussed regarding denture success.¹⁶

A study states that females and elderly edentulous patients were not satisfied with their esthetics (67%) and functional ability (58%) of their denture.¹⁷ In second study, esthetic satisfaction (59% vs 62.9%) did not differ between sexes or with age.² While in one more study, females (88%) were more satisfied with esthetics and less satisfied with functional ability (63%) and older patients were more satisfied with esthetics (69%) and less satisfied with functional ability (61%).¹⁸

Most of the previous studies are done globally and a dearth of local study is present. The objective of this study was to evaluate patient esthetics and functional satisfaction with complete denture therapy.

Materials and Methods

A cross-sectional study was carried out at the department of Prosthodontics, Lahore medical and dental college for a period of 6 months from 10th February till 10th August 2023. A structured questionnaire was designed that captured the patient's details if the patient was satisfied with the function of prosthesis and the esthetics of prosthesis. The present research was conducted by following all ethical principles. Foremost, Ethical Committee Approval was sought, which works as an Institutional Review Board (IRB) LMDC/FB/2125/20. Informed consent was taken from the patients. The duration of the study was 6 months. Confidence interval being 95% absolute precision was required

5% using WHO calculator. An overall 67 patients were included.

Nonprobability convenient sampling technique was used. The inclusion criteria were edentulous patient, between ages of 50 – 80 years of either gender, complete denture therapy already done for at least 6 months. Exclusion criteria was patients with dementia, history of neurosis, local and systemic malignant neoplasia, bedridden and uncooperative patients' satisfaction was recorded in a pre-designed questionnaire having variables regarding socio-demographic features, questions regarding esthetic and functional satisfaction of complete denture.

The Statistical Package for the Social Sciences (SPSS) version 25.00 was used to analyze the data. Continuous variables such as duration of usage of denture were presented in the form of mean ± SD. The results were presented in frequencies and percentages for gender, esthetics satisfaction and functional satisfaction of complete dentures. Effect modifiers including gender and duration were controlled through stratification. The Post stratification Chi-square test was calculated with *p* value of ≤0.05 considered statistically significant.

Results

The total number of patients in this study was 67. The mean duration of use of denture was 8.99±3.08 months (Table I). Forty-four (65.7%) patients were satisfied with their esthetics and 23 (34.3%) patients were not satisfied with their esthetics (Table II). Forty patients (59.7%) were functionally satisfied and 27 (40.3%) were not functionally satisfied (Table III). According to duration of use of dentures, 60 (89.5%) patients were between 6-12 months and 7 (10.4%) patients were between 13-20 months. When the satisfaction was stratified according to duration of use of denture, it was statistically significant (*p* value=0.043) (Table IV)

Table I: Stratification of Satisfaction According to Duration of Use of Denture (n=67)

Duration of use of denture (months)	Satisfaction		p Value
	YES	NO	
6-12	37(55.3%)	23(34.3%)	0.043
13-20	7(10.4%)	-	

Table II: Complete Denture Satisfaction According to Esthetics (n=67)

Esthetics Satisfaction	Number, n	Percentage (%)
Yes	44	65.7
No	23	34.3

Table III: Complete Denture Satisfaction According to Function Usage (n = 67)

Functional Satisfaction	Number, n	Percentage (%)
Yes	40	60
No	27	40

Table IV: Distribution of cases according to duration of use of Denture (n = 67)

Duration of use of denture (months)	Numbers of Patients	Percentage, (%)
6-12	60	89.6
13-20	7	10.4
Mean±SD	8.99±3.08	

Discussion

Rehabilitation of the edentulous patients has always been a challenge. The success of conventional complete denture therapy might be affected by several factors such as patients' age, personality, previous denture wearing experience, expectations, esthetics, residual ridge anatomy and form, denture quality, how it was made, the dentist's background, and the relationship between the dentist and the patient.¹⁹

In one study, it was found that the median age of the patients in 2017 was 58 years old, and 52% of them were female.² The satisfaction scores significantly outperformed the expectation scores, even though both were high ($p < 0.001$). There were differences in age, gender, and expectancies throughout the studies ($p < 0.008$); there were gender differences in age as well ($p = 0.004$). Men's expectations were higher than women's after the study was adjusted ($p = 0.005$); There was no difference in satisfaction levels by gender. It was discovered that the satisfaction and expectations were only positively correlated in men ($r = 0.300$; $p < 0.001$). Patients and dentists frequently evaluate complete denture treatment success in different ways.²⁰ In one study it was discovered that 10% of the participants were not pleased with their functionally sound removable dentures.²¹ Patient satisfaction can therefore be used to evaluate the clinical success of denture treatment.

Patient opinions and emotions regarding various aspects of prosthodontic treatment can be directly determined because of the ease of measuring satisfaction outcomes. It was discovered that health care in all aspects including oral health, standard of life is related, and satisfaction measures were positively correlated (Oral Health Related – Quality of Life, OHRQoL).^{22,23}

A valuable means for comparing prosthodontic outcomes is the Oral Health Impact Profile (OHIP), a questionnaire on oral health-related quality of life. The original (49-item) OHIP was developed by Locker and Slade. Among its seven domains were handicap, physical and psychological difficulty, physical and psychological limitations, social disabilities, and functional limitations.²⁴

In the current study the duration of use of dentures, 60 (89.5%) patients were between 6-12 months and 7 (10.4%) patients were between 13-20 months. The average time spent wearing the denture was 8.99 ± 3.08 months (Table 3). The present study result showed that satisfaction of esthetic procedure was stratified according to duration of use of denture, it was statistically significant ($p < 0.05$) difference (Table 4).

Future studies should compare long-term results with additional variables like the patient's age, both sexes and cost effectiveness, as well as operator experience.

Conclusion

After receiving denture therapy, patients were generally more aesthetically satisfied than they had anticipated; this satisfaction did not change with age or gender. Young patients are more functionally satisfied than older patients.

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CONFLICT OF INTEREST

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DATA SHARING STATEMENT

The data that support the findings of this study are available from the corresponding author upon request.

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