ORIGINAL ARTICLE

Expectation of treatment outcomes in complete denture wearers

B. Vaishnavi Devi,
Nabeel Ahmed,
Dhanraj Ganapathy,
Subhabrata Maiti,
Kiran Kumar Pandurangan

Department of Prosthodontics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai, Tamil Nadu, India

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ABSTRACT

Edentulism is a condition associated with age, and the outcome of prosthodontic treatment depends on a number of dental and nondental factors. In complete denture therapy, patient satisfaction is a key objective and various other variables affect this parameter. The ability to foresee its preferences may assist dentists in making informed treatment selections. The study purpose is to assess the expectations of treatment outcomes in complete denture users. For the study, all cases referred for total denture therapy during September 2020 and February 2021 were included. Both new and old denture users completed questionnaires on factors such as retention, mastication, phonetics, esthetics, and comfort. Excel was used to compile the data, which was then imported into SPSS for statistical analysis. The study's statistical significance level was established at $P < 0.05$. Male patients over the age of 60 years wearing dentures were very common. Denture wearers were highly prevalent in the age group of >60 years among male patients. Retention, esthetics, and phonetics are highly satisfied in existing denture wearers and mastication is highly satisfied in new denture wearers. The comfort factor is commonly satisfied in both the denture wearers. The results were statistically significant with a $P = 0.05$. Clinician can plan their treatments more effectively if they are aware of the treatment's expectations.

Key words: Complete denture, denture wearers, expectation, innovative, innovation, satisfaction

INTRODUCTION

The absence of all permanent teeth is known as complete edentulism.[1] To provide patients with edentulous status with esthetics, additional functions, and social benefits of replacing missing teeth, conventional dentures are still regarded as the first line of treatment.[2] The treatment success is influenced by the rate of alveolar ridge resorption, soft tissue health, neuromuscular coordination, and oral mucosal characteristics such as sulcus depth and tongue hypertrophy.[3]

Earlier studies have shown that patient satisfaction is not totally dependent on denture quality and treatment techniques.[4,5] It depends mainly on prosthetic factors such as esthetics, phonetics, mastication, and comfort. Men adapt to complete dentures more easily than women, according to Panek *et al*.[6] Dentists should remember that patients who will be wearing dentures desire to recover their youthful appearance, thus comfort and esthetics are the most

Address for correspondence:
Dr. Subhabrata Maiti,
Department of Prosthodontics, Saveetha Dental College and Hospitals, Saveetha Institute of Medical and Technical Sciences, Saveetha University, Chennai - 600 077, Tamil Nadu, India.
E-mail: subhabratamaiti.sdc@saveetha.com

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crucial factors for them.[7] Patients' attitudes regarding new dentures are influenced by their previous experiences with dentures.[8,9] Although patients' satisfaction is an important factor of oral rehabilitation, the dentist should also equally concentrate on the prosthetic factors such as retention and mastication without which the patients cannot use the denture.[10,11]

Furthermore, one of the key elements in obtaining contentment is the patient's perception of their new dentures and clinicians should improve patient communication to address any problems that can obstruct the course of treatment. Our team's in-depth expertise and research experience have resulted in publications of high quality.[12-31] Only very few studies have assessed the patient's expectations and treatment outcomes in complete denture wearers. This study aims to assess complete denture wearers' expectations for treatment outcomes.

MATERIALS AND METHODS

Study setting

The goal of the current study was to evaluate treatment outcomes and expectations for complete denture therapy by a cross-sectional retrospective investigation. The study was held in a hospital setup and received ethical approval from the Institutional Review Board (IHEC/SDC/PROSTHO/21/118).

Sampling

From September 2020 to February 2021, all cases referred for complete denture therapy were included in the study. Sample size n = 30 patients. Before the study, the patients gave their informed consent. The study sample was divided into two groups: new denture wearers and existing denture wearers. Simple random sampling was used to reduce sample bias.

Criteria

Patients with edentulous arches and those who can comprehend to the questions asked meet the inclusion criteria. Participants with neurological and psychological illnesses as well as those with symptoms of temporomandibular dysfunction are excluded from the study.

Procedure

Following the complete denture delivery, the patient was given a questionnaire and given clear instructions in terms in which the patient could comprehend. The patient's expectations for mastication, phonetics, comfort, retention, and esthetics were recorded on the Visual Analog Scale. To indicate whether they were satisfied or dissatisfied with the treatment, patients answered the questionnaire by placing a mark on a scale between two endpoints.

Data analysis

All of the confirmed data were tabulated in Excel before being imported into the Statistical Package for Social Sciences (SPSS) software, version 1.0.0.1327 64 bit edition (IBM corp., NY, USA). Data were analyzed using descriptive statistics in the form of crosstabs and were subjected to descriptive analysis using frequencies and percentages. The analysis was done based on the results of the nonparametric Chi-square test.

RESULTS

The study evaluated the expectation of treatment outcomes in complete denture wearers in patients visiting a private dental institute. The statistical significance was set at P = 0.05.

According to data on the age distribution of complete denture users, 10% of those between the ages of 40 and 50 years reported having both new and old dentures, and 13% reported having new dentures. In 51–60 years, 16% reported as new wearers and existing denture wearers. Similarly in the age of >60 years, 20% were existing denture wearers and 23% were new denture wearers [Figure 1]. The outcome is statistically significant because the P = 0.029. Gender distribution in complete denture wearers shows that in the new denture wearers 30% were males and 6% were females. Twenty percent of the current denture wearers were female and 26% were male [Figure 2]. The P = 0.04 indicates that the result is statistically significant.

The association between the retention factor in new and existing denture wearers shows that in existing denture wearers 16% of them are not satisfied and 33% are satisfied. In the new denture wearers, 23% are not satisfied and 26%

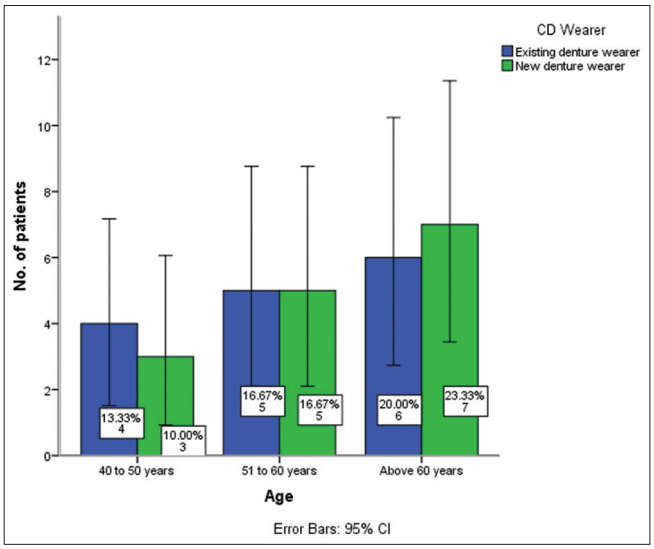

Figure 1: Relationship between complete denture wearers and age categories. CI: Confidence interval

are satisfied [Figure 3]. The result is significant as the *P* value is <0.05. The comparison between the mastication factor in new and existing denture wearers shows that in existing denture wearers 20% of them are not satisfied and 30% are satisfied. In the new denture wearers, 16% are not satisfied and 33% are satisfied [Figure 4]. Since the *P* = 0.23, the conclusion cannot be considered statistically significant. The association between esthetics factor in new and existing denture wearers shows that in existing denture wearers 10% of them are not satisfied and 13% are satisfied. In the new denture wearers, 40% are not satisfied and 36% are satisfied [Figure 5]. The *P* = 0.012 therefore this finding is statistically significant.

The association between the phonetics factor in new and existing denture wearers shows that in existing denture wearers 20% of them are not satisfied and 23% are satisfied. In the new denture wearers, 30% are not satisfied and 26% are satisfied [Figure 6]. Because the *P* was <0.05, the result is statistically significant. The correlation between the comfort factor in new and existing denture wearers reveals that 20% of both groups are dissatisfied and 30% are content [Figure 7]. The *P* = 0.345, and therefore, the result is not significant statistically.

DISCUSSION

Denture satisfaction is multifactorial, with age, gender, psychological considerations, preprosthetic background, and other variables all playing a part.[32] This study examines the elements that influence new denture wearers' and old denture

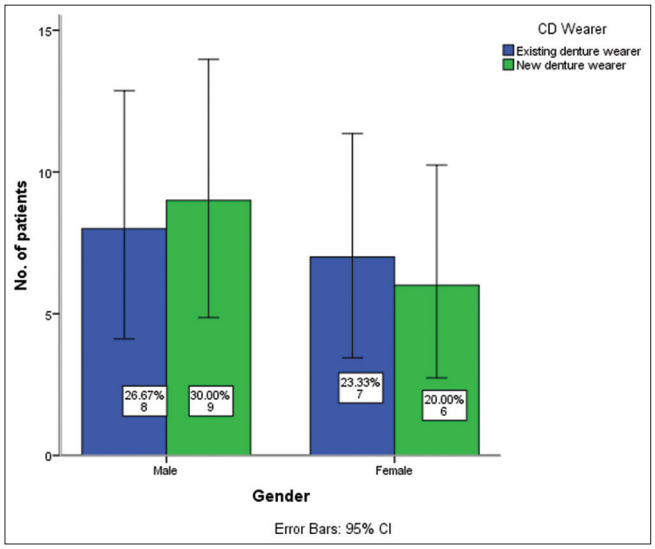

Figure 2: Relationship between gender and complete denture wearers. CI: Confidence interval

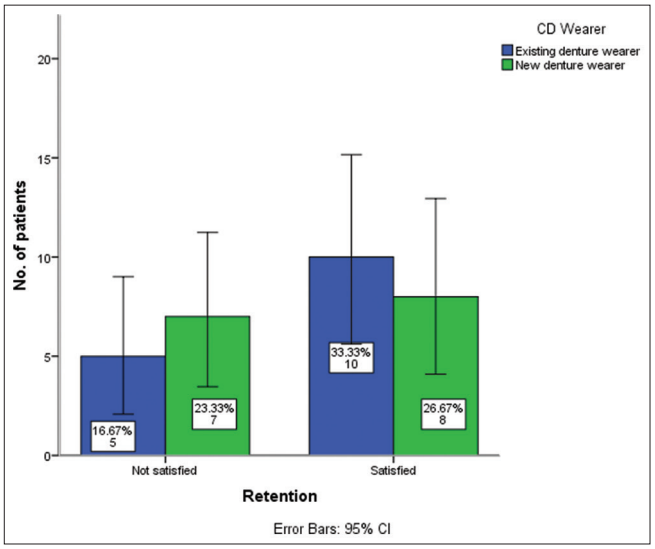

Figure 3: Association between complete denture wearers and the retention factor. CI: Confidence interval

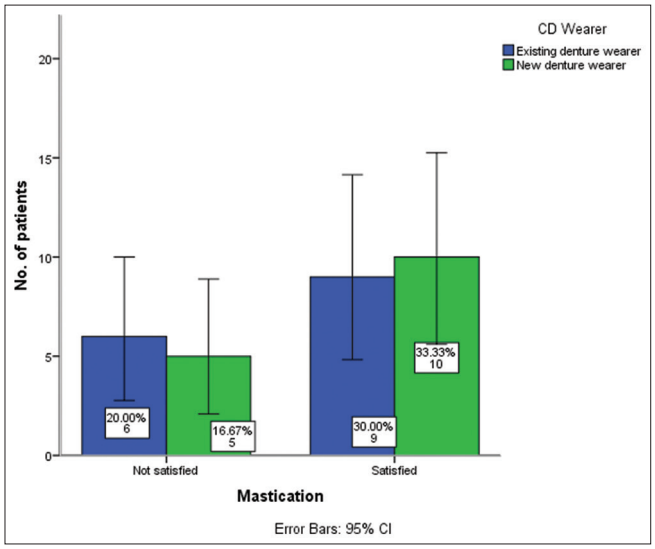

Figure 4: Association between mastication factor and complete denture wearers. CI: Confidence interval

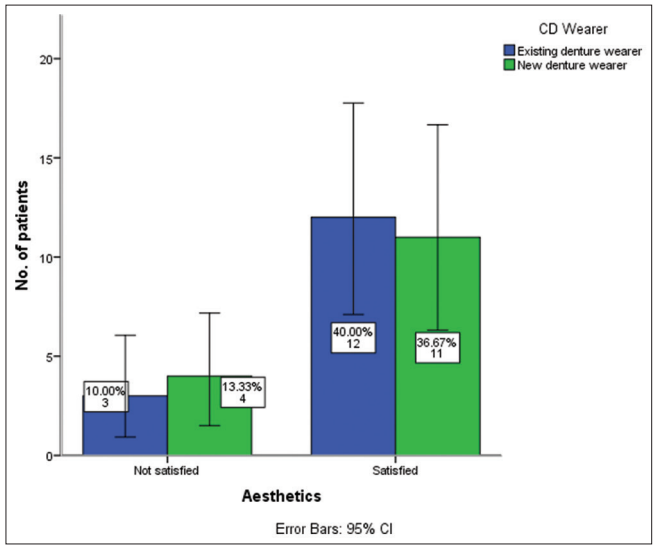

Figure 5: Correlation between esthetics factor and complete denture wearers. CI: Confidence interval

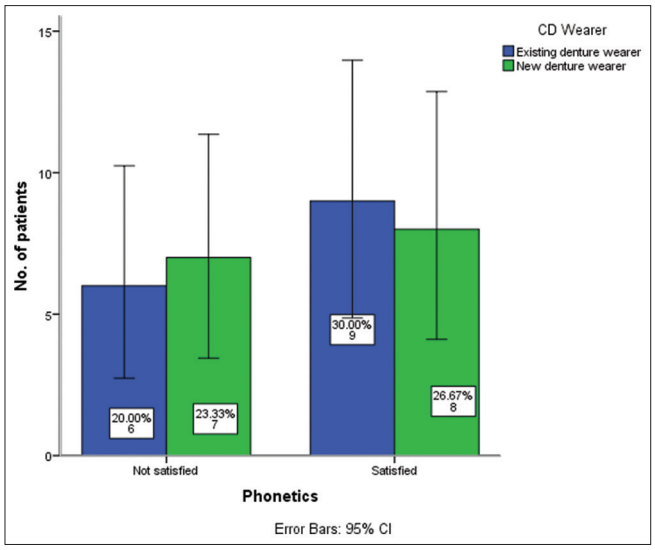

Figure 6: Correlation between phonetics factor and complete denture wearers. CI: Confidence interval

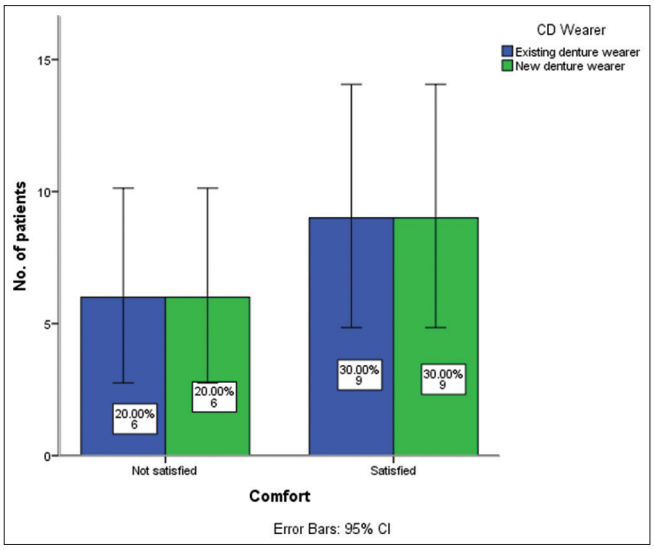

Figure 7: Correlation between comfort factor and complete denture wearers. CI: Confidence interval

wearers' expectations. The existing denture wearers usually expect their new dentures to be similar to that of old ones, whereas the new denture wearers will have high expectations and want the denture to be similar to the factors such as chewing, retention, facial esthetic, comfort, and speech.[33]

The existing denture and new denture wearers are highly prevalent >60 years among male patients [Figures 1 and 2]. The findings of the current study concerning variables such as age and gender were in conformity with the results of Yun Zou., *et al*.[34] Gender differences are linked to dental hygiene maintenance and harmful habits such as smoking and dieting, which are linked to caries and periodontitis.[35]

The results of the present study show that existing denture wearers are highly satisfied with retention, esthetics, and phonetics. The factors such as mastication and comfort were highly satisfying for new denture wearers. In addition, this result is consistent with past research.[36,37] A study conducted by Baracat found no significant association between esthetic, functional, and educational levels.[38] It may be due to the fact that new denture wearers have not experienced the denture treatment and hence are meant to have high expectations toward the treatment.[39]

They might expect the treatment to return their normal functioning and esthetics. It can be because the patient was looking forward to their new dentures' functionality, comfort, and appearance.[40] The previous experience of denture could influence the patient's anticipation. The outcomes of this study will help clinicians be better equipped to serve patients in that age range and gender by knowing their expectation in the complete denture treatment. A follow-up of the results was not reported, and the sample size was limited. Future periodic studies to assess the patients' potential expectations and clinical implementation can be done.

CONCLUSION

Complete denture wearers were highly prevalent in the age of 60 years among male patients. The factors such as retention, esthetics, and phonetics are highly satisfied in existing denture wearers and mastication is highly satisfied in new denture wearers. The comfort factor is commonly satisfied in both the denture wearers. Before starting therapy, the clinician should talk to the patients about the potential concerns and assist them to develop reasonable expectations about these factors.

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Conflicts of interest

There are no conflicts of interest.

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