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COMPARATIVE ANALYSIS OF PATIENT SATISFACTION BETWEEN FIXED PROSTHODONTIC TREATMENT AND REMOVABLE PROSTHODONTIC TREATMENT

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Abstract

The purpose of this study is to investigate the interplay of stress, emotional ***Introduction:*** *Patient satisfaction is a key indicator of success in prosthodontics treatment, influencing treatment adherence, oral health outcomes, and overall quality of life.*

Objective: *This comparative study aimed to evaluate and compare satisfaction levels between patients receiving fixed and removable prostheses.*

Methods: *Conducted at City University of Science and Information Technology Peshawar, data were collected from 88 adult patients treated at the prosthodontic ward of Sardar Begum Dental Hospital using a descriptive cross-sectional survey and non-probability convenient sampling. The survey assessed various aspects of patient satisfaction, including aesthetics, function, service quality, and cost-effectiveness. Descriptive statistics and chi-square tests were used for analysis.* ***Results:*** *The results showed that patients with fixed prostheses reported significantly higher satisfaction levels than those with removable ones, particularly in terms of overall comfort, aesthetics, and perceived improvement in quality of life. A statistically significant difference was found in patients' perception of the fairness of treatment cost relative to quality ($p = 0.023$), with fixed prosthesis patients more likely to find the cost reasonable. They also expressed higher satisfaction with clinic services ($p = 0.000$). Despite these differences, both groups demonstrated similar oral hygiene practices and a comparable willingness to recommend the clinic to others.* ***Conclusion:*** *The study concludes that fixed prostheses may offer greater satisfaction and perceived value, although each prosthesis type has distinct advantages. These findings emphasize the importance of individualized treatment planning, considering patient preferences, expectations, and oral hygiene habits. Future research should focus on optimizing treatment outcomes and understanding the factors that influence satisfaction in*

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both fixed and removable prosthodontic patients.

INTRODUCTION

Patient satisfaction serves as a crucial metric in assessing healthcare quality and effectiveness, especially in dental care. Prosthodontic treatments both fixed and removable are essential in restoring function, aesthetics, and psychological well-being among partially or fully edentulous patients. High satisfaction not only reflects successful clinical outcomes but also fosters patient adherence, trust, and service utilization (Ghanem et al., 2023).

Unlike other body tissues, teeth lack regenerative ability, necessitating prosthetic replacements in cases of trauma or decay. Fixed prosthodontics use permanent fixtures, improving aesthetics and function, while removable prostheses are cost-effective and accessible but may be less comfortable (Shrestha et al., 2020). Treatment success relies heavily on both biological and patient-reported outcomes, notably satisfaction and oral health-related quality of life (OHRQoL) (Saddq et al., 2020; Swelem & Abdelnabi, 2021).

OHRQoL reflects a patient's self-assessed health status and life satisfaction. While many patients opt for removable prostheses due to cost or anatomical limitations, fixed options often yield higher satisfaction (Kavita et al., 2020). Variables such as age, gender, socioeconomic status, and oral health literacy affect satisfaction, emphasizing the need for individualized care (Alqutaibi et al., 2022).

Patient satisfaction is an important indicator for evaluating care quality, incorporating consumer viewpoints into healthcare policy, and respecting patients' rights and perspectives; therefore it plays crucial role improving health care systems (Ghanem et al., 2023). In fixed prosthodontic treatment, artificial alternatives that are difficult to extract from the mouth are used to replace and restore missing teeth. It will enhance the patient's self-esteem, preserve the integrity and health of the dental arches, and improve their comfort and masticatory capacity. Prosthesis survival, its ability to meet biologically relevant and patient-evaluated goals, and patient satisfaction are all factors that affect how effectively prosthodontic treatment works. (Shrestha et al., 2020).

It has been shown that for patients undergoing prosthetic treatment, the clinical indicator of oral health status alone may not be adequate. A more thorough and multifaceted evaluation of a patient's oral health condition should consider their perceived needs and preferences. Dentists must consider the impact of therapy on patients' overall health and quality of life, in addition to treating oral disease (Saddq, Al-Kaisy, et al., 2020).

Quality of Life Associated with Oral Health Living conditions, function, and oral health status are all included in the phrase OHR-QoL. When a person's health conditions change, their OHR-QoL may also change. Many individuals wear traditional removable dentures because they cannot afford implants or because they have anatomical constraints. Studies examining OHR-QoL and denture satisfaction that incorporate patient sociodemographic information, denture satisfaction, and associated questions are quite rare. The ultimate goal of rehabilitation is to enhance the patient's oral health and contentment; this is considered to be a crucial aspect of the patient's overall wellbeing. Since poor oral hygiene is the most common cause of periodontics illness and caries, which ultimately lead to tooth loss, it is taken into consideration. According to Davis et al. (2000), losing a tooth might make a patient socially disadvantaged. The study's findings indicated that the majority of participants receiving prosthodontic treatment experienced emotional anguish. Any dentist's top priority is to improve the appearance of their patients and address problems related to speech and chewing that arise from tooth loss. (Kavita et al., 2020)

Study Design:

This research employed a descriptive and comparative study design.

Research Type:

This study falls under the category of quantitative research.

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Sampling Technique

A non-probability convenient sampling technique was adopted for participant selection.

Study Setting

The study was conducted under the academic umbrella of City University of Science and Information Technology, Peshawar. Data were collected from patients visiting the prosthodontic ward of Sardar Begum Dental hospital, Peshawar.

Population of the Study

The target population for this study included adult patients who visited the prosthodontic ward of Sardar Begum Dental Hospital, Peshawar.

Ethical approval

After obtaining ethical approval from City University of Science and Information Technology we visited Sardar begum Dental Hospital and obtained ethical approval from them as well to conduct research in their hospital.

Inclusion Criteria

Patients who have received fixed, prosthodontic treatment, Patients who have received removable prosthodontic treatment, Individuals age above 18 years, Both male and female

Exclusion Criteria.

Not willing to participate

Data Collection Tool

A structured and pre-validated questionnaire, originally adopted from the study conducted by (Carek et al., 2021) was utilized as the primary data collection instrument for this research.

Statistical analysis

The collected data were systematically entered and analyzed using SPSS version 24 for Windows. Descriptive statistics, including frequencies and percentages, were used to summarize the data.

RESULT

This chapter outlines the results derived from the analysis of data collected from 88 patients who underwent different prosthodontic procedures. The study revealed that patients with fixed and removable prostheses differed significantly in several ways. The results of the study indicate that, in comparison to patients with removable prostheses, patients with permanent prostheses typically expressed higher satisfaction and more pleasant experiences. In particular, patients who had permanent prostheses were more likely to strongly concur that their overall satisfaction, aesthetics, and quality of life had improved as a result of their prosthetic work. Furthermore, there was a statistically significant difference between the two groups ($p = 0.023$) in the patients' perceptions of the cost of their prosthetic work compared to the quality received. Notably, patients with fixed prostheses were more likely to strongly agree that the clinic's service met their needs ($p = 0.000$) and that the price was fair given the quality they received ($p = 0.023$). However, there were similarities between the two groups' usage of extra oral hygiene products, oral hygiene practices, and willingness to refer others to the clinic. According to the results, fixed prostheses might be better for patient happiness and perceived value, although each kind of prosthesis has advantages and disadvantages of its own.

This is a questionnaire-based study among the 88 participants in this study 36.4% were males' participants 63.6% were females, among these people, 44.3% of the population lived in urban areas, while 55.7% resided in rural areas.

Table 1 Characteristics of subjects by sociodemographic factors

(n=30)		
Sociodemographic characteristics Frequency (%)		
Gender	Frequency	Percent
Male	32	36.4%

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Female	56	63.6%
Residence		
Urban	39	44.3%
Rural	49	55.7%
Education		
No formal education	26	29.5%
Primary school	5	5.7%
Secondary school	40	45.5%
University degree	16	18.2%
Postgraduate degree	1	1.1%

The most common prosthetic work was a crown (52.3%) and bridge (27%). And a lower percentage of participants had a removable denture (15.9%).

Table 2 Type of prosthetic work received

Crown	46	52.3%
Bridge	28	31.8%
Removable denture	14	15.9%

Upon questionnaire submission, 76.1% of patients had their prosthetic restoration done since less than 2 years, 22.7% had their prosthetic restoration done in the last 2-5 years and 1.1% had their prosthetic restoration done in the last 5-10 years.

Table 3 (Time since receiving prosthetic work)

Less than 2 years	67	76.1%
2-5 years	20	22.7%
5-10 years	1	1.1%

The survey reveals high overall patient satisfaction with the aesthetic aspects of prosthetic work. A majority (70.5%) were satisfied with the appearance, and 73.9% felt the color matched their natural teeth. However, functional outcomes such as chewing and pronunciation showed mixed responses. Only 33% strongly agreed that their prosthesis helped with chewing, while over 54% disagreed or strongly disagreed. Similarly, 48.9% reported pronunciation difficulties.

Comfort levels were also divided, with 39.8% feeling comfortable, while 43.2% reported discomfort. Despite these issues, psychosocial impacts were largely positive. Over 72% felt an increase in self-confidence, and 78.4% noticed improvements in their smile, as observed by family and friends. Most importantly,

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87.5% agreed that their prosthesisimproved their quality of life, highlighting a strong overall benefit despite some functional concerns.

Table 4 shows satisfaction level among participants

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am satisfied with the appearance of my prosthetic work	13 (14.8%)	3 (3.4%)	4 (4.5%)	6 (6.8%)	62 (70.5%)
The color of my prosthetic work matches my natural teeth	13 (14.8%)	3 (3.4%)	2 (2.3%)	5 (5.7%)	65 (73.9%)
The prosthetic work helps me with chewing effectively	20 (22.7%)	28 (31.8%)	6 (6.8%)	5 (5.7%)	29 (33.0%)
I have no difficulty in pronunciation due to my prosthesis	16 (18.2%)	27 (30.7%)	8 (9.1%)	4 (4.5%)	33 (37.5%)
I feel comfortable with my prosthetic work	16 (18.2%)	21 (25.0%)	12 (13.6%)	3 (3.4%)	35 (39.8%)
My prosthetic work has positively impacted my self-confidence	3 (3.4%)	8 (9.1%)	13 (14.8%)	17 (19.3%)	47 (53.4%)
My friends and family have noticed an improvement in my smile	–	4 (4.5%)	15 (17.0%)	17 (19.3%)	52 (59.1%)
I believe my prosthetic work has improved my quality of life	–	–	11 (12.5%)	21 (23.9%)	56 (63.6%)

DISCUSSION

This study assessed oral hygiene practices and patient satisfaction among individuals with fixed and removable prostheses. Results indicated that patients with fixed prostheses reported significantly higher satisfaction in aesthetics, comfort, service quality (p=0.000), and perceived cost-effectiveness (p=0.023) compared to those with removable prostheses.

These findings align with previous research. Yoshimoto et al. (2021) highlighted variable satisfaction among removable denture users, while Alqutaibi et al. (2022) and D'Addazio et al. (2021) emphasized that cost and care quality influence prosthetic satisfaction. Kavita et al. (2020) and Swelem & Abdelnabi (2021) similarly noted differences in oral hygiene satisfaction between fixed and removable prosthesis users, underscoring hygiene practices as a factor in overall satisfaction.

Affordability perceptions also mirrored earlier studies by Al Ghanem et al. (2023) and Kashbur & Bugaighis (2019), which found that cost, aesthetics, and functionality significantly influence satisfaction with prosthetic treatments. Shrestha et al. (2020) and Khan et al. (2022) further validated the higher satisfaction levels associated with fixed prostheses, particularly regarding function and appearance.

Patient satisfaction has been widely recognized as a key determinant of treatment success. Studies by Jayasinghe et al. (2024) and Wang et al. (2021) emphasize that beyond clinical outcomes, subjective measures like satisfaction and OHRQoL are essential in evaluating prosthodontic treatments. Carek et al. (2021) also noted that functionality, aesthetics, and service quality are pivotal to achieving high satisfaction rates in prosthodontics.

In conclusion, this study reinforces the importance of patient-centered care in prosthodontics. Understanding factors like aesthetics, comfort, cost perception, and hygiene practices is crucial when selecting prosthetic treatments. By integrating these insights into clinical decision-making, dental

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practitioners can enhance patient outcomes and satisfaction. Future research should explore broader populations and long-term satisfaction trends to further validate these findings.

CONCLUSION

In conclusion, this study shows that patients with fixed prostheses exhibit significantly higher satisfaction levels, perceived cost reasonableness, and satisfaction with dental clinic services compared to those with removable prostheses. According to the finding, fixed prostheses might be beneficial for patient satisfaction and perceived value, especially when it comes to functional and aesthetic results. However, the findings also highlight the importance of considering individual patient needs and oral hygiene habits when selecting a type of prosthesis. These findings have implications for clinical practice, suggesting that dental professionals should prioritize patient-centered care and personalize treatment options to meet the specific requirements and preferences of each patient. Future studies should investigate methods to maximize treatment results and patient satisfaction in these populations, as well as to better understand the variables affecting oral hygiene practices and patient satisfaction in patients with permanent and removable prostheses.

The findings of this study can also guide future research and inform clinical practice. The results can be used by dentists to create more efficient treatment programs, facilitate better patient communication, and enhance the patient experience in general.

Ultimately, by highlighting the significance of giving patient satisfaction, oral hygiene practices, and perceived value top priority for treatment planning, this study adds to the expanding body of research on patient-centered care in prosthodontics. Dental practitioners can enhance patient outcomes, give more effective care, and enhance the overall quality of life for patients with prosthetic needs by giving priority to these factors.

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