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Investigating Patients Attitude, Comfort, Esthetics and Satisfaction with Fixed Restorations – A survey

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KEYWORDS

Fixed prosthodontic restorations, patient satisfaction, comfort, aesthetics, functional efficiency, patient-centered care, oral health-related quality of life (OHRQoL)

ABSTRACT:

Introduction: Fixed prosthodontic restorations, such as crowns, bridges, and implants, are critical in restoring oral function, aesthetics, and overall quality of life. However, understanding patient attitudes and satisfaction regarding these restorations remains limited.

Objectives: To assess patient Attitude, Comfort, Esthetics and Satisfaction with fixed restorations.

Methods: A survey-based study will be conducted at the Department of Prosthodontics, Seema Dental College and Hospital, Rishikesh. Data will be collected through a validated questionnaire administered to patients who have undergone fixed restorations. Participants will evaluate their experiences based on comfort, aesthetic outcomes, and overall satisfaction.

Results: Preliminary results indicate that implants are the most satisfactory in terms of all parameters, whereas crowns and bridges are less satisfactory in terms of comfort and functionality. Correlation analysis reveals that comfort is a strong predictor of overall satisfaction, and quality of life is significantly enhanced in most cases.

Conclusions: This study underscores the need to incorporate patient perceptions into prosthodontic treatment planning to enhance patient-centered care and optimize clinical outcomes.

1. Introduction

Tooth loss is a significant life event that impairs essential oral functions, particularly eating and speaking. It is often linked to various psychological and physical side effects that impact multiple aspects of oral health-related quality of life (OHRQoL). Besides causing an unsatisfactory appearance, tooth loss can significantly restrict affected patients in their daily activities.[1]

Fixed dental prostheses (FDPs) are artificial teeth permanently attached to remaining teeth to replace missing ones. The common single crown and FDP treatment method can restore one or more lost teeth. Some situations will always require the use of fixed prosthetics for tooth replacement.[2] With the advancement and clinical availability of full-ceramic fixed partial denture (FPD) materials, all-ceramic FPDs have become widely used in dentistry. The success rate for anterior ceramic crowns and veneers is remarkably high.[3] In a 50-year follow-up study, Olley et al found all the ceramic crowns and veneers to be intact; there were failures only with the metal-ceramic crowns. However, a primary cause of restoration failure is fractures of posterior all-ceramic FPDs.[4]

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Modern oral implantology has become eager to fulfill the growing aesthetic concerns of the patient. Due to this, the implant-supported fixed prosthesis, that offers aesthetic oral health and improves subjective patient satisfaction, has become the necessity of time.[5]

Fixed restorations remain an important part of the prosthodontic practices, especially in developing countries, even with the current upsurge of dental implants.[6]

For successful and long-lasting tissue regeneration and health preservation through biological investment, careful case selection, detailed diagnosis, accurate preparation, and high-quality prosthesis fabrication are needed.[7] On the other hand, a poorly cared for prosthesis will more likely fail early and result in substantial damage to the underlying teeth and tissues.[8]

The most common complication with the FDPs was a dental caries, reaching 18% of abutments, and 11% of abutment required root canal treatment post-prosthesis placement. Other complications included aesthetic issues occurring in 6% of the prostheses, periodontal disease in 4%, tetracycline staining in 4% and loss of retention of 7%. Common problems associated with fixed prostheses included porcelain fracture (3%), loss of restoration (2%), necrotic pulp (3%), periodontal disease (0.6%), and caries (2%). Post and core complications were: loosening of the post at 5%, root fracture at 3%, periodontal disease at 2%, and dental caries at 2%.[9]

Clinical success in restorations depends heavily on patient comfort and satisfaction. Measuring patient attitude, comfort and esthetics about various aspects of prosthodontic rehabilitation directly reflects this satisfaction. Improvements in the overall oral health condition have been considered as an influencing factor in patient satisfaction about fixed restoration treatments.[10]

Several studies have assessed and recorded the extent of patient satisfaction, yet relatively little published work can be found on the variables which influence patient comfort, esthetics, and satisfaction with fixed partial dentures restorations and their clinical performances. Thus, an appraisal of the success and life expectancy of these restorations, as well as the causes and character of related problems and failures is necessary. Understanding these factors enables dentists to create the best possible treatment plans, set realistic patient expectations, and set suitable maintenance schedules for patients under fixed prostheses.[11]

2. Objectives

To assess patient Attitude, Comfort, Esthetics and Satisfaction with fixed restorations.

3. Methods

This is a cross-sectional survey-based study conducted over a period of one year in the Department of Prosthodontics and Crown & Bridge at Seema Dental College and Hospital, Rishikesh.

- Inclusion Criteria:
  1. Aging 18 years and above.
  2. Patients who have already received fixed restorations, including crowns, bridges, or implants.
  3. Patients who are willing to give consent.

- Exclusion Criteria:
  1. Patients unwilling to participate.
  2. Patients who do not have complete dental records.
  3. Patients with systemic conditions that will impact oral health outcomes.

The sample size consisted of 200 participants, balanced across demographic variables to ensure a comprehensive understanding of patient experiences.

Data collection: A valid questionnaire was used to collect the data. Convenience sampling was used to recruit the patients. The form of the questionnaire comprised 20 questions distributed over four primary domains: comfort, functionality, aesthetics, and overall satisfaction. Questions were framed on a 5-point Likert scale that ranges from "Very Dissatisfied" to "Very Satisfied" and permits scoring the responses accordingly. Age, gender, and type of restoration received by the patient were also documented.

Statistical Analysis: The data were coded in Microsoft Excel and analyzed using SPSS. Descriptive statistics, mainly in the form of frequencies and percentages, were used, and inferential statistics in terms of Chi-Square and ANOVA tests were performed to test the difference in variables. A p-value

≤ 0.05 was taken as statistically significant.

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1. Results

Comfort:
The results show clear discrepancies in comfort between crowns, bridges, and implants. Among implant users, 46.3% reported feeling "Very Comfortable," whereas 27.8% of crown recipients and 25.9% of bridge recipients expressed the respective level of comfort (Fig.1). Factors contributing to discomfort in crowns and bridges included minor occlusal adjustments and occasional sensitivity, which were less frequently reported by implant users. Statistical analysis confirmed a significant association between the type of restoration and patient-reported comfort levels (p= 0.03).

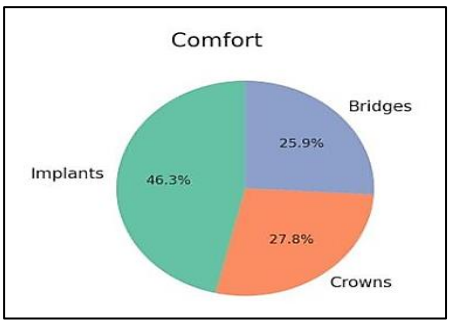

Fig.1

Aesthetic Satisfaction:
Aesthetic satisfaction varied substantially among the participants. Dental implants were rated highest, with 45.8% of patients being "Very Satisfied" with their appearance. Crowns followed with a satisfaction rate of 29.2%, while bridges scored the lowest at 25% (Fig.2). Common concerns among crown and bridge users included slight mismatches in color and contour, while implant recipients appreciated their natural-looking outcomes. These differences were statistically significant, with a p-value of 0.01.

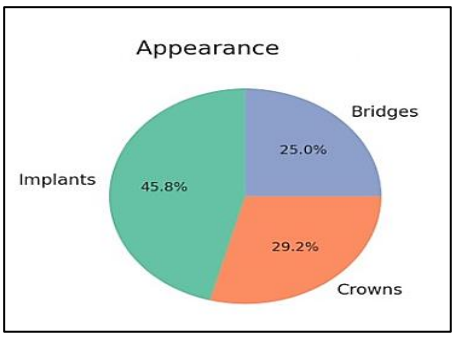

Fig.2

Functionality and Chewing Efficiency:

Functionality, especially in terms of chewing efficiency, was another crucial parameter. Implants once more outdid crowns and bridges, with 43.3% of implant users being "Very Satisfied." In contrast, 30% of crown users and 26.7% of bridge users rated their chewing experience at the low satisfaction level (Fig.3). Some of the participants with crowns and bridges reported minor limitations in food choices, such as difficulty chewing hard foods. The results were statistically significant, with a p-value of 0.02, which reinforces the superior performance of implants in this domain.

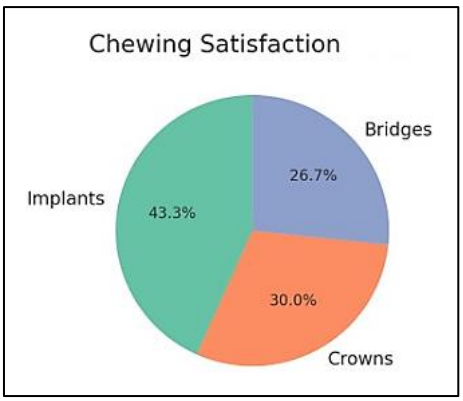

Fig.3

Satisfaction Overall:
Analysis of overall satisfaction scores shows that the implants were reported at 65%, very satisfied by the patients; 40% by the crowns and 38% by the bridges (Fig.4). Combining comfort, aesthetics, and functionality, implant supported restorations achieved superior patient satisfaction. Even though crowns and bridges fulfill the minimum requirements for prosthodontic care, it seems their shortfalls in aesthetics and functionality impact on overall satisfaction to some extent.

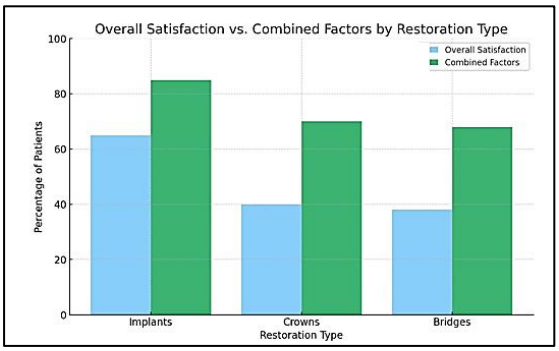

Fig.4

2. Discussion

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The integration of methodology and results in this study strongly underlines the evolving importance of patient-centered approaches within fixed prosthodontics, setting a benchmark for advancing both clinical practices and patient satisfaction. The findings illustrate that the superior performance of dental implants over traditional crowns and bridges is deeply rooted in technological progress, particularly in biomaterials science and surgical innovations. Dental implants have progressed to resemble the anatomy of the natural tooth in form as well as function, hence allowing them to be more effectively integrated with the surrounding bone and soft tissues. This biocompatibility allows for better stability, fewer complications, and higher durability in the long term.[12] Crowns and bridges are still highly effective for certain applications but are not without inherent limitations that they continue to possess. These include challenges such as dependency on adjacent teeth for support, susceptibility to wear and tear, and difficulties in replicating the natural esthetics and biomechanics of teeth to the same degree as implants. The reliance on traditional materials and techniques can often result in outcomes that, although clinically acceptable, may fall short of patient expectations for comfort, aesthetics, and longevity.

This study validates the hypothesis that incorporating patient preferences, feedback, and real- world experiences into treatment planning is essential to optimizing outcomes in prosthodontic interventions. The centering of care on a patient shifts the focus away from purely technical success, such as ensuring functional occlusion or structural integrity, and toward broader measures of how treatments influence quality of life. Incorporating factors such as aesthetic appeal, speech, ease of maintenance, and overall comfort allows the clinician to meet the holistic needs of the patient.

The structured survey design of the study is also noteworthy, since it provides a robust methodology for the capture of nuances in patient experiences. Direct feedback from patients allows the research to capture insights that go beyond what traditional clinical metrics can report, providing a more complete understanding of factors that affect patient satisfaction and long-term success. For example, the findings of these surveys may indicate small yet crucial information, for example, the preference for some material texture, shade, or the psychosocial effect of prosthetic treatment on self-esteem.

The findings further emphasize the need for innovation and personalization in prosthodontic care. With the advent of technology, it becomes an avenue to solutions that address most of the shortcomings of the traditional options available in prosthodontics. For instance, the CAD/CAM technology, digital impressions, and 3D printing have made it possible to design prosthetic components with unprecedented precision, thus ensuring a closer fit and better integration. Furthermore, next-generation biomaterials, such as bioactive ceramics and hybrid polymers, are being researched, which will bridge the gap between mechanical performance and aesthetic fidelity.[13]

From a clinical perspective, these findings challenge practitioners to think differently on treatment planning. It shouldn't be all about dentally restoring functionality but producing outcomes that matter to people's personal needs and expectations of them. Letting a patient in the process of sharing their own goals, choices, and preference for aesthetics and functionalities is also critical in securing trust and outcomes.[14]

For researchers, the study shows the importance of patient-reported outcomes as part of evidence-based practice. Traditional clinical trials focus on narrow metrics, such as survival rates or structural integrity, which are important but don't reflect the full scope of patient experiences. By integrating patient feedback into research design, future studies can provide a more balanced and actionable evidence base that guides innovations that are both clinically sound and patient-centered.[15]

Further, the study underlines the larger ramifications of embracing the concept of patient- centeredness in prosthodontic care. More than offering a better result for every patient, it has changed and is changing the nature of the practice paradigm: empathizing, communicating, and, therefore, cooperating becomes a basic condition for practice. Aligned with the patients' perceptions and values, the planning of treatment can increase satisfaction better, build more powerful therapeutic relationships, and ultimately, promote a good standing and credibility of the specialty.[16]

Thus, this article confirms that the future of prosthodontics is only possible by finding a nice balance between technical excellence and the human dimensions in care. Through continuous innovation combined with patient feedback, prioritized individualized approaches to care, the field can meet outcomes that are not merely restorative of function, but transformative for life in general. The findings from this study are a powerful reminder that behind every clinical intervention is the very basic goal of bettering the patient's welfare in the most holistic way possible.

References

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1. Sargozaie, N.; Moeintaghavi, A.; Shojaie, H. Comparing the Quality of Life of Patients Requesting Dental Implants Before and After Implant. Open Dent. J. 2017, 11, 485–491.
2. Paquette JM, Wu JC, Sheets CG, Stewart DL: Replacing missing teeth with fixed partial dentures . Ronald E. Goldstein's Esthetics in Dentistry, Third Edition. Goldstein RE, Chu SJ, Lee EA, Stappert CF (ed): John Wiley & Sons, Inc., Hoboken, NJ ; 2018. 541-78. 10.1002/9781119272946.ch17
3. Olley RC, Andiappan M, Frost PM: An up to 50-year follow-up of crown and veneer survival in a dental practice. J Prosthet Dent. 2018, 119:935-41. 10.1016/j.prosdent.2017.06.009
4. Abdulrahman S, Von See Mahm C, Talabani R, Abdulateef D: Evaluation of the clinical success of four different types of lithium disilicate ceramic restorations: a retrospective study. BMC Oral Health. 2021, 21:625. 10.1186/s12903-021-01987-1
5. Ponsi, J.; Lahti, S.; Rissanen, H.; Oikarinen, K. Change in subjective oral health after single dental implant treatment. Int. J. Oral. Maxillofac. Implant. 2011, 26, 571–577
6. Montero J: A review of the major prosthetic factors influencing the prognosis of implant prosthodontics . J Clin Med. 2021, 10:816. 10.3390/jcm10040816
7. Carey C, Din ND, Lamb J, Wright H, Robb ND, Abuzar M: Survival of single-unit porcelain-fused-to-metal (PFM) and metal crowns placed by students at an Australian university dental clinic over a five-year period. Dent J (Basel). 2021, 9:60. 10.3390/dj9060060
8. Srimaneepong V, Heboyan A, Zafar MS, Khurshid Z, Marya A, Fernandes GV, Rokaya D: Fixed prosthetic restorations and periodontal health: a narrative review. J Funct Biomater. 2022, 13:15. 10.3390/jfb13010015
9. Goodacre CJ, Bernal G, Rungcharassaeng K, Kan JY: Clinical complications in fixed prosthodontics. J Prosthet Dent. 2003,1, 90:31-41. 10.1016/s0022-3913(03)00214-2
10. Forrer FA, Schnider N, Brägger U, Yilmaz B, Hicklin SP: Clinical performance and patient satisfaction obtained with tooth-supported ceramic crowns and fixed partial dentures. J Prosthet Dent. 2020, 124:446- 53. 10.1016/j.prosdent.2019.08.012
11. Chandranaik MB, Thippanna RK: Fixed partial denture failures: a clinical survey for evaluation of the factors responsible. CODS J Dent. 2017, 9:41-5.
12. De Bruyn H, Raes S, Matthys C, Cosyn J. The current use of patient-centered/reported outcomes in implant dentistry: a systematic review. Clin Oral Implants Res. 2015;26 Suppl 11:45-56.
13. Alghazzawi TF. Advancements in CAD/CAM technology: Options for practical implementation. J Prosthodont Res. 2016;60(2):72-84.
14. Krist AH, Tong ST, Aycock RA, Longo DR. Engaging Patients in Decision-Making and Behavior Change to Promote Prevention. Stud Health Technol Inform. 2017;240:284-302.
15. Mercieca-Bebber R, King MT, Calvert MJ, Stockler MR, Friedlander M. The importance of patient-reported outcomes in clinical trials and strategies for future optimization. Patient Relat Outcome Meas. 2018;9:353-367. Published 2018 Nov 1. doi:10.2147/PROM.S156279
16. Edgman-Levitan S, Schoenbaum SC. Patient-centered care: achieving higher quality by designing care through the patient's eyes. Isr J Health Policy Res. 2021;10(1):21. Published 2021 Mar 5. doi:10.1186/s13584-021-00459-9.