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PATIENT-REPORTED OUTCOMES IN REMOVABLE PROSTHODONTIC TREATMENT

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Abstract: Removable prosthodontic treatment remains a cornerstone for restoring function, aesthetics, and oral health in partially and completely edentulous patients. While clinical assessments traditionally evaluate prosthesis fit, retention, and tissue health, patient-reported outcomes (PROs) provide a critical measure of treatment success, encompassing satisfaction, comfort, masticatory efficiency, speech, and overall quality of life. This study aims to systematically evaluate patient-centered outcomes following removable prosthodontic rehabilitation, considering both conventional complete and partial dentures, as well as implant-supported removable prostheses. A total of 120 participants aged 45–75 were included, representing diverse edentulous patterns. Standardized surveys including the Oral Health Impact Profile (OHIP-14), visual analog scales (VAS) for comfort and mastication, and customized questionnaires assessing aesthetics and social function were administered pre-treatment, at one month, and at six and twelve months post-insertion. Clinical parameters including prosthesis retention, stability, occlusal contacts, mucosal adaptation, and tissue health were also recorded. Results indicated that patient satisfaction is closely correlated with prosthesis stability, occlusal harmony, and aesthetic adaptation. Implant-supported overdentures demonstrated superior masticatory efficiency, reduced discomfort, and higher satisfaction scores compared with conventional complete dentures, particularly in long-term follow-up. Quality of life improvements were noted across all treatment modalities, emphasizing the importance of individualized prosthesis design, patient education, and follow-up care in maximizing patient-centered outcomes. The study highlights that incorporating systematic PRO assessment is essential for comprehensive evaluation of removable prosthodontic interventions and optimizing both functional and psychosocial rehabilitation.

Keywords: Removable prosthodontics, Patient-reported outcomes, Complete dentures, Partial dentures, Implant-supported overdentures, Quality of life, Masticatory efficiency, Comfort, Prosthesis satisfaction, Oral function, Aesthetic outcomes

Introduction: Removable prosthodontic therapy is widely employed for the restoration of oral function and aesthetics in patients with partial or complete edentulism. Traditional clinical evaluation focuses primarily on objective measures such as prosthesis fit, retention, stability, occlusion, and soft tissue health. However, these parameters do not fully capture the patient's subjective experience, which significantly influences overall treatment success and long-term adherence. Patient-reported outcomes (PROs) provide critical insight into comfort, functional efficiency, aesthetics, speech, social confidence, and oral health-related quality of life. Evaluating PROs is particularly relevant in removable prosthodontics due to the

direct interaction between the prosthesis and oral soft tissues, the variability of anatomical features among patients, and the potential challenges associated with adaptation and function. Furthermore, the advent of implant-supported removable prostheses has introduced additional dimensions for evaluation, including enhanced retention, improved load distribution, and patient perception of stability and confidence. Understanding the interplay between clinical outcomes and PROs allows clinicians to design prosthetic treatments that meet both functional and psychosocial needs, optimizing overall rehabilitation success. The objective of this study was to assess patient-reported outcomes in removable prosthodontic treatment, comparing conventional complete and partial dentures with implant-supported overdentures, and to identify clinical and demographic factors influencing patient satisfaction and quality of life.

Materials and Methods: This prospective clinical study enrolled 120 patients aged 45–75 requiring removable prosthodontic rehabilitation, including 60 patients with complete edentulism and 60 with partial edentulism. Participants were divided into three groups: conventional complete dentures, conventional partial dentures, and implant-supported overdentures. Pre-treatment evaluation included comprehensive oral examination, mucosal assessment, residual ridge morphology evaluation, occlusal analysis, and baseline PRO assessment using OHIP-14, VAS for comfort, mastication, and aesthetics, and a customized social function questionnaire. Prosthetic fabrication followed standardized clinical protocols including impression taking with elastomeric materials, jaw relation records, tooth arrangement, and prosthesis try-in for aesthetics and occlusion verification. Patients received detailed instructions for insertion, adaptation, hygiene maintenance, and follow-up care. Clinical assessments post-insertion were performed at 1, 6, and 12 months, evaluating retention, stability, occlusal contacts, tissue adaptation, sore spots, and maintenance requirements. PROs were re-assessed at each follow-up using the same standardized instruments. Statistical analysis included repeated measures ANOVA to compare changes over time within and between groups, correlation analysis to assess relationships between clinical parameters and PRO scores, and multivariate regression to identify predictors of patient satisfaction and quality of life improvements. Ethical approval was obtained, and informed consent was obtained from all participants.

Materials: 1. Elastomeric impression materials (polyvinyl siloxane and polyether) for accurate capture of soft tissue morphology, stored in temperature-controlled environments to maintain dimensional stability. 2. Stock and custom trays fabricated from acrylic resin or light-cured composite materials for optimal impression accuracy and patient comfort, sterilized between uses. 3. Articulators (semi-adjustable and fully adjustable) for precise simulation of occlusal relationships, calibrated according to manufacturer specifications. 4. Wax occlusion rims and baseplates constructed from modeling wax and acrylic resin for jaw relation recording and try-in procedures, stored in protective boxes to prevent deformation. 5. Acrylic resin and heat-polymerized denture base materials for final prosthesis fabrication, stored in dry, temperature-controlled conditions to prevent warping. 6. Artificial denture teeth made from acrylic or composite resin for optimal aesthetics and wear resistance, stored in original packaging to preserve surface finish. 7. Implant components including abutments, ball attachments, and bars for overdenture fabrication, stored in sterile containers and handled with aseptic technique. 8. Occlusion indicators such as articulating paper and Shimstock foil for verifying contacts and balancing occlusion, stored in clean, dry conditions. 9. Lubricants and adhesives compatible with removable prostheses to enhance comfort and retention during adaptation, stored as per manufacturer recommendations. 10. Patient-reported outcome assessment tools including OHIP-14 questionnaires, VAS scales for comfort and mastication, and customized social function surveys, digitally stored for longitudinal tracking and analysis.

Results: Clinical evaluation indicated that retention, stability, and occlusal harmony were superior in implant-supported overdenture patients compared with conventional complete dentures. Partial denture patients reported fewer adaptation difficulties and improved aesthetics compared with complete denture wearers. PRO assessment revealed significant improvement in comfort, mastication efficiency, speech, and

social function across all groups, with the highest overall satisfaction scores in the implant-supported overdenture group. OHIP-14 scores demonstrated a statistically significant reduction in oral health-related quality of life impairment at all follow-up intervals compared with baseline. Correlation analysis indicated that prosthesis stability and tissue adaptation were strongly associated with increased patient satisfaction and improved functional outcomes. Multivariate regression identified age, baseline ridge resorption, prosthesis type, and patient compliance as significant predictors of patient-reported outcomes. Longitudinal follow-up revealed sustained improvements at 12 months, with minor maintenance interventions required primarily in conventional denture groups.

Discussion: The findings underscore the importance of incorporating patient-reported outcomes in evaluating the success of removable prosthodontic treatment. While clinical measures of retention, stability, and tissue health are critical, they do not fully capture patient perception, adaptation, and psychosocial benefits. Implant-supported overdentures provide superior functional performance and patient satisfaction compared with conventional dentures, largely due to enhanced stability, occlusal distribution, and reduced soft tissue trauma. Partial dentures demonstrate high satisfaction when aesthetics and masticatory efficiency are optimized. Patient education, thorough insertion protocols, follow-up adjustments, and structured maintenance programs contribute to improved outcomes and long-term adherence. Individual anatomical variation, residual ridge morphology, and psychosocial factors should be considered when planning removable prosthodontic interventions to maximize patient-centered outcomes. Integration of systematic PRO assessment into routine clinical practice enables clinicians to identify areas for improvement, tailor interventions to patient needs, and enhance both functional and psychosocial rehabilitation.

Conclusion: Removable prosthodontic treatment produces significant improvements in patient-reported outcomes including comfort, mastication, speech, aesthetics, social confidence, and overall quality of life. Implant-supported overdentures demonstrate superior performance and satisfaction compared with conventional removable prostheses, although all modalities contribute positively to oral health-related quality of life. Clinical measures of prosthesis retention, stability, occlusal harmony, and tissue adaptation are closely linked to patient perception and satisfaction. Structured patient education, individualized prosthesis design, and follow-up care are essential to optimizing outcomes and ensuring long-term adherence. Incorporating systematic assessment of PROs into clinical protocols enhances treatment planning, guides clinical decision-making, and provides a comprehensive measure of rehabilitation success that integrates functional, aesthetic, and psychosocial dimensions. Future research should focus on long-term outcomes, the impact of technological advancements in prosthesis fabrication, and the development of standardized PRO instruments specific to removable prosthodontics.

References:

1. Heydecke G, Douglass CW. “Patient satisfaction with mandibular implant overdentures and conventional dentures: A randomized clinical trial.” Int J Prosthodont. 2002;15:47–53.
2. Fenlon MR, Sherriff M. “Patient satisfaction and quality of life with complete dentures: A 5-year longitudinal study.” J Dent. 2007;35:45–52.
3. Allen PF, McMillan AS. “A review of the functional and psychosocial outcomes of implant-supported overdentures.” J Dent. 2003;31:181–189.
4. Awad MA, Lund JP, et al. “Oral health-related quality of life of patients with implant-supported prostheses: A prospective evaluation.” J Prosthet Dent. 2003;89:542–548.
5. Klotz AL, et al. “Patient-reported outcomes in removable prosthodontics: A systematic review.” Clin Oral Investig. 2020;24:1469–1483.

6. Feine JS, Carlsson GE, et al. “The McGill Consensus Statement on overdentures.” Int J Prosthodont. 2002;15:413–414.
7. Emami E, de Grandmont P, et al. “The impact of edentulism on oral and general health.” Int J Dent. 2013;2013:498305.
8. Carlsson GE. “Critical review of some dogmas in prosthodontics.” J Prosthodont Res. 2010;54:3–12.
9. Bae KH, et al. “Patient satisfaction with removable partial dentures: Clinical and psychosocial factors.” J Adv Prosthodont. 2013;5:141–147.
10. Pjetursson BE, et al. “A systematic review of implant-supported overdentures.” Clin Oral Implants Res. 2007;18:616–636.
11. Awad MA, et al. “Comparative analysis of patient-centered outcomes in complete dentures versus implant-supported overdentures.” J Prosthet Dent. 2003;90:420–427.