

Questionnaire on evaluation of complete denture wearer patients in post-insertion phase over 4 years

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Abstract

Aim: The objective of this questionnaire study was to evaluate complete denture wearer patients' satisfaction after insertion of the dentures over 4 years.

Materials and methods: One hundred and twenty two patients who had received upper and lower complete dentures over a period of 4 years at Kathmandu Model Hospital, Dental wing, Dept. of Prosthodontics & Maxillofacial Prostheses, Bag Bazaar, Kathmandu, Nepal were evaluated. They were recalled for an interview with respect to post-insertion clinical examination and their satisfaction with their dentures.

Results: Of a total of 100 patients, 76 patients rated the quality of denture retention as satisfactory. 80 patients rated speech quality as satisfactory. 90 patients rated aesthetic as satisfactory and 75 patients considered mastication to be satisfactory. Complete unsatisfaction was shown by 7 patients for retention, 1 patient for aesthetic and speech each, and 4 patients for mastication.

Conclusion: The questionnaire proved to be a reliable and feasible method to evaluate complete denture wearer patients in post-insertion phase and many factors play a role in denture satisfaction.

Key words: Complete dentures, Edentulous patient, Satisfaction

Introduction

One of the most baffling challenges in dentistry is to rehabilitate an edentulous mouth. The main objectives of restoring an edentulous mouth are to preserve the health of remaining structures of the masticatory apparatus, to improve the efficiency of mastication, to assist the phonation, to improve the aesthetics, to give physiological, psychological & social comforts to the patient. Often, many patients fail to recognize the limitations of artificial substitute, as a result there are complications like denture sore, denture stomatitis, wearing off of occlusal surfaces, increased residual ridge reduction, fracture of dentures, hypermobile ridge tissues, epuli fissuratum, and many more. Complete denture wearers are probably one of the largest underserved dental patients. In recent years advances in dental education, research and technology, have helped in retaining the natural teeth of most of the elderly patients in western world compared to the older generation¹. Even though implant dentistry has helped to rehabilitate edentulous patients, implants may not be a solution for a major number of

adults because of medical, physiological, psychological, oral hygiene habits or financial limitations². As a result, conventional complete dentures remain an imperative and crucial means for the restoration of the oral function of edentulous adults.

The purpose of this study was to evaluate the relative importance of denture quality among a number of patients with respect to their satisfaction with their complete denture prostheses.

Materials and methods

Edentulous patients who had received upper and lower complete dentures over a period of 4 years at Kathmandu Model Hospital, Dental wing, Dept. of Prosthodontics & Maxillofacial Prostheses, Bag Bazaar, Kathmandu, Nepal were evaluated. The data revealed that altogether 122 patients had received upper and lower complete dentures over the period of 4 years. They were recalled for a post-insertion clinical examination

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and were interviewed regarding their satisfaction with the dentures. The data was collected and was subjected to statistical analysis using SPSS 11.5.

Results

Out of 122 patients, 8 were non-contactable, 6 were ill, 3 were deceased, 5 had moved out of country. Of the remaining 100 patients, 79 reported to the hospital and were re-evaluated with their complete dentures. The remaining 21 were interviewed through telephonic conversation.

Out of 100 patients, 64 were males and 36 were females. 50 patients were between 61-70 years old, 38 were between 71-80 years old. 10 were between 50-60 years old and 2 patients were above 80 years old. Most of the patients were from Kathmandu with the remaining 24 from out of valley. 55 were educated, out of them, 19 were job holders and the rest were retired. 76 patients rated the quality of denture retention as satisfactory. 80 patients rated speech quality as satisfactory. 90 patients rated aesthetic as satisfactory and 75 patients considered mastication to be satisfactory. Complete dissatisfaction was shown by 7 patients for retention, 1 patient for aesthetic and speech each, and 4 patients for mastication. It was seen that 82 patients out of 100 rated the overall comfort as satisfactory (Table 1).

Discussion

It is said that the patient's personality and his/her relationship with the dentist play an important role in overall success. Psychological attributes are as important for success as a patient's anatomical features, as well as the dentist's skill in providing complete denture therapy³. It has been argued that a patient's satisfaction with complete dentures is influenced by a complex of psychological, biological, anatomic, and constructional factors. For example, the dilemma of providing dentures to patients with unrealistic expectations⁴. According to Albino et al⁵ a patient's pre-treatment expectations may influence treatment outcomes, and treatment failures may result from mismatched perceptions and expectations of the patient and the dentist. As individual patients have

unique experiences, expectations, emotions, adaptive abilities, and physical attributes, the undertaking of predicting denture success is multifaceted. Often, there are factors beyond the dentist's control that affect a patient's ability to achieve a successful denture outcome. Various factors related to aging i.e. poor denture foundations, xerostomia, tissue fragility, muscle weakness, osteoporosis, arthritis, and depression have been reported as possible causes for denture failure^{6, 7}. Retention of the denture is the resistance of a denture to dislodgment⁸. It also means quality inherent in a denture that resists the force of gravity, the adhesiveness of foods, and the forces associated with the opening of the jaws. In our study, though 76 patients were satisfied, 7 patients showed complete dissatisfaction. Our result was consistent with the study done by Usha et al⁹. Those patients who were unsatisfied had either poor foundations, or tissue fragility. Edentulous patients with mandibular bone resorption have difficulties of adaptation to mastication and often report dissatisfaction with their conventional full dentures¹⁰. Age did not have significant influence on predicting patient satisfaction which is consistent with the previous studies^{7, 11}. Aesthetics refers to the development of the labial and buccal borders so that they are not only retentive but also support the lips & cheeks properly. In our study, though 90 patients were satisfied, 1 patient showed complete dissatisfaction. The patient who was unsatisfied had history of cleft lip surgery. The great majority of the recalled patients were satisfied with mastication. In our study, though 75 patients were satisfied, 4 patients showed dissatisfaction with mastication. The patients who were unsatisfied had poor foundation as a result, stability of the dentures were not satisfactory, leading to poor retention and mastication. The study indicates that 80 patients were satisfied with speech and the remaining developed coping abilities to deal with difficulties in pronouncing certain words.

Conclusion

The questionnaire proved to be a reliable and feasible method to evaluate complete denture wearer patients in post-insertion phase. It can be seen from this study that variety factors play a role in denture satisfaction.

Table 1

Denture quality	Satisfactory (No. of patients)	Average (No. of patients)	Unsatisfactory (No. of patients)	Completely unsatisfactory (No. of patients)
Denture retention	76	11	6	7
Denture aesthetics	90	7	2	1
Mastication	75	16	5	4
Speech	80	17	2	1
Overall comfort	82	12	5	1

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References

1. Steele JG, Treasure E, Pitts NB, Morris J, Bradnock G. Total tooth loss in the United Kingdom in 1998 and implications for the future. *Br Dent J* 2000; 189(11):598-603.
2. Fitzpatrick B. Standard of care for the edentulous mandible: a systematic review. *J Prosthet Dent* 2006; 95(1):71-8.
3. Carlsson GE. Clinical morbidity and sequel of treatment with complete dentures. *J Prosthet Dent* 1998; 79(1):17-23.
4. Albino JE, Tedesco LA, Conny DJ. Patient perceptions of dental-facial esthetics: shared concerns in orthodontics and prosthodontics. *J Prosthet Dent* 1984; 52(1):9-13.
5. Albino JE, Tedesco LA, Conny DJ. Patient perceptions of dental-facial esthetics: shared concerns in orthodontics and prosthodontics. *J Prosthet Dent* 1984; 52(1):9-13.
6. Frank RP, Milgrom P, Leroux BG, Hawkins NR. Treatment outcomes with mandibular removable partial dentures: a population-based study of patient satisfaction. *J Prosthet Dent* 1998; 80(1):36-45.
7. Weinstein M, Schuchman J, Lieberman J, Rosen P. Age and denture experience as determinants in patient denture satisfaction. *J Prosthet Dent* 1988; 59(3):327-9.
8. Glossary of Prosthodontic terms, *J Prosthet Dent* 2005; 94(1).
9. Usha et al. A Prospective Study of the Quality of Removable Prosthodontics and Patients' Satisfaction in Post-Prosthetic Phase. *The Internet Journal of Dental Science* 2010; 9(1)
10. Kimoto K, Garrett NR. Effect of mandibular ridge height on masticatory performance with mandibular conventional and implant-assisted overdentures. *Int J Oral Maxillofac Implants*. 2003; 18: 523-30.
11. van Waas MA. The influence of clinical variables on patients' satisfaction with complete dentures. *J Prosthet Dent* 1990; 63(3):307-10.