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Research Article

ORAL HEALTH RELATED QUALITY OF LIFE FOR PATIENTS TREATED WITH COMPLETE DENTURES, REMOVABLE AND FIXED PARTIAL DENTURES

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ABSTRACT

AIM: To describe the OHRQoL in patients treated with complete dentures, fixed or removable partial dentures.

BACKGROUND: OHRQoL is a relatively new but rapidly growing notion. This concept, is significant in mainly three areas - clinical practice of dentistry, dental research and dental education. These are different approaches in measuring the OHRQoL, the most popular of which uses the multiple item questionnaire. Patients who are either partially or completely edentulous undergo a prosthodontic treatment.

OBJECTIVE: To observe the satisfaction and quality of life relating to oral health after prosthodontic treatment.

MATERIALS AND METHODS: OHRQoL was determined using Oral Health Impact Factor for edentulous adults (OHIP - 14) method in a sample of 150 patients treated with complete dentures, fixed and removable partial dentures. A questionnaire was given to the patients before and after the treatment. The data was collected and analysed.

CONCLUSION: This study will help us to evaluate OHRQoL for patients treated with complete dentures, fixed or removable partial dentures. There was an improvement after the treatment than when compared to before the treatment.

INTRODUCTION

The use of patient-based outcome measures in oral health, like oral health-related quality of life (OHRQOL), has been into existence since 1980 and is increasing recently. OHRQOL can be defined as a person's assessment of how pain, functional, psychological, discomfort or social factors affect his/her well being in the context of oral health and is often considered as an idea of multi-dimensional context (Strassburger *et al.*, 2004). In daily practice, dentists who are solving different prosthodontic cases, from their own professional perspective, mainly are satisfied with the given treatment. However, they indeed do not know much about the patients' perspective, their feelings, experiences and subjective assessment in the important aspects of their overall well-being, connected with wearing the particular prosthetic construction. It has been documented that patients' perceptions of their oral health status are important outcomes in prosthodontic (John *et al.*, 2004).

The oral health-related quality of life (OHRQoL) is frequently defined as a composition of self-report, specifically pertaining to oral health that captures the functional, social and psychological impacts of oral disease (Gift *et al.*, 1992). As it has been many times confirmed through the practice of almost any dentist, the assessment of oral health made by the dental practitioners is generally different to the opinion given by the patient. Also, there is a huge variability in the individual evaluations. For some patients, absence of teeth does not affect their social and psychological well-being but for the others, the same condition means a great attack on their everyday living in all possible social contexts. The increasing recognition of the importance of the subjective assessment of oral health resulted in proliferation of many oral health-related quality of life measurements. One of the most widely used and psychometrically tested instruments in many different cultures is OHIP- 49 (Allen *et al.*, 2003). The OHIP questionnaire is frequently used to monitor changes of the OHRQoL due to its sensitivity to detect the impact of dental treatment and its extensive cross-cultural usage. This instrument has a short version (OHIP-14) that is much easier to use, with well-documented psychometric characteristics, but somewhat less

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responsive that the original instrument (Locker *et al.*, 2002). In the recent years, it has been documented that by promoting and improving the prosthetic technology, the quality of life has been significantly improved after the treatment with implant-supported removable over dentures in comparison to the previous experience of wearing complete dentures (Cune *et al.*, 1994) (Awad *et al.*, 2003). Tooth loss and its prosthodontic replacement have a potential impact on every aspect of people's quality of life.

Most of the clinical studies are mainly focused on OHRQoL outcomes after the prosthodontic treatment with partial or complete removable dentures (Forgie *et al.*, 2005) (CE- Lebic *et al.*, 2003) (Nikolovska *et al.*, 2012). The current study helps in finding out the patients self perception about their oral health condition before and after the prosthodontic treatment with complete denture, fixed and removable partial dentures. The self perceived motive of a patient for the prosthodontic treatment is more important for planning of a treatment.

MATERIALS AND METHODS

Patients seeking prosthodontic therapy to replace missing teeth were included for this study. The patients were treated based on the diagnosis and were given either fixed or removable partial dentures or complete dentures. The questionnaire was prepared in two languages, both Tamil and English. The patients were explained about the questionnaire and they understood the questionnaire well. A total of 150 participants (convenient sample) were included in the study. Among them, 50 participants came for the treatment of complete dentures, 50 participants came for removable partial dentures and 50 participants for fixed partial dentures.

In order to assess the oral health and quality of life, we administered the OHIP – 14 instrument. It is a five point Lickert scale (0–4) consisting of 19 questions that compose 7 different subscales which indicate different aspects of oral self-perceived well-being: Social disability, Physical disability, Psychological disability, Physical pain, Psychological discomfort, functional limitation and Handicap. In addition, the questionnaire results with a general (total) score indicated the degree of perceived oral health related well-being.

The higher the scores, the lower is the self-evaluated oral health-related quality of life. Using the OHIP-14, we used the questionnaire by interviewing the participants. The patients were in a follow up from the beginning of the treatment till the treatment was completed. The patients were interviewed two times; before and after the treatment. In other words, they answered the same set of questions in which they evaluated how frequent an oral health problem occurred before, after the prosthodontic treatment.

RESULTS

A total of 150 patients are included in this study, i.e. 50 patients treated with complete denture, 50 treated with fixed partial denture and 50 with removable partial denture. Gender is not included in our study, as it is not in relationship with the score. The results are tabulated below, after treatment the patients are more satisfied with their function, pain, appearance, social and physical disability and psychological

discomfort compared to the one before treatment. The score for individual satisfaction dimension for complete denture, fixed and removable partial denture are shown in the Tables 3, 6, 9 respectively. Lower the scores better is the oral health related quality of life and higher the scores the more worse is the oral health related quality of life. Correlation of OHIP-14 score in percentage for complete denture is shown in Tables 1, 2 for removable partial denture is shown in Tables 4, 5 and for fixed partial denture is shown in Tables 7, 8.

Complete Denture

Table 1. BEFORE

	0	1	2	3	4
FUNCTIONAL LIMITATION	25	50	100	100	100
PHYSICAL PAIN	50	50	50	50	50
PSYCHOLOGICAL DISCOMFORT	0	33.3	100	100	100
PHYSICAL DISABILITY	0	33.3	100	100	100
PSYCHOLOGICAL DISABILITY	0	0	66.6	66.6	100
SOCIAL DISABILITY	0	0	50	100	100
HANDICAP	0	0	100	100	100

Table 2. AFTER

	0	1	2	3	4
FUNCTIONAL LIMITATION	100	100	25	0	0
PHYSICAL PAIN	100	100	50	0	0
PSYCHOLOGICAL DISCOMFORT	66.6	66.6	66.6	33.3	33.3
PHYSICAL DISABILITY	100	100	66.6	0	0
PSYCHOLOGICAL DISABILITY	100	100	100	66.6	66.6
SOCIAL DISABILITY	100	100	100	0	0
HANDICAP	100	100	50	0	0

Table 3. COMPLETE DENTURE

	0	1	2	3	4
BEFORE	10.5	10.2	57.9	84.2	89.4
AFTER	98.7	94.5	63.1	15.7	15.3

Fixed Partial Denture

Table 4. BEFORE

	0	1	2	3	4
FUNCTIONAL LIMITATION	0	50	75	100	100
PHYSICAL PAIN	0	50	50	100	100
PSYCHOLOGICAL DISCOMFORT	0	0	66.6	100	100
PHYSICAL DISABILITY	0	33.3	66.6	100	100
PSYCHOLOGICAL DISABILITY	0	0	100	33.3	100
SOCIAL DISABILITY	0	0	100	100	100
HANDICAP	0	0	100	50	100

Table 5. AFTER

	0	1	2	3	4
FUNCTIONAL LIMITATION	100	100	25	25	0
PHYSICAL PAIN	100	100	50	0	0
PSYCHOLOGICAL DISCOMFORT	100	100	66.6	0	0
PHYSICAL DISABILITY	100	66.6	0	0	0
PSYCHOLOGICAL DISABILITY	100	100	66.6	0	0
SOCIAL DISABILITY	100	100	0	0	0
HANDICAP	100	100	0	0	0

Table 6. FIXED PARTIAL DENTURE

	0	1	2	3	4
BEFORE	0	21	78.9	88.9	94.5
AFTER	100	94.7	31.5	5	0

Table 7. BEFORE

	0	1	2	3	4
FUNCTIONAL LIMITATION	25	50	100	100	100
PHYSICAL PAIN	50	50	50	50	50
PSYCHOLOGICAL DISCOMFORT	0	33.3	100	100	100
PHYSICAL DISABILITY	0	33.3	100	100	100
PSYCHOLOGICAL DISABILITY	0	0	66.6	66.6	100
SOCIAL DISABILITY	0	0	50	100	100
HANDICAP	0	0	100	100	100

Table 8. AFTER

	0	1	2	3	4
FUNCTIONAL LIMITATION	100	100	50	25	0
PHYSICAL PAIN	100	100	100	0	0
PSYCHOLOGICAL DISCOMFORT	100	100	100	66.6	33.3
PHYSICAL DISABILITY	100	66.6	66.6	33.3	0
PSYCHOLOGICAL DISABILITY	100	100	66.6	33.3	0
SOCIAL DISABILITY	100	100	0	0	0
HANDICAP	0	100	50	0	0

Table 9. REMOVABLE PARTIAL DENTURE

	0	1	2	3	4
BEFORE	10.6	26.3	84.4	89.4	94.9
AFTER	100	89.6	63.3	26.3	5.2

DISCUSSION

The impact of the oral disease on psychological and social well-being of the patients is very important aspect of modern living, because oral disorders frequently compromise aspects of daily living that are of significant importance for the majority of individuals. The current study has shown that the quality of life has improved after treatment, compared to the situation before treatment. Certain studies have proved that the lower denture is more problematic (Carlsson *et al.*, 1967). In another study they noted a high rate overall satisfaction after the treatment. This may be explained by the two reasons: Firstly, most dental patients in a dental school environment develop a degree of friendship towards their student. Therefore, many patients may have been protective of students when answering the questions and found it difficult to express their dissatisfaction (Berg E *et al.*, 1988) (Guckes *et al.*, 1978). Also, there have been conflicting results regarding the influence of denture quality on patient satisfaction (Fenlon MR *et al.*, 2004) (Yoshizumi *et al.*, 1964) (Wolff *et al.*, 2003) (Langer *et al.*, 1961) (Carlsson *et al.*, 1967) (Petricevic *et al.*, 2012). The results in the study conducted by Petricevic *et al.* suggested that improvement of the quality of life of FPD patients the period as short as three weeks was not sufficient to show recovery in all domains of oral health related to well-being [19]. In our study, about 57% of patients were questioned one to four months after their treatment and they were all satisfied with the function and appearance of their fixed partial dentures.

Further in our study, patients showed an improvement in their quality of life after their treatment with complete denture, fixed or removable partial denture compared to one before treatment. Patients were more satisfied with their function, appearance, physical pain, social disability, psychological disability and discomfort, and physical disability. Comparing the results in our study, patients treated with fixed partial dentures were more satisfied than patients treated with removable partial dentures and complete dentures.

The patients treated with fixed partial dentures did not have any negative responses but patients treated with removable partial denture had problems with psychological discomfort (33.3%) and complete denture patients had psychological discomfort (33.3%) and psychological disability (66.6%). To enable the development of patient-oriented approaches in public health care and provide appropriate oral health care to patients wearing removable or fixed partial denture, or complete dentures, it is important to know which predictors actually affect the OHRQoL of the people. Therefore, the present study aimed to assess the factors of OHRQoL among the patients treated with complete denture, fixed or removable partial dentures.

Conclusion

The importance of providing patients with high quality dentures should be self-evident, if for no other reason than to avoid harmful effects on the oral tissues. It has now been proven that patients who are satisfied have a better quality of life than their dissatisfied counterparts. Clinicians should familiarize themselves with the patient's expectations and inform them of possible limitations. Dentists should spend more time counseling the edentulous patients prior to and during denture construction. Clinicians should also recognize the important role they play in improving a patient's quality of life aside from just manufacturing a denture for functional purposes. The study showed that complete dentures, fixed or removable partial dentures do improve the quality of life of patients. Significant improvements were recorded in almost all domains. These results are relevant for clinicians in drawing on evidence about the benefits of treatment when advising patients about whether treatment will improve their oral function and everyday lives.

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