

ORIGINAL ARTICLE

IMPACT OF ORAL HEALTH RELATED QUALITY OF LIFE OF PERIODONTALLY COMPROMISED PATIENTS

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ABSTRACT:

Background: Oral disorders cause considerable physical pain and suffering, impairment of function and reduced quality of life. Periodontal disease may compromise functional aspects of the stomatognathic system, such as mastication, swallowing, and speech, smile esthetics, and consequently self-esteem. **Aim:** The aim of the present study was to assess the impact of oral health related quality of life of periodontally compromised patients. **Materials and Methods:** A total of 170 patients were included in the study. Data was collected in face-to-face interviews about the personal information and also recorded the oral health related quality of life questionnaire. OHIP 14 measure contains seven dimensions (functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social disability and handicap). After recording the details through interview, the participants were examined to assess their periodontal status by using Community Periodontal Index (CPI) and Loss of Attachment component of WHO Oral Health Survey Proforma (1997). Chi-square test and Fisher's exact test were used to explore the association between dental variables and OHRQoL scores. **Results:** Mean Quality Of Life score was highest (62.15) among those individuals who had bleeding on probing (score 1) for Community Periodontal Index and there was a statistically significant association found between Quality Of Life and Community Periodontal Index. And There was no association ($p=0.397$) between Quality of Life and Loss of attachment score. **Conclusion:** Quality of life was inversely associated with periodontal disease. Periodontal health to be an important determinant of the well being.

Keywords: Community Periodontal Index, Loss of Attachment, oral health, periodontal disease, quality of life.

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INTRODUCTION:

Oral Health status of an individual plays a significant role in an individual's well being good oral health is more than having good teeth. Teeth and orofacial structures play an important role in a person's social life from very early age. Oral disorders cause considerable physical pain and suffering, impairment of function and reduced quality of life.¹ The quality of life (QoL) is a multidimensional subjective construct connected with impact of health and disease on daily performances. Oral diseases are among the most

common diseases that could not dissociate from general conditions with regards to impacts on QoL. Measurement of the impact of oral conditions on QoL is an important part of healthcare; patient-centered outcomes are likely to be more relevant to patients than traditional clinical measures of disease. Oral health-related QoL (OHQoL) considers various aspects of life including functional, psychological, social factors, and experience of pain/discomfort in relation to orofacial conditions.² Dental decay or tooth decay and periodontal disease, (diseases of gum and supporting structures of teeth) are the

most common oral diseases. As a consequence of untreated tooth decay and periodontal disease, infections, pain and tooth loss occurs. This causes impairment of function and associated impacts on the individual, which affects the person's daily living.

Chronic periodontitis is an infection caused by microorganisms on the tooth surface, which form supra- and subgingival biofilm and can lead to irreversible loss of tooth-bearing structures and eventually tooth loss.³

Periodontal disease may compromise functional aspects of the stomatognathic system, such as mastication, swallowing, and speech, smile esthetics, and consequently self-esteem. As compared with healthy individuals, those with periodontal disease have a poorer perception of their oral health and worse quality of life (QoL), which confirms previous findings that periodontal disease is not a "silent" problem in terms of QoL, as was once thought.⁴

It is essential to understand how people perceive their oral health and the importance they attach to it, as these factors underlie the desire to seek adequate treatment, which can prevent adverse effects on QoL. Periodontitis related factors such as tooth mobility and gingival recession may alter smile esthetics and thus negatively affect self-esteem and interpersonal relations, thereby lowering QoL. When self-perception develops, individuals cease to act only as patients and start diagnosing and actively maintaining their oral health.⁵ Hence the present study was conducted to assess the impact of oral health related quality of life of periodontally compromised patients.

MATERIALS AND METHODS:

This was a cross-sectional study conducted from September to October 2016. Aged 35 and above were selected from the department of Periodontics, S.B Patil Dental College. Total of 170 patients were included in the study. Informed consent was obtained from the participants. Data was collected in face-to-face interviews, held by only one previously trained and calibrated interviewer. He was collected Participants detailed information about sex, age and income. And also recorded the oral health related quality of life questionnaire. OHIP 14 measure contains seven dimensions (functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social disability and handicap). Questions about functional limitation, physical pain and psychological discomfort capture impacts that would be apparent primarily to the individual. Questions in the disability dimension refer to impacts on everyday activities, and handicap represents the extent of disadvantage caused by oral health.⁶ The participants answered on a 5-point scale, with answers ranging from "Definitely no" to "Definitely yes" for each item. Possible scores range from 14 to 70, with higher scores indicative of greater dental neglect. After recording the details through interview, the participants were examined to assess their periodontal status by using

Community Periodontal Index (CPI) and Loss of Attachment component of WHO Oral Health Survey Proforma (1997).

STATISTICAL ANALYSIS:

The collected data was classified and tabulated in Microsoft Office excel. SPSS for windows version 20.0 software was employed for statistical analysis. Chi-square test and Fisher's exact test were used to explore the association between dental variables and OHRQoL scores. The significance level was set at 5%.

RESULTS:

A total of 170 participants were recruited in this study, with a 100% response rate. Most of the participants were male (n = 134, 78.8%), and 36 (21.2%) were female[Graph 1].

The association of mean Quality Of Life with Community Periodontal Index scores is shown in table 1. Mean Quality Of Life score was highest (62.15) among those individuals who had bleeding on probing (score 1) for Community Periodontal Index and lowest among those who had pocket depth 6mm or more (score 4) for the Community Periodontal Index. The association between Quality Of Life and Community Periodontal Index was statistically significant (p=0.013).

It is evident from Table 2 that there was no association (p=0.397) between Quality of Life and Loss of attachment score. The differences in mean Quality of Life scores among groups with different loss of attachment scores were not statistically significant.

Correlation coefficients between Total Quality Of Life score and each of the independent variables examined in the study, Community Periodontal Index scores and loss of attachment scores are shown that Quality Of Life was negatively correlated with Community Periodontal Index scores (r = -0.161) and loss of attachment scores (r = -0.106). However it was not statistically significant.

Graph 1: Distribution of Genders

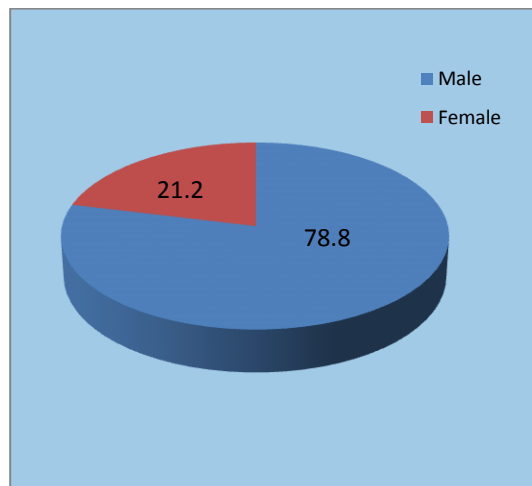


Table 1: Association of mean Quality of Life with Community Periodontal Index Scores

CPI Score	N	Mean Qol Score	X ² value	P value
0	14	57.18	3.69	0.013*
1	70	62.15		
2	50	54.35		
3	36	54.55		
4	0	0		

* Significant

Table 2: Association of mean quality of life with loss of attachment Scores

LOA Score	N	Mean Qol Score	X ² value	P value
0	112	54.11	0.83	0.397 ^{ns}
1	53	57.14		
2	5	52.85		
3	0	0		
4	0	0		

ns: not significant

DISCUSSION:

Quality of life is increasingly acknowledged as a valid, appropriate and significant indicator of service need and intervention outcomes in contemporary public health research and practice. Assessing the consequences of impaired oral health from the patient’s perspective has emerged as an important research area. This has led to an increase in the use of patient-centered oral health status measures, primarily attempting to measure the impact of oral health on QoL.

A study by Needleman et al.⁷ attempted to explore the impact of oral health on QoL in periodontal patients. However, its sample was confined to referred periodontal patients attending a private periodontal practice. Accordingly, periodontal status was found to have a significant impact on QoL. The lack of a control sample of subjects limited the extent to which these findings could be generalized to a larger population.

Altered QoL could have impact changes in oral conditions. In addition, other events, such as perception and values, which have a linear relationship with age, might also play a role in OHRQoL.

In the present study, majority of the subjects had Bleeding on probing 41.17% (CPI=1), calculus in 29.41 % (CPI =2) and pocket depth of 4-5mm in 21.17% (CPI =3). Smith AC⁸, Dilip CL⁹ studies shows the contrary result to our findings, by quite a high number of subjects had healthy periodontium. And results were similar to the study done by Dong Y-J et al¹⁰ and Holmgren CJ¹¹ found CPI score 2 was more common.

In the present study, association between quality of life was statistically significant with Community Periodontal Index. However, there was no significant association with Loss of attachment Scores.

In Durham *et al.*¹² study, patients with chronic periodontitis have significantly poorer OHQoL compared to periodontally healthy patients, specifically in functional, physical, psychological domains. In Ng and Leung¹³ and Al Habashneh *et al.*¹⁴ studies, the impact of periodontal diseases on patient QoL was moderate in physical pain and psychological disability domains.

The generic OHQoL measure is sensitive to periodontal health, both self-reported and clinically observed.¹⁵ The prevalence of impact was high when the effect of oral health on the QoL was evaluated by the OHQoL-UK measure. The instrument indicated discriminative validity in recognizing self-reported symptoms and clinical evidence of periodontitis. Thus, it would seem to be the stronger candidate for a short and easily applicable OHQoL measure for periodontitis.

The attachment loss was intended neither as an indication for treatment, nor as a direct and specific parameter in measurement of disease severity. Nevertheless, it provides a valid estimate of the historical amount of periodontal destruction in a given patient. The potential for difference in clinical attachment loss between individuals might theoretically influence the QoL of the corresponding participant to varying extents.¹⁶

CONCLUSION:

In conclusion, quality of life was inversely associated with periodontal disease. Periodontal health to be an important determinant of the well being. However, there was lack of knowledge about preventive strategies and treatment of periodontal problems. So it’s necessary to educate the people about the importance of maintaining the periodontal health to balance their quality of life.

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