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Effect of Malocclusion on Adults Undergoing Orthodontic Treatment in Rayalaseema Population

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ABSTRACT

Background: Malocclusion is often so evident that it leads to adverse social reactions and a deficient self-concept. Evidence has been produced to the effect that patients with malocclusions have a poorer quality of life in terms of oral health than do patients with balanced occlusions. Hence the present study was undertaken to study the oral health-related quality of life in adults with malocclusion.

Material and Methods: The present study was conducted among 200 adult orthodontic patients aged 18 years or above undergoing treatment for malocclusion belonging to Rayalaseema population. The oral health-related quality of life was measured using the TOQOL The TOQOL evaluated oral health-related quality of life in 5 sphere of influence that comprises role, oral health, social, emotional and physical. The impact was calculated by a scoring program. Means and sums were calculated for each sphere.

Results: The overall physical functioning domain scores were 10.53, for oral problems was 13.42, for role functioning was 2.79, for emotional functioning was 14.48 and for Social functioning was 29.72. The impact score for patients with grade 4 or 5 index of orthodontic treatment need was 16.52±4.83 and for patients with grade 2 or 3 was 12.73±3.64.

Conclusion: Malocclusion is an important factor associated with poor quality of life caused by social, oral function and emotional disability in young adults. The present study found that patients with malocclusion have negative impact on quality of life and are more affected by social factor.

Keywords: Esthetics; Malocclusion; Oral health related quality of life (OHRQoL**)**.

INTRODUCTION

Malocclusion is often so evident that it leads to adverse social reactions and a deficient self-concept.[1] There is an increasingly tendency nowadays for adult patients to seek orthodontic treatment. Esthetics are important in people's lives, and facial appearance has a profound influence on personal attractiveness and self-esteem because it affects health and reverberates in social, affective, and professional relationships.[2] Oral health affects people physically and psychologically and influences how they grow, enjoy life, look, speak, chew, taste food and socialize, as well as their feelings of social well-being.[3]In addition, because social and psychological effects are the key motives for seeking orthodontic treatment, oral health

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related quality of life (OHRQoL) can be considered a useful supplementary measurement for orthodontic treatment need and outcome. [1]

Therefore, there is a need for a more comprehensive and rigorous assessment of the impact of orthodontic treatment on quality of life, employing standardized, valid, and reliable instruments. Normative measures should be complemented by Oral Health-Related Quality of Life (OHRQoL) measures. An OHRQoL measure has the potential to provide an insight into the physical, psychological, and social consequences of untreated malocclusions, as well as the benefits and side-effects of orthodontic treatment.[4] Evidence has been produced to the effect that patients with malocclusions have a poorer quality of life in terms of oral health than do patients with balanced occlusions.The main benefits of orthodontic treatment would be related to improved aesthetics and masticatory function, which would, in turn, result in improvements in the patient's social and psychological well-being, reflected in a better "quality of life.[5] Hence the present study was undertaken to study the oral health-related quality of life in adults with malocclusion.

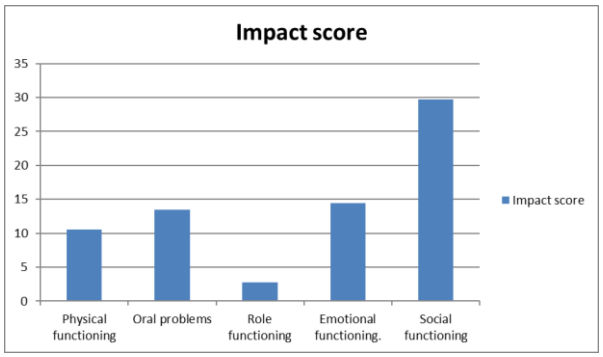
MATERIALS AND METHODS

The present study was conducted among 200 adult orthodontic patients aged 18 years or above undergoing treatment for malocclusion belonging to Rayalaseema population. The present cross sectional study evaluated patients opinion regarding effect of malocclueded teeth on their oral health-related quality of life. Patients were also inquired to rate the esthetic appearance of their teeth relative to the Aesthetic Component of the Index of Orthodontic Treatment Need (IOTN).[6] Informed written consent was obtained from the participants before initiation of the study. The oral health-related quality of life was measured using the TOQOL The TOQOL evaluated oral health-related quality of life in 5 sphere of influence that comprises role (evaluates the manner in which patients' oral condition affects their ability to pay attention to their work, missing work and any disturbance on their sleeping pattern), oral health (bleeding gums, bad breath, social (effect on social interactions, others perception in concern to their appearance and comfort with smiling), emotional (worries about oral health), and physical (oral pain and difficulty in eating). . For each item, patients were asked how often they are bothered and how severely they are bothered.[7] The impact was calculated by a scoring program. The first part of the question asked how often the patients' oral health bothered them, and the second asked how severely they were bothered. Scores were assigned as 0 if did not happen; 1, once in a while; 2, some of the time; and 3, all the time. Severity values were 0, did not happen; 1, never bothered; 2, bothered a little bit; 3, somewhat bothered; and 4, very bothered. An impact score was created by multiplying the frequency scores by the bother score; impact scores thus ranged from 0 to 12. Means and sums were calculated for each sphere. TOQOL scores for adults seeking orthodontic treatment were computed and TOQOL scores by groups were obtained using generalized linear modeling

RESULTS

Table 1: Mean scores of various study parameters.

Study variables		Mean values	
Mean age		23±3.5	
Impact scores			
Gender	Female	17.41±3.9	p value
	Male	12.18±4.51	
Teen Oral Health-Related Quality of Life Instrument (TOQOL)			
Physical functioning		10.53 ±5.25	
Oral problems		13.42±4.42	
Role functioning		2.79±1.43	
Emotional functioning.		14.48±4.63	
Social functioning		29.72±7.58	
IOTN group	Grade 2 or 3	12.73±3.64	
	Grade 4 or 5	16.52±4.83	



Graph 1: Impact score of Teen Oral Health-Related Quality of Life Instrument (TOQOL)

The mean age of patients were 23±3.5. The impact score of male was 17.41±3.9 and females was 12.18±4.51. The overall Physical functioning domain scores were 10.53, for oral problems was 13.42, for role functioning was 2.79, for emotional functioning was 14.48 and for Social functioning was 29.72 (table 1 and graph 1). The impact score for patients with grade 4 or 5 index of orthodontic treatment need was 16.52±4.83 and for patients with grade 2 or 3 was 12.73±3.64 (table 1).

DISCUSSION

The dental profession has remained narrowly clinical in its approach to oral health equating health with disease. This is the reason why dentistry has remained immune to this broadening concept of health. So now it is important to know that quality of life (QOL) measures are not a substitute of measuring outcomes associated with the disease, but are adjunct to them. Oral health related quality of life (OHRQOL) is a relatively new, but rapidly growing phenomenon, which has emerged over the past 2 decades.[8] The concept of 'OHRQoL' has been defined as either 'a standard of health of oral and related tissues which enables an individual to eat, speak and socialize without active disease, discomfort, or embarrassment' or 'the absence of negative impacts of oral conditions on social life and a positive sense of dentofacial self-confidence.[1]

The present study found that patients with malocclusion have negative impact on quality of life and are more affected by social factor. Shaw et al[9] found that children were teased more about their teeth than anything else e.g. clothes, weight, ears. A person's dental appearance can have a significant effect on how they feel about themselves. Azuma S et al[10] revealed that assessments of the HRQOL and psychological status before treatment might predict the HRQOL and psychological status after the treatment.

Neely ML et al[7] examined the Teen Oral Health-related Quality of Life (TOQOL) questionnaire for use in adults receiving orthodontic treatment and assess validity and reliability by age groupand the study revealed that adults who come for orthodontic treatment appear to be more affected by their malocclusion than are teens. The total TOQOL score and the emotional and social domains were significantly higher for adults. The total TOQOL score and the emotional and social domains were significantly higher (worse) for adults than teens and suggested that TOQOL may be a useful way to measure the impact of malocclusion on the quality of life in both adults and teens. Chen M et al[11] carried out a study to assess the association between malocclusion and oral health-related quality of life in young adults without orthodontic treatment, controlling for sociodemographic factors and common oral diseases and concluded that severe malocclusion is significantly associated with functional limitations, physical pain, and social disability in young adults.

The main benefit to the patient of orthodontic treatment may be in improved aesthetics and social-psychological well-being, and additionally the effect this may have on attitudes to dental health.[6] OHRQoL has a multitude of substantive applications for the field of dentistry, healthcare, and dental research as we move from bench to applied science and person-centered approaches to measure treatment needs and efficacy of care. Patient-oriented outcomes like OHRQoL will enhance our understanding of the relationship between oral health and general health and demonstrate to clinical researchers and practitioners that improving the quality of a patient's well-being goes beyond simply treating dental problems. [12]

CONCLUSION

Malocclusion is an important factor associated with poor quality of life caused by social, oral function and emotional disability in young adults. The present study found that patients with

malocclusion have negative impact on quality of life and are more affected by social factor.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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