

# Evaluation of quality of life and self esteem in patients with malocclusion

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## Abstract

**Objective:** the objective of the study is to develop a questionnaire to assess the psychosocial aspects which are considered important by orthodontic patients regarding their dento-facial deformity.

**Background:** Orthodontic treatment is an operation to reposition the upper, lower, or both jaws, in individuals who have a large discrepancy between the size of the jaws in relation to each other, or in whom the jaws are abnormally positioned in relation to the base of skull.

**Reason:** To evaluate the quality of life and self esteem in patients undergoing orthodontic treatment.

## Introduction

Many people have crowded or crooked teeth. Orthodontic treatment will straighten the teeth or move them into a better position. This can improve their appearance and the way the teeth bite together, while also making them easier to clean.

When the teeth don't meet correctly, this can put strain on the muscles of the jaw, causing jaw and joint problems and sometimes headaches. Orthodontic treatment can help you to bite more evenly and reduce the strain.

The clinical focus on improving quality of life (QOL) and other psychological measures in cases of dental conditions that are not life threatening, and thus the psychological aspects of malocclusion and ortho-dontic treatment have become a popular topic in modern orthodontics [1,2].

Malocclusion represents only one dimension of the complex nature of oral health. However, malocclusion can affect self-satisfaction, and as a result, impair psychological and social functioning [3].

The term self-esteem is used to describe a person's overall sense of self-worth or personal value. Self-esteem can involve a variety of beliefs about the self, such as the appraisal of one's own appearance, beliefs, emotions, and behaviours. There has been a growing acceptance of the positive relationship between improvement in aesthetics and psychological profile [4].

## Materials and methods

The first stage involved generating a list of items or questions, the content of which would reflect the impact of facial deformity on an individual's quality of life.

Evaluation of malocclusion is currently taken by 20 questions. A total of 30 patients were recruited for the study and the OQLQ was administered prior to any treatment and will also be administered

after pre-surgical orthodontic treatment and at the end of treatment (Table 1) [8].

## Socioeconomic status

A validated questionnaire in which demographic data and occupational and educational status of subjects is gathered as an indicator of socioeconomic status was used (Table 2) [5].

The Rosenberg Self-esteem scale [6] assessed the psychological influences of malocclusion and orthodontic treatment. This scale has proven reliability and validity for the general population and orthodontic patients [7]. The scale consists of 10 questions: 5 positive and 5 negative and uses a Likert scale, in which the responses for positive and negative questions are weighted differently, by a four-point scale, ranging from 'strongly agree; agree; disagree and strongly disagree'. The scale ranges from 0 to 30, with scores of 15-25 indicating a normal self-esteem and scores of less than 15 indicating a low self-esteem.

## Results

Results have been presented in the Tables 1, 2 and 3.

## Discussion

The present study sample revealed that the majority of the participants were female than male. Females were more dissatisfied with the appearance of their dentition and perceived a need for braces more often than males. The overall self-esteem appeared high among the group, and therefore its impact on malocclusion was unlikely to

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**Received:** May 02, 2015; **Accepted:** June 12, 2015; **Published:** June 15, 2015

**Table 1.** Principal component analysis and internal consistency analysis [8].

Sr. No.	Question	I-bothers a little	II-bothers a lot	Lies between this statement	Does not applicable
1	I am self-conscious about the appearance of my teeth?	10	15	3	2
2	I have problems biting?	15	9	5	1
3	I have problems chewing?	8	20	1	1
4	There are some foods I avoid eating because the way my teeth meet makes it difficult?	25	3	2	0
5	I don't like eating in public places?	11	14	3	2
6	I get pains in my face or jaw?	7	6	12	5
7	I don't like seeing aside view of my face profile?	17	3	5	5
8	I spend a lot of time studying my face in the mirror?	13	13	2	2
9	I spend a lot of time studying my teeth in the mirror?	3	17	5	5
10	I dislike having my photograph taken?	10	10	7	3
11	I often stare at other people's teeth?	7	8	10	5
12	I often stare at other people's faces?	15	10	5	0
13	I am self conscious about my facial appearance?	12	11	2	5
14	I try to cover my mouth when I meet people for the first time?	9	9	7	6
15	I worry about meeting people for the first time?	20	5	2	1
16	I worry that people will make hurtful comments about my appearance?	18	7	5	0
17	I lack confidence when I am out socially?	14	14	1	1
18	I do not like smiling when I meet people?	16	11	2	1
19	I sometimes get depressed about my appearance?	10	15	4	1
20	Comments about my appearance really upset me, even when I know people are only joking?	19	8	2	1

**Table 2.** Socio demographic characteristics of subjects.

Gender	Male	11
	Female	19
Age	Minimum	16
	Maximum	35
Education	Primary school	8
	Secondary school	13
	Under graduate	5
	Post graduate	4
Occupation	student	7
	Full time employed	8
	Part time employed	4
	Self employed	9
	Retired	2

be detected. The present finding has been supported by a number of studies confirming the presence of a dentofacial deformity and does not necessarily result in lower self-esteem [10-12].

The results from the current study found there was no statistically significant difference in self-esteem scores during orthodontic treatment. However, a significant difference was detected between the start and end of treatment. These results are in contrast to the findings from a longitudinal study on adult orthodontic patients in which orthodontic treatment was not found to affect self-esteem [13].

Self-esteem is influenced by many factors such as body image, facial image, stage of anxiety and depression, and social acceptance; therefore, the interaction with orthodontic treatment may be variable.

**Table 3.** Descriptive and comparative statistics of the overall self-esteem scores in the test group at baseline (T0), 1- (T1), 3- (T2), and 6-months (T3) and post-treatment (T4; n = 61) [9].

Variable	Median	Minimum	Maximum	P value
T0	23	8	30	-
T1	22	8	30	0.892
T2	21	8	30	0.727
T3	23	16	30	0.841
T4	26	18	30	0.002

The findings of the present study suggest that orthodontic treatment might impart psychological benefits to adult patients.

### Conclusion

Undergoing fixed orthodontic therapy appeared to have a more negative impact on the overall oral health related quality of life during the first 3 months of treatment, which then improved to pre-treatment scores. In contrast, a significant improvement was detected in self-esteem.

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