



## RESEARCH ARTICLE

### PSYCHO-SOCIAL IMPACT OF MALOCCLUSION-A QUESTIONNAIRE STUDY

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#### ABSTRACT

**Aim:** The aim of this study was to assess the psychosocial impact that malocclusion has on an individual self designed Questionnaire and co-relating the effects and malocclusion.

**Material & Methods:** A specially designed questionnaire was filled by 120 subjects seeking Orthodontic treatment, the questions aimed at finding out the effect malocclusion had on psychology of the patient and the social impact.

**Results:** The sample consisted of 120 adults with mean age of 20 years (SD±2.4), and largely female comprising 140 (88%) and males were 19 (12%). The study group consisted of patients that reported to Maharaja Ganga Singh Dental College & Research Centre, Sri Ganga Nagar, Rajasthan, India. Of the total sample, 120. 85.5 % agreed that healthy and well arranged teeth are important for appearance wherein 95% female subjects and 56.6% male subjects agreed to the same. A total of 90% subjects believed they needed orthodontic treatment and 87.5% believed that straight beautiful teeth can promote their career (91.5% female subjects and 73.3 5 male subjects), further 86.6% believed having a straight beautiful smile can promote social success.

**Conclusion:** Malocclusion has a direct co-relation with the psycho-social effect it has on an individual and psychology of an individual improves at the mere thought of initiating Orthodontic treatment.

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## INTRODUCTION

Malocclusion is the second most common dental disease in children and young adults next to dental caries. (Bali *et al.*, 2004) High prevalence of malocclusion negatively affect individual's quality of life, especially in children and adults. (Soha *et al.*, 2005) An impact of malocclusion on oral health-related quality of life of especially young adults is also reported. Furthermore, the subjects with more severe malocclusion and dentofacial deformities are more likely to report oral impacts on quality of life than those with milder malocclusion. (Birkeland *et al.*, 1997; Kerosuo *et al.*, 2004) People vary in the observation of their physical self. In finding out the possible benefits of orthodontic treatment for a person, the association between physical appearance and awareness of an aesthetic divergence is important. In young adults, even a slight deviation can be perceived important and the impact of malocclusion on a youth's quality of life might be profound. Orthodontic treatment may be additionally often influenced by demand than by need. (Bernabe *et al.*, 2006) In the past, need for orthodontic treatment was evaluated from a strictly expert

viewpoint. However, several studies have stated that self-perceived dental appearance is also important in the choice to pursue orthodontic care. (Espeland and Stenvik, 1991) The present study has the objective to determine the psychological as well as social impact of dental aesthetics using a Questionnaire and attitude to fixed orthodontic treatment and attitude to own teeth and general appearance.

## MATERIALS AND METHODS

This cross sectional study was conducted among the patients of Maharaja Ganga Singh Dental College & Research Centre, Sri Ganga Nagar, Rajasthan, India, with age ranging from 18-30 years. The reason for choosing these ages is that the respondents would be sufficiently grown-up to be able to state their own opinion. Study was approved by the ethical review committee. A questionnaire was given to 120 patients who met the inclusion criteria of being 18-30 years of age and having no previous history of orthodontic treatment. Students already undergoing orthodontic treatment and/or having craniofacial syndromes or anomalies were excluded from the study. The Questionnaire used in this study consisted of questions pool from various previous researches examining dental aesthetics and oral health-related quality of life questionnaires.

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(Grzywacz, 2003; Klages *et al.*, 2006) The questionnaire was self-administered by the patients and was translated to the local language for better understanding. No time limit was given to the patients for filling the questionnaire.

## RESULTS

The sample consisted of 120 adults with mean age of 20 years (SD±2.4), and largely female comprising 140 (88%) and males were 19 (12%). The study group consisted of patients that reported to Maharaja Ganga Singh Dental College & Research Centre, Sri Ganga Nagar, Rajasthan, India. Of the total sample, 120. 85.5 % agreed that healthy and well arranged teeth are important for appearance wherein 95% female subjects and 56.6% male subjects agreed to the same. A total of 90% subjects believed they needed orthodontic treatment and 87.5% believed that straight beautiful teeth can promote their career (91.5% female subjects and 73.3 5 male subjects), further 86.6% believed having a straight beautiful smile can promote social success.

with malocclusions might be qualified as unfavourable personality characters by others and this may bother the self-concept and self efficacy of the affected subjects. Klages *et al.* have proved a direct effect of dental aesthetics on all 'oral health-related quality of life scale values, with a greater social appearance concern in individuals with poor dental aesthetics. (Klages *et al.*, 2004) According to Onyeaso *et al.*, over 40% of respondents reported feeling less confident as a result of their malocclusions, with normal activities constrained in some of the subjects including laughing in public, meeting people and forming close relationships. (Onyeaso *et al.*, 2005) Psycho-social effects also include a collection of items dealing with a sense of inferiority and sadness when the affected subjects link themselves with persons with superior dental aesthetics. Onyeaso *et al.* have reported depression associated to altered dental aesthetics in 27% of their individuals. (Onyeaso *et al.*, 2005) The relationship of a greater self-perceived treatment need with increasing severity of malocclusion has also been shown by Mandall *et al.* who determined that children who are teased about their teeth are more likely to take orthodontic

**Table 1. Questionnaire and Results of the study**

Question		Female subjects	Male subjects	Total
Do you think healthy and well-arranged teeth are important for your appearance	Yes	86(95%)	17(56.6%)	103 (85.8%)
	No	04 (4.4%)	13 (43.3%)	17 (14.1%)
Do you think you should have orthodontic treatment (Braces)	Yes	74 (82%)	16 (53.3%)	90 (75%)
	No	16 (17.7%)	14 (46.6%)	30 (25%)
Is there anything you would like to change about your teeth	Yes	81 (90%)	21 (70%)	102 (85%)
	No	09 (10%)	09 (30%)	18 (15%)
Do you think straight and beautiful teeth can promote dental health	Yes	77 (85.5%)	25(83.3%)	102 (85%)
	No	13 (14.4%)	05 (16.6%)	18 (15%)
Do you think straight and beautiful teeth can promote your career	Yes	85 (94.4%)	20 (66.6%)	105 (87.5%)
	No	05 (5.5%)	10 (33.3%)	15(12.5%)
Do you think straight and beautiful teeth can promote social success	Yes	82 (91.1%)	22 (73.3%)	104 (86.6%)
	No	08 (8%)	08 (26.6%)	16 (13.3%)
Do you think straight and beautiful teeth have significant effect on your general appearance	Yes	84 (93.3%)	22 (73.3%)	106 (88.3%)
	No	06 (6%)	08 (26.6%)	14 (11.6%)

## DISCUSSION

Assessment of psychosocial factors of malocclusion has been considered important part of orthodontic examination in adults recently, previously only children usually were focused. Majority of the studies conducted found that female subjects outnumbered male subjects in seeking Orthodontic treatment. We found similar results in our study with 75% subjects who reported were female. Same are the results of the study by Klages *et al* which summarized that a lower grades of IOTN-AC show more well aligned set of dentition, and this may be due to more favourable oral health status, and a superior degree of contentment regarding dental attractiveness ensuing a better social concept. (Klages *et al.*, 2005) We found similar results where in 86.6% of the total subjects believed that getting straight and beautiful teeth can promote social success. There is a great Social impact of malocclusion that comprises of possible problems in social circumstances due to personal awareness of a discouraging individual dental appearance. Our finding confirms the previous interpretations that individuals

treatment. (Mandall *et al.*, 2005) Onyeaso *et al.* reported that 56.6% of their subjects reported for orthodontic treatment for aesthetic purposes. (Onyeaso *et al.*, 2005) Further confirmed by the findings of Cunningham *et al.* that social impact and aesthetic concern are different and independent psychosocial factors, (Cunningham *et al.*, 2000) and that social and psychological effects of oral health are also independent.

58% individuals judged that healthy and well-arranged teeth are important in facial appearance, Grzywacz (2003) reported that 100% of 84 children aged 12 years judged that healthy and well-arranged teeth were important in facial appearance. Vander Geld *et al* found that facial appeal was correlated with character traits & self-confidence/self-esteem and highlighted the need for further study on the aesthetic aspects of the oral region. Phillips and Beal showed that, in adolescents, the positive feelings towards the dentofacial region is more important factor in one's self-concept than the severity or perceived severity of the malocclusion or the adolescent's perception of their malocclusion. (Phillips and Beal, 2009)

## Conclusion

There was strong association between subjects perceiving the need for orthodontic treatment and their psychosocial wellbeing. It seems prudent to endorse the benefits of orthodontic treatment based on the need as assessed normatively by the orthodontist and subjectively as perceived by the patient. Although, the AC is effective in determining the detrimental effects of altered dental aesthetics, the recommendations for an index incorporating a psychometric scale for assessment of orthodontic-specific aspects of quality of life still stand strong.

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