

**How to Cite:**

Naik, M. K., Himabindua, M., Vamsi, K. J., & Reddy, B. R. M. (2022). Psycho-social impact of malocclusion in patients seeking orthodontic treatment. *International Journal of Health Sciences*, 6(S6), 7067–7071. <https://doi.org/10.53730/ijhs.v6nS6.11368>

## **Psycho-social impact of malocclusion in patients seeking orthodontic treatment**

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**Abstract**--Background: The present study was conducted for assessing Psycho-social effects of malocclusion in patients seeking orthodontic treatment. Materials & methods: 30 subjects seeking orthodontic treatment were enrolled in the present study. All the subjects were pre-informed about the study protocol. Study consisted of collection of information for psychosocial assessment using a questionnaire and clinical examination of malocclusion. Data regarding psychosocial impact of dental aesthetics was collected using a Psychosocial Impact of Dental Aesthetics Questionnaire. The responses were recorded by the examiner himself using the appropriate codes. All the oral examination procedures were carried out using sterile gloves, mouth mirror, tweezer and probe. Results: Out of the 30 children examined, there were 63.33% (19) males and 36.67% (19) females. The mean age of the subjects examined was 13.96 years. On the whole, the mean Dental self-confidence score differed significantly among both male and female children across the age groups. Overall, the mean social impact score did not differ significantly among both male and female subjects across the age

groups. Conclusion: Dental aesthetics have a significant impact on the psychosocial aspects of human life.

**Keywords**--psycho-social, malocclusion, orthodontic.

## **Introduction**

Malocclusion in itself is not a life threatening condition; however, it may unfavorably affect social interactions and psychological well-being of patients. Index of Orthodontic Treatment Need (IOTN) was proposed by Brook and Shaw in the United Kingdom as a scoring system for estimating treatment need of patients with various degrees of malocclusion. The IOTN has been used extensively in the literature to evaluate actual and perceptive orthodontic treatment needs.<sup>1- 4</sup> Various studies have also evaluated IOTN and its impact on quality of life. Quality of life (QoL) has been defined by the World Health Organization as “people’s perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns”. Additionally, oral health-related quality of life (OHRQoL) describes the impact of oral and paraoral conditions on one’s life. Recognizing the effects of orthodontic treatment on the quality of life is an important step in informing the patients of the health benefits and gains of orthodontic treatment.<sup>5- 8</sup> Hence; the present study was conducted for assessing Psycho-social effects of malocclusion in patients seeking orthodontic treatment.

## **Materials and Methods**

30 subjects seeking orthodontic treatment were enrolled in the present study. All the subjects were pre-informed about the study protocol. Study consisted of collection of information for psychosocial assessment using a questionnaire and clinical examination of malocclusion. Data regarding psychosocial impact of dental aesthetics was collected using a Psychosocial Impact of Dental Aesthetics Questionnaire. The responses were recorded by the examiner himself using the appropriate codes. All the oral examination procedures were carried out using sterile gloves, mouth mirror, tweezer and probe. All the results were recorded in Microsoft excel sheet and were analysed by SPSS software.

## **Results**

Out of the 30 children examined, there were 63.33% (19) males and 36.67% (19) females. The mean age of the subjects examined was 13.96 years. On the whole, the mean Dental self-confidence score differed significantly among both male and female children across the age groups. Overall, the mean social impact score did not differ significantly among both male and female subjects across the age groups.

Table 1  
Dental self-confidence score

Age group	Dental self confidence		p- value
	Mean	SD	
12 years	12.23	3.12	0.000 (Significant)
13 years	13.85	3.32	
14 years	14.66	4.82	
15 years	16.56	4.96	

Table 2  
Social impact mean scores

Age group	Social impact scores		p- value
	Mean	SD	
12 years	8.02	2.66	0.115
13 years	8.23	3.56	
14 years	9.12	2.99	
15 years	8.33	2.96	

## Discussion

There has been an increased concern about dental appearance during childhood and adolescence to an early adulthood. The public equates good dental appearance with success in many pursuits. In general, societal forces define the norms for acceptable, normal, and attractive physical appearance. Fundamentally, the difficulties seen are due to the fact that malocclusion is not a disease but a morphological variation which may or may not be associated with pathological conditions. Malocclusion can be defined as an occlusion in which there is a malrelationship between the arches in any of the planes or in which there are anomalies in tooth position, number, form, and developmental position of teeth beyond normal limits. Genetic, environmental, or a combination of both factors, along with various local factors such as adverse or deleterious oral habits can cause malocclusion.<sup>6-8</sup>

Individuals with malocclusion might develop a feeling of shame about their dental appearance and may feel shy in social situations or lose career opportunities. Malocclusion also has a large impact on both individuals and society in terms of discomfort, quality of life, and social and functional limitations. The prevalence of malocclusion varies from country to country and between different age and sex groups. It has been shown to affect periodontal health, increase the prevalence of dental caries, and cause temporomandibular joint problems.<sup>9-11</sup> Hence; the present study was conducted for assessing Psycho-social effects of malocclusion in patients seeking orthodontic treatment.

Out of the 30 children examined, there were 63.33% (19) males and 36.67% (13) females. The mean age of the subjects examined was 13.96 years. On the whole, the mean Dental self-confidence score differed significantly among both male and female children across the age groups. Jamilian A et al assessed whether

orthodontic treatment of adolescents with malocclusion had any association with their oral health-related quality of life (OHRQoL). The subjects for this study were recruited at a state-funded university clinic. Data were collected from 100 participants aged 17 to 21 with moderate to severe malocclusion. Experimental group comprised of 50 subjects who were in the retention phase of their orthodontic treatment and the control group comprised of 50 untreated subjects. The shortened version of the Oral Health Impacts Profile (OHIP-14) as used to assess the subjects' oral health-related impact. T-test, Kruskal-Wallis, and Mann Whitney tests were used to analyze the data and p-value was set at  $P < 0.05$ . In general, oral health-related quality of life of all subjects significantly improved after orthodontic treatment. ( $p < 0.001$ ) Subjects with moderate malocclusion showed better improvement than severe malocclusion subjects. ( $P < 0.001$ ) This study showed that oral health-related quality of life improves with the treatment of malocclusion.<sup>10</sup>

Overall, the mean social impact score did not differ significantly among both male and female subjects across the age groups. Taibah SM et al assessed relationships between self-esteem and malocclusion severity and type in adolescents using a self-esteem measurement scale and the index of treatment need (IOTN) and to investigate the influence of age, sex, and school type in these relationships. Adolescent students aged 12–19 years randomly selected from four private and two governmental schools were enrolled for this study. After completing the self-esteem questionnaire, participants were examined by researchers to evaluate malocclusion severity and type using the IOTN. The sample consisted of 886 participants: 558 females (62.9%) and 328 males (37.1%) with a mean age of 16 years. Chi-square analysis showed that 17.1% of males and 31% of females showed low levels of self-esteem, with a statistically significant difference ( $P < 0.001$ ). Cases with multiple malocclusions showed significantly lower self-esteem ( $P = 0.018$ ) compared with single-category malocclusion. Anterior teeth spacing, crowding, and overjet malocclusion showed the highest percentages of low self-esteem. The study supported that malocclusion has negative effects on self-esteem; multiple malocclusions with spacing, crowding, and overjet had the greatest effects.<sup>11</sup>

## **Conclusion**

Dental aesthetics have a significant impact on the psychosocial aspects of human life.

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