European Journal of Molecular & Clinical Medicine
ISSN 2515-8260 Volume 07, Issue 08, 2020

Psychosocial Effects Of Malocclusion

1. Dr. Prema Sivakumar*
Post-graduate
Department of Orthodontics and Dentofacial Orthopaedics
Sree Balaji Dental College and Hospitals
BIHER

2. Dr. Amudha
Lecturer
Department of Orthodontics and Dentofacial Orthopaedics
Sree Balaji Dental College and Hospitals
BIHER

3. Dr. M.S. Kannan
Head of the Department
Department of Orthodontics and Dentofacial Orthopaedics
Sree Balaji Dental College and Hospitals
BIHER

Corresponding Author:
*Dr. Prema Sivakumar
E-mail ID : sakshinyaa97@gmail.com
Phone number: +91 8939273492

ABSTRACT:
Malocclusion is extremely commonplace in the current day individual. And the need or want, to get it corrected has definitely increased over the years owing to an increase in awareness about appearance of self and the others, an increase in inter-personal interactions, far and wide, not only restricted to one's community and also the social media revolution. Malocclusion definitely leaves some sort of an impact on the psyche of the individual and the effect can range from mild reservations about teeth appearance to debilitating anxiety and self-image issues. It could lead to a deterioration of one's self esteem. There is also the added factor of considering not only the perception of the self, but also the perception of the community, friends, family and one's social circle. Orthodontic treatment is said to greatly improve one's perception of the self, and among their peers. The effects of malocclusion can be determined both quantitatively and qualitatively.
Keywords: Malocclusion, psychosocial, quantitative, qualitative, psychological

INTRODUCTION:

Malocclusion is increasingly prevalent in the current day individuals.[1] The incidence and prevalence have also seemingly increased due to evolutionary decrease in the size of jaws and absence of attritional occlusion as suggested by P.R. Begg , leading to an increase in the various forms of malocclusions including crowding, rotations, increased overjet and overbite as opposed to proximal and occlusal attrition observed in the stone-age man, due to his rough and tough diet which would ultimately result in an edge to edge occlusion, with lesser incidence of the malocclusions mentioned above.[2] It has various implications for the development of an individual ranging from difficulty in carrying out normal function, to increased propensity of trauma, especially incisal trauma in Class II division I malocclusion patients and a far-reaching effect on the psychological status of the patient. It most often adversely impacts the quality of life and self esteem of an individual, stemming from social conditioning to what is considered

normal, any deviation from which effectively compromises one's adaptive ability to their entire lives.[3] The need for receiving orthodontic treatment has increased manifold over the years due to an increased awareness from the patient's end, owing to an increased exposure to print, visual and social media, but media is a double edged sword, because despite it increasing the general awareness of the public, does far too much damage than good, to one's self esteem and is seen as the root cause of many body image issues. Straight white teeth are considered a social prerogative and lead to formation and perpetuation of class differences and an exercise of disciplinary power over the people by the society through this ideal. Concepts of self and personal identities are deeply rooted in the social structure regarding any deviation in shape and arrangement of teeth.[4] Severe malocclusion is almost always handicapping. Protruding upper incisors are likened to a dim-witted person and a prognathic lower jaw is always used in the description of a "witch". In all, well aligned teeth always carry and infer a positive status to the possessor and not so well- aligned teeth or other dentofacial deformities and malocclusions have a negative impact. [5,6] Appearance of a person, has far reaching effects from judgement by teachers at school for their capabilities, to making friends, being a part of social groups and cliques as they grow up, prospective academic opportunities, employability and the ability to find a mate. Therefore, any deviation from what is considered normal may effectively handicap a person socially, and one wouldn't be going too far, calling malocclusion a social handicap.

When it comes to the perception by others, the same malocclusion may be viewed differently by different people and the person may be judged for their appearance when they don't anticipate it and such incidents of unpredictable judgement from peers and society in general can be damaging to the individual's mental health. [7]Conspicuous malocclusions may be related to incidences of bullying.[8] Self-perception is another important facet of the psychosocial effect of malocclusion. The concept of self is affected far too often in some people and seldom in some, in relation to malocclusion. Individuals with mild malocclusion may have debilitating anxiety about their appearance whereas sometimes patients with excessive skeletal and dental problems tend to be very confident. Psychosocial problems are one of the main reasons people undertake orthodontic treatment, and they are far more than cosmetic issues because they directly impact the patient's quality of life. [9,10]

The psychosocial effects of malocclusion can be assessed quantitatively and qualitatively.

Quantitative Assessments Of Psychosocial Effects Of Malocclusion:

Quantitative assessments involve collection and analysis of numerical data to arrive at a conclusion. With respect to the psychological implications of malocclusion, questionnaire-based studies have been conducted to collect quantitative data for various analyses to establish a relationship between the two. There are a few standardized questionnaires that are available for filling by the patient, the clinician or their parents and so on. Many of them involve the filling of a self-perception questionnaire (many of which are recorded with a 5 point Likert scale)by the patient and comparison with a questionnaire with respect to certain standardized indices filled by the clinician, some of them involve random general public assessing sets of photographs and rating them or evaluating them to choose the most suitable responses. These questionnaires though standardized may be altered to fit to a particular demographic and also translated to the local language. Some of the various employed scales and questionnaires are:

1. *Visual Analog Scales:* For measuring characteristics that range across a continuum of values and can't be directly measured (example- Likert scale)

2. *DSM III*(Diagnostic and Statsitical Model of Mental Disorders) – *Adaptive functioning: DSM III*, a
classification measuring adaptive functioning, which ranges from 1 (superior) to 7 (grossly impaired) (American Psychiatric Association,1980)[11]

3. *Piers-Harris Self-Concept Scale for Children*, an 80 item yes-and-no questionnaire designed for children aged 6 to 18 years (Piers,1969)[12]

4. *Hay's Rating Scale*, which ranges from 1 (perfect feature) to 9 (marked imperfection) (Hay and Heather, 1973).[13]

5. *IOTN-AC,DHC : Index for Orthodontic Treatment Need , Aesthetic Component, Dental Health Component* (Brook and Shaw ; 1989) [14] DHC: Grades 1-5(No need for treatment-extreme need) AC: Grades 1-10(attractive-least attractive)

6. *DOTQ(Demand for Orthodontic Treatment Questionnaire):* 10 measures with sub-measures; sub-measures of particular relevance to psychosocial aspect*: Dental Self-Esteem*- 8 items with 3 reverse coded, *Global Self-Esteem*-10 items with 4 reverse coded.(Bayat 2016) [15]

7. *Global Negative Self Evatuation- derivative of the Rosenberg's Self Esteem scale:* 6 negative self-evaluations filled by the patient in Likert format (Alasker and Olewus 1986) [16]

8. *Rosenberg Self Esteem Scale:*A 10 item scale to be filled in by patient in Likert/Guttman format (Rosenberg:1965, modified 1979)[17,18]

9. *Psychosocial Impact of Dental Aesthetics Questionnaire (PIDAQ)*(Klages et al 2005) *:*Psychometric analysis of patients' Orthodontic aspects of Quality of life by filling up a questionnaire with 23 items; 4 measures in the item pool: Dental Self-Confidence, Social Impact, Psychological Impact, and Aesthetic Concern. [19]

10. *Dental Aesthetic Index* (Naham Cons-1986): Socially defines Aesthetic standards and a severity measure for physiological and functional impairment- 10 components multiplied by weights base of regression coefficients plus a constant. [20]

11. *Oral Aesthetic Subjective Impact Score* (Mandall 1999): 5 questions addressed to children to be marked on a 7-point Likert scale, scores of which combined with the child's perceives Aesthetic Component score on the IOTN-AC [21]

12. *Child Perception Questionnaire* (Jokovic 2002-long, 2006-short) *CPQ 11-14 (age group)*Long – 37 items; 4 domains oral symptoms, functional limitations, emotional well-being and social well-being, assessed for the previous 3 months evaluated over a 5-point Likert scale(scores 0-148) short- 16 items; 4 domains (scores 0-64) [22,23]

13. *Oral Health Impact Profile* (Slade and Spencer 1994): *OHIP 14:* 49 item quality of life measure, evaluating perception of oral disorders on well-being; patient self-assessment form. [24]

14. *Oral Impacts on Daily Performance* (Adulyanon 1996)*:* Measures effect of oral impacts on ability to perform daily activities. 9 items – physical, physiological and social aspects of daily activities. [25]

Qualitative Assessments Of Psychosocial Effects Of Malocclusion:

Qualitative analyses consist of analysis of non-numerical data to arrive at a conclusion. It is usually done by means of long in-depth interviews, and identification of repetitive themes. Central themes and sub themes are identified and a thematic analysis can be carried out. There are various other methods of conducting qualitative research. These are important in understanding not just the facts and the numbers but also what the real concerns of the patient/guardian are, and will help in providing more efficient and patient-oriented care. Some approaches to Qualitative Research are:

1. Grounded Theory approach
2. Ethnography
3. Action Research
4. Phenomenological research

5. Narrative Research

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