

## Psychological Impact of Malocclusion among Teenagers

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### ABSTRACT

**Objective:** The current study was aimed to assess the psychological impact in terms of self-esteem due to malocclusion among teenagers and to determine the incidence of severity of malocclusion among teenagers

**Method:** This was survey based descriptive crosssectional study conducted in the department of orthodontics in a private dental teaching hospital of Lahore. Data was collected from the patients coming to orthodontic department for treatment. Sample size was 130 patients who required orthodontic treatment between ages ranging from 13years of age to 18 years of age. Data was analyzed using SPSS version 25. Frequencies and percentages were calculated as descriptive statistic.

**Results:** Data was segregated according to the IOTN divisions according to which mild/little treatment was required for 18.46% participants, moderate treatment was required for 31.54% participants, severe treatment was required for 35.38% participants and extreme treatment was required for 14.62% participants. Majority of participants were reported low self-esteem due to the maloccluded teeth.

**Conclusion:** The occurrence and severity of dental malocclusions has an adverse psychological impact among teenagers.

**Keywords:** Dental Malocclusion, Psychological impact, Self-esteem, IOTN

### INTRODUCTION

Nowadays, the importance of enhancing dento-facial esthetics is increasing rapidly making high orthodontic treatment demand.<sup>1</sup> According to Hassebrauck, the second most significant component of face is a beautiful smile that attracts other when considering facial attraction.<sup>2</sup> During orthodontic treatment, orthodontists carefully consider all facets of malocclusion, for instance, occlusion, esthetics, speech as well as mastication, but seeking orthodontic treatment is majorly aimed to have improved facial appearance.<sup>3</sup> Literature supports that there is an impact of physical appearance on psychosocial prominence, particularly in teenagers as well as young adults.<sup>4</sup> Furthermore, teenagers face peer pressure in terms of mocking as well as bullying but they may face social isolation in severe cases.<sup>5</sup> Students' facial attractiveness may affect the perception of teachers which later on impact the expectations from children and affect their assessment.<sup>6</sup> It was reported that better positions is the again of being attractive in every stage of life.<sup>7</sup> Therefore, psychical attractiveness resulted in positive experiences in society. Even though such associations are well approved, but direct relationship of malocclusion and its psychological impact is still scarce as it varies among communities.<sup>8</sup>

The current study was aimed to assess the psychological impact in terms of self-esteem due to malocclusion among teenagers and to determine the incidence of severity of malocclusion among teenagers.

### METHODOLOGY

This was survey based descriptive crosssectional study conducted in the department of orthodontics in a private dental teaching hospital of Lahore. Data was collected from

the patients coming to orthodontic department for treatment. Sample size was 130 patients who required orthodontic treatment between ages ranging from 13years of age to 18 years of age.

After the ethical approval from the ethical committee of institution, parents of participants and participants were elaborated about the study and consent forms got signed from parents on patients' behalf. Patients were evaluated according to the index of treatment need (IOTN) and who had requirement of treatment were inducted in the study. The index of treatment need (IOTN) rank patient according to the need of treatment ranging from 1 means no treatment required, 2 Mild/little treatment required, 3 means moderate treatment required, 4 means severe treatment required and 5 means extreme treatment required. Questionnaire was given to the participants to record their responses. The questionnaire has 2 portions, one was demographic part in which gender and age was asked and other part was based on 16 questions to evaluate their perception about smile and its impact on psychological level. Questions were rated on dichotomous responses; Yes or No. Data reliability was tested using Cronbach's alpha which was .78. Data was analyzed using SPSS version 25. Frequencies and percentages were calculated as descriptive statistic.

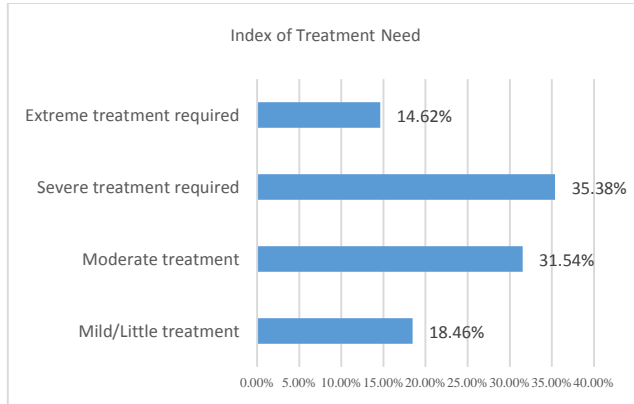
### RESULTS

Out of the entire data of 130, 46(35.38%) were males and 84(64.62%) were females. Data was segregated according to 2 age groups, 13-15 years age group included 62(47.69%) participants whereas 16-18 years age group included 68(52.31%)

Table 1: Demographic data

		Frequency	Percent
Gender	Male	46	35.38%
	Female	84	64.62%
Age	13- 15 years	62	47.69%
	16-18 years	68	52.31%

Data was segregated according to the IOTN divisions according to which mild/little treatment was required for 18.46% participants, moderate treatment was required for 31.54% participants, severe treatment was required for 35.38% participants and extreme treatment was required for 14.62% participants.



Graph 1: Data division according to Index of Treatment Need

Table 2: Self-Perception about smile and its psychological impact

Statements	Yes	No
Self-confident about smiling	30(23.1%)	100(76.9%)
Putting hand while smiling over the mouth	85(65.4%)	45(34.6%)
Photograph better from one side of the face	82(63.07%)	48(36.93%)
Someone's smile is better	91(70%)	39(30%)
Looking at magazines while wishing to have a pretty smile like models	92(70.8%)	38(29.2%)
While reading fashion magazine, getting attracted to smile of models	86(66.2%)	44(33.8%)
Pointing out defects in gums or teeth, looking in the mirror while	97(74.6%)	33(25.4%)
Whiter teeth are required	81(62.3%)	49(37.7%)
Level of satisfaction with the gums appearance	47(36.2%)	83(63.8%)
While smiling, too few or too many teeth appear	86(66.2%)	44(33.8%)
While smiling, too few or too many gums appear	89(68.5%)	41(31.5%)
Too short or too long teeth	84(64.6%)	46(35.4%)
Too narrow or wide teeth	97(74.6%)	33(25.4%)
Too round or square teeth	81(62.3%)	49(37.7%)
Shape of the teeth are satisfactory	47(36.2%)	83(63.8%)
Feeling of confidence while smiling in gathering	29(22.31%)	101(77.69%)

Majority of the participants were not confident about their smile (100(76.9%)). About 65.4% participants reported that they put hand on their face while smiling. 63.07%

participants reported that they photograph better from one side of your face. 70% participants believe that someone you believe has a better smile than theirs. 70.8% participants reported that they look at magazines and wish that they had a smile as pretty as the models. 66.2% participants reported that their eyes drawn to the model's smile while reading a fashion magazine. 74.6% participants reported that when they look at their smile in the mirror, they see defects in their teeth or gums. 62.3% participants reported that they wish to have whiter teeth. 36.2% participants reported that they are not satisfied with the way their gums look. 66.2% participants reported that they show to many or too few teeth when you smile. 68.5% participants show too much of or little gum when you smile. 64.6% participants that their teeth are too long or too short. 74.6% participants reported that their teeth are too wide or too narrow. 62.3% participants reported that their teeth are too square or too round. 63.8% participants reported that they do not like the way their teeth are shaped. 77.69% participants reported that they do not feel confident while smiling in gathering.

**DISCUSSION**

Smile perception varies from person to person and has influence of the factors associated with individual at cultural and social level such as gender, age, socioeconomic status, education level etc.<sup>9,10</sup> Hence, it is a challenge to evaluate the esthetic self-perception which is rarely present similarities. The findings of the study revealed that 77.69% of the participants reported that they are confident about their smiles whereas 92% participants of another study were confident about their smile. Better smile of others was reported by 70% participants whereas 90% was reported by Brazilian students in a study. This could be due to the impact of mass media and peer pressure.<sup>11</sup> It was found that in Brazil, the orthodontic treatment seeking is actually conceptualized as enhancement of dental as well as facial esthetics which later on improve the quality of life.<sup>12</sup> Tooth whitening demand is a cultural phenomenon that has now reached to numerous countries. The reports indicated that about 34% adult community of United States is not satisfied with their teeth colour<sup>13</sup> where as in current study, 37.7% participants are not satisfied which is a little raised. In fact, the demand of attractive smile is also the requirement of present culture along with the maintained oral health.<sup>14</sup> It was thought that tooth shape and arrangement are the required esthetic variables but researchers reported that tooth colour has prime importance as compared to other component of esthetics.<sup>15</sup> In conclusion, the occurrence and severity of dental malocclusions has an adverse psychological impact among teenagers.

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