



ASSESSMENT OF THE SELF EVALUATION OF DENTAL APPEARANCE AMONG NON-DENTAL UNDERGRADUATE STUDENTS AND THEIR ATTITUDE TOWARDS ORTHODONTIC TREATMENT- CROSS SECTIONAL STUDY

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ABSTRACT

Aims and Objectives: The aim of the study was to assess the self evaluation and satisfaction of dental appearance among undergraduate students and their attitude towards orthodontic treatment.

Material and Methods: A cross sectional descriptive survey was carried among 315 undergraduates, data collected was analysed using SPSS software. The continuous measurement results were shown using Mean ± Standard Deviation while the categorical measurement results were shown using Number (%).

Results: 81.9% individuals were aware of their dental aesthetics. 90.5% individuals understood the importance of well aligned teeth. 81.6% individuals were satisfied by their dental appearance. 26.7% individuals would readily undergo orthodontic treatment, 51.4% would undergo orthodontic treatment when advised by dentist.

Conclusion: Smile consciousness was found to be associated with dissatisfaction of dental appearance. It was also found that most individuals understood the importance of orthodontic treatment however acceptance for the same was improved when advised by a dentist.

KEYWORDS : dental appearance, orthodontic treatment, self satisfaction.

INTRODUCTION

Orthodontic treatment is often carried out to improve the patient's dental appearance. The main factors influencing the decision for treatment are aesthetic improvement and psychological aspect.^{1,2} In addition, the knowledge about the attitude of patients towards malocclusion is becoming increasingly important in orthodontics.^{3,4} Orthodontists routinely evaluate their patients and prescribe treatment plans in order to satisfy the often stated goals of good dental function, stability of teeth and jaw position and dental aesthetics.

However aesthetics has variability in individual judgments. It can differ for patients and dentist making it difficult to make generalized statements.⁵

People tend to be most concerned about their appearance in their early adulthood (age group 18 to 25 years). Therefore to know about their views on orthodontic treatment becomes very crucial.

Hence the aim of this study was to assess the self evaluation and satisfaction of dental appearance among non-dental undergraduate students and their attitude towards orthodontic treatment.

MATERIAL AND METHOD:

A cross sectional descriptive study was conducted among the undergraduate students of the Mahatma Gandhi Mission's University, Navi Mumbai belonging to the fields of medical, engineering, physiotherapy, nursing and paramedical. The nature of the study was explained to every student and an informed consent was obtained. Data was obtained from the students using a structured questionnaire. The questionnaire consisted of demographic details and questions about the awareness about teeth, level of self-satisfaction, attitude toward orthodontic treatment and the overall perception of dental appearance among

students.(Figure 1: Demographic characteristics of the study participants (N=315) based on stream)

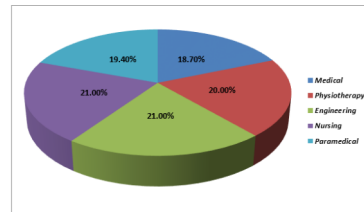


Figure 1: Demographic characteristics of the study participants (N=315) based on stream

SAMPLING METHODOLOGY:

To calculate the sample size for the present study the following formula was used.

$$\text{Sample size } n = [DEFF \times Np(1-p)] / [(d^2 / Z^2_{1-\alpha/2} \times (N-1) + p \times (1-p))]$$

Population size (for finite population correction factor or fpc) (N): 4681

Hypothesized % frequency of outcome factor in the population (p): 75%±5 s

(75% from Article by Baswaraj et al JIAPHD 2015) Confidence limits (d): 5%

Design effect (for cluster surveys-DEFF): 1

Substituting the values in the formula, a sample size of 278 was derived. However, an additional 10% were included in the study [N = 304 (rounded off to 315)] in order to compensate for potential refusals. The sample size of the present study for MGM University was thus estimated to be 315 at 95% confidence interval.

Inclusion criteria:

- Undergraduate students aged 18 to 25 years.

Exclusion criteria:

- All undergraduate students who do not wish to participate in the survey will be excluded from the survey.
- Dental undergraduate students

Information collected and methods used:

Data was collected from the study subjects by using a questionnaire. The questionnaire was executed using the face-to-face interview method to obtain information about the demographic details, awareness about teeth, level of self-satisfaction, attitude toward orthodontic treatment and the overall perception of dental appearance students.

Data Management and Statistical Analysis:

The data was collected and entered in a computer wherein it was analysed using the SPSS software. Descriptive and inferential statistical analyses were carried out. The continuous measurement results were shown using Mean Standard Deviation while the categorical measurement results were shown using Number (%). Level of significance was fixed at p=0.05 and any value less than or equal to 0.05 was considered to be statistically significant.

RESULTS:

The mean age of the study population was 18 to 25 years. The 315 undergraduate students belonging to 5 fields namely medical, physiotherapy, engineering, nursing, paramedical were selected by simple random sampling. (Table 1: Demographic details of the study sample (N=315))

Variables	Sub-groups	N	%
Gender	Male	160	50.8
	Female	155	49.2
Stream	Medical	59	18.7
	Physiotherapy	63	20.0
	Engineering	66	21.0
	Nursing	66	21.0
	Paramedical	61	19.4

Table 1: Demographic details of the study sample (N=315)

A questionnaire was used to find out about the level of self satisfaction of dental appearance and attitude of students towards orthodontic treatment.

The questionnaire consisted of 3 parts as follows

1. Awareness of dental aesthetics
2. Self satisfaction of dental aesthetics
3. Attitude towards orthodontic treatment

Awareness of dental aesthetics

This included questions regarding alignment of teeth, its effect of facial aesthetics and function and its importance from the participant's point of view. 81.9 % individuals were aware of their dental aesthetics. 90.5% individuals understood the importance of healthy and well aligned teeth. Females (93.5%) were found to understand importance of healthy and well aligned teeth as compared to males (87.5%).

Self satisfaction of dental aesthetics

This set of questions helped in evaluating the level of satisfaction of the participant by their dental appearance. 81.6% individuals were found to be satisfied by their dental appearance. Females (83.9%) were satisfied by their dental appearance as compared to males (79.4%). It was found that 15.2% individuals were conscious about the appearance of their teeth when smiling in social environment. Males (18.8%) were found to be conscious about their smile as compared to females (11.6%).

Attitude towards orthodontic treatment

This set of questions helped in evaluating the attitude of students

and their willingness towards orthodontic treatment. 26.7% individuals would readily undergo orthodontic treatment while 51.4% would undergo orthodontic treatment when advised by a parent or dentist. Males (55%) would undergo orthodontic treatment on advised by a parent or dentist as compared to females (47.7%). 65.7% individuals understood the importance of orthodontic treatment in facial aesthetics. Females (70.3%) understood the importance of orthodontic treatment as compared to males (61.3%).(Table 2: Descriptive statistics (N=315))

Awareness about dental aesthetics			
Questions	Sub-groups	N	%
Are your teeth well aligned?	No	85	27.0
	Yes	230	73.0
Do you like the way your teeth look?	No	57	18.1
	Yes	258	81.9
Do your teeth affect the way your face looks?	No	134	42.5
	Yes	181	57.5
Do you think your smile could be better if teeth were better aligned?	No	112	35.6
	Yes	203	64.4
Do you think healthy and well-arranged teeth are important for your appearance?	No	30	9.5
	Yes	285	90.5
Self-satisfaction about their dental aesthetics			
Questions	Sub-groups	N	%
Have you found that other people have commented on the appearance of your teeth?	No	194	61.6
	Yes	121	38.4
Have you found that other people have teased on the appearance of your teeth?	No	253	80.3
	Yes	62	19.7
Do you avoid smiling because of the appearance of your teeth?	No	271	86.0
	Yes	44	14.0
Do you ever cover your mouth because of the appearance of your teeth?	No	267	84.8
	Yes	48	15.2
Are you conscious about your smile while taking pictures/selfies?	No	169	53.7
	Yes	146	46.3
Attitude towards orthodontic treatment			
Questions	Sub-groups	N	%
Are you satisfied with your dental appearance?	No	58	18.4
	Yes	257	81.6
Do you have any trouble while speaking, chewing, facial muscle pains by teeth arrangement?	No	276	87.6
	Yes	39	12.4
Do you think you should have braces treatment?	No	231	73.3
	Yes	84	26.7
Would you agree readily to braces treatment if a dentist or parent suggested it?	No	153	48.6
	Yes	162	51.4
Do you think your smile could be better if teeth are better aligned?	No	108	34.3
	Yes	207	65.7

Table 2: Descriptive statistics (N=315)

DISCUSSION:

Patient's view about treatment results in orthodontics is extremely important as it is the patients who take the treatment and should be satisfied by the improved esthetics and function. Several studies have been conducted in this aspect.^{6,7,8,9}

W.C. Shaw et al conducted a study for factors influencing the desire for orthodontic treatment during routine school dental inspection among 100 boys and 100 girls. Analysis of the data indicated that dissatisfaction with dental appearance was commoner among girls

and associated with increasing age and dental attendance pattern.⁶ Similar results were obtained in our study wherein more females (93.5%) were found to understand importance of healthy and well aligned teeth as compared to males (87.5%). Also females (70.3%) better understood the importance of orthodontic treatment as compared to males (61.3%).

Another study was conducted to find out the role of clinical aspects of smile attractiveness and their influence on personality traits. The results showed that participants smiling with teeth entirely displayed and some gingival display (two to four millimeters), perceived their smile line as most esthetic.⁷ Our study compared the consciousness of the participants in social environment with their satisfaction of dental appearance. It was found that 81.6% individuals were satisfied by their dental appearance. Comparatively 15.2% individuals were conscious about the appearance of their teeth when smiling in social environment.

Kari Birkeland et al conducted a study to evaluate factors affecting the decision about orthodontic treatment. The results indicated that dentists play a key role in determining orthodontic treatment levels. High referral rates secured low risk of denying care to some patients.⁸ Our study showed that most individuals (51.4%) would undergo orthodontic treatment when advised by a dentist out of which males (55%) were more likely to undergo orthodontic treatment on advised by dentist as compared to females (47.7%).

Another study conducted to evaluate treated and untreated subjects' attitudes towards orthodontic treatment and to examine possible determinants of these attitudes. It was found that age, but not gender is a significant predictor for a subject's general attitude towards orthodontics.⁹ However our study was conducted in a definite age group and hence a gender vice distribution was observed. It was found that females (70.3%) better understood the importance of orthodontic treatment as compared to males (61.3%).

While the above studies covered upon the different aspects of views of orthodontic treatment among general population, this study was aimed to find out about the self perception of dental aesthetics and attitude towards orthodontic treatment among the young adults who are most concerned about their aesthetics and are more likely of undergoing orthodontic treatment at their own will. It was found that 81.9% individuals were aware about their dental aesthetics and 51.4% would undergo orthodontic treatment when recommended by a parent or dentist.

SUMMARY AND CONCLUSION:

A total of 315 undergraduate students belonging to the fields of medical, physiotherapy, engineering, nursing, paramedical were included in this cross sectional survey.

The significant findings of this study were as follows:

- 81.9% individuals were aware of their dental aesthetics.
- 90.5% individuals understood the importance of healthy and well aligned teeth. Females (93.5%) were found to understand importance of healthy and well aligned teeth as compared to males (87.5%).
- 81.6% individuals were found to be satisfied by their dental appearance. Females (83.9%) were satisfied by their dental appearance as compared to males (79.4%).
- It was found that 15.2% individuals were conscious about the appearance of their teeth when smiling in social environment. Males (18.8%) were found to be conscious about their smile as compared to females (11.6%).
- 26.7% individuals would readily undergo orthodontic treatment while 51.4% would undergo orthodontic treatment when advised by a parent or dentist. Males (55%) would undergo orthodontic treatment on advised by a parent or dentist as compared to females (47.7%).
- 65.7% individuals understood the importance of orthodontic treatment in facial aesthetics. Females (70.3%) understood the

importance of orthodontic treatment as compared to males (61.3%).

The study concluded that smile consciousness in a social environment was associated with dissatisfaction of dental appearance. Also it was found that most individuals understood the importance of orthodontic treatment, however the acceptance for the same was improved when advised by a dentist.

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