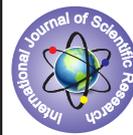


“COGNIZANCE OF DENTAL ATTRACTIVENESS AND ORTHODONTIC TREATMENT NEED AMONG DENTAL STUDENTS”



Dental Science

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ABSTRACT

The aim of the study was to investigate opinions of dental students about dental attractiveness and their perceptions of orthodontic treatment need. Random sample of 120 dental students, aged 17 to 28 years, the subjective need was assessed using prestructured questionnaire, attractiveness was scored using 10 intraoral frontal photographs and Orthodontic treatment need was measured with the IOTN. The DHC indicated that 14% of the students needed orthodontic treatment, whereas the AC indicated 1.7%. Although 30% of the students said they needed treatment, 16% and 15% were unhappy with the arrangement and the appearance of their teeth respectively. Most students (67%) recognized well-aligned teeth as very important for overall facial appearance. Students who were unhappy with their anterior teeth were more concerned for orthodontic treatment. More awareness was found in subjects of employed and educated mothers and this perception also existed when compared with the dentition of their peers.

For many centuries, facial attractiveness has always been a desirable physical characteristic in all societies¹. It has been strongly emphasized upon, especially by the modern society^{2,3}.

The cognizance of beauty may vary among individuals that may be influenced by training, cultural and ethnic factors^{4,5}. Generally, peers and parents are involved in the initiation of the individual's dissatisfaction in regarding his/her dental esthetics leading to increased orthodontic treatment need⁶.

The preference for the treatment as assessed by the orthodontist has been reported to be higher than that expressed by the patient's themselves. Thus, orthodontist plays a significant role in the patients decision for the appropriate treatment plan⁷.

The aim of this study was to investigate the opinions of dental college students about dental attractiveness and their perceptions of orthodontic treatment need.

MATERIAL & METHOD

This study was conducted in Kothiwal Dental College and Research Center, Moradabad, Uttar Pradesh, with prior approval for the study was obtained from Institutional Ethical Review Board. Study involved randomly selected 120 dental students (67boys, 53 girls), aged 17 to 28 years. Inclusion criteria for the respondents were age at the time of the study and willingness to participate.

A prestructured questionnaire⁸ was administered to the students. The questionnaire was divided into 3 sections.

The first section included questions pertaining to demographic characteristics, particularly age, sex, and parents education and employment status.

The second section dealt with awareness of the student's own occlusion, including questions on their subjective need of treatment, satisfaction with the arrangement and appearance of their teeth, and the importance of well-aligned teeth. The questions were scaled and

scored with 3 or 5 points.

The third section concerned the respondents perceptions of malocclusion and comprised questions related to 10 intraoral frontal photographs on which the respondents had to give an opinion about attractiveness. The 10 intraoral photographs represented the aesthetic component (AC) of the index of orthodontic treatment need (IOTN)⁹.

Investigator administered the questionnaire and conducted a clinical examination of the participating students using the IOTN. Data processing and analysis was carried out with the SPSS statistical package.

RESULTS

Table I demonstrates the parents education and employment status. The rate of parents with university educations was relatively high (72.5% mothers and 42.5% fathers). Over 77% of the mothers and 29% of the fathers were employed.

Table II demonstrates the clinical AC and DHC scores for the students. As indicated by the AC, around 1.7% of the students who were inspected clinically were found to need orthodontic treatment; 14.2 % of the understudies fell in the group of moderate/borderline need for orthodontic treatment. A higher extent of understudies 14.2%, needed orthodontic treatment (grades 4 and 5), as indicated by the DHC. Moderate/borderline treatment need was found in 25% of the students.

Table III shows frequencies of the questions on subjective need, satisfaction with the arrangement and the appearance of the teeth, and the importance of well-aligned teeth. Thirty one percent of the students perceived that their own teeth needed orthodontic treatment. This subjective need was correlated with the objective need as measured by AC score 8-10 and DHC score 4-5, with correlation coefficient of 0.19 ($p=0.03$) and 0.31 ($p<0.001$) respectively. The impact of DHC disappeared after correcting for AC due to high correlation coefficient between AC & DHC ($r=0.71$).

Mothers education has appeared to impact subjective treatment need ($p < 0.012$). Around one sixth of the students were unhappy with the arrangement or the appearance of their teeth (16.6% and 14.2%, individually). The satisfaction with the arrangement and appearance of teeth demonstrated a significant correlation with the AC and DHC of IOTN, extending from 0.31 to 0.38 ($p < 0.001$). Mothers employment status has likewise impacted the perception in regards to their own teeth ($p < 0.23$) and on correlation with the dentition of their peers ($p = 0.04$). The significance of well-aligned teeth was perceived by 98% of the students (68% appraised this very important).

Table IV demonstrates the mean scores for the students opinions on attractiveness of the 10 intraoral frontal photographs. By and large, the students considered severe deviations including crowding (factor 3) as unattractive. They generally liked the photographs of normal occlusions (factor 1), and the means of the opinions about spacing with overbite > 2 mm or open bite (factor 2) fell amidst the scale with a tendency toward unattractiveness.

In addition to it, students who need orthodontic treatment were more unhappy with the arrangement of their anterior teeth as well compared to their peers and they also consider well aligned teeth is important for overall facial appearance.

Table I. Characteristics of respondents' parents

Educational Status	Mothers		Fathers	
	N	%	N	%
Primary education and below	5	4.2	24	20.0
Secondary education	26	21.7	39	32.5
University education	87	72.5	51	42.5
Unknown	2	1.7	6	5.0
Employment status				
Peasant and home job	13	10.8	43	35.8
Traders / business	35	29.2	15	12.5
Employed in office	58	48.3	20	16.7
Unknown	14	11.7	42	35.0

Table II. Percentage and 95% confidence intervals of respondents' clinical grades for AC and DHC of the IOTN

	Treatment need	N	%
AC grades			
1-4	No/slight need	101	84.2
5-7	Moderate/borderline need	17	14.2
8-10	Need	2	1.7
DHC grades			
1	No need	28	23.3
2	Little need	45	37.5
3	Borderline need	30	25
4-5	Need	17	14.2

Table III. Responses to questions on subjective treatment need and perception of malocclusion

Questions	%	%	%
Do you need orthodontic treatment?	Yes 30.8	No 53.3	Donot know 15.8
Are you happy with the arrangement of your anterior teeth?	Happy 53.4	Normal 30	Unhappy 16.6
Are you happy with the appearance of your own teeth compared to the teeth of your peers?	48.3	37.5	14.2
Do you consider well aligned teeth important for overall facial appearance?	Import ant 98.3	Doesn't matter 1.7	Not important 0

Table IV. Scores for questions about respondents' opinions on 10 intraoral photographs (higher scores indicate less attractive occlusion)

PHOTO NO.	FACTOR	ATTRACTIVENES* Mean±SD	HAPPINESS* Mean±SD	Overall Mean±SD
1	NORMAL	1.56±0.75	1.71±0.86	2.25±0.85
2		2.72±0.85	3.01±1.71	
3	SPACING WITH OVERBITE> 2mm or OPEN BITE	3.15±0.84	3.62±1.03	4.29±0.45
4		3.71±0.78	4.08±0.75	
5		4.30±0.69	4.58±0.57	
6		4.53±0.59	4.67±0.48	
7		4.63±0.58	4.69±0.54	
8	SEVERE DEVIATIONS INCLUDING CROWDING	4.73±0.46	4.72±0.50	4.77±0.19
9		4.76±0.48	4.77±0.44	
10		4.87±0.34	4.79±0.42	

DISCUSSION

As per the AC of the IOTN, dental students had a comparable need of treatment like that of British and Turkish children (2% and 5%, respectively)^{10,11}. The objective need for orthodontic treatment as per the DHC in this study was 14.7% like that reported in Nigerian children¹² yet lower to that revealed for Tanzanian and British children by different scientists utilizing a similar index^{8,10-11}. Concerning the 2 segments of the IOTN, 14% of the children needed orthodontic treatment on the premise of the DHC and 1.7 % for the AC. A definite requirement for orthodontic treatment (grades 8-10 of the AC and grade 4-5 of the DHC) was found in 14% of the students; this is nearly the reported need among young adults in Finland¹². The outcomes on objective need for orthodontic treatment in this study gave pattern information to plan orthodontic administrations in Moradabad.

In this study, 31% of the students showed a subjective requirement for orthodontic treatment-like that detailed in Tanzanian children⁸. The subjective orthodontic treatment need was related to the objective treatment need (AC and DHC) however was impacted more by the AC than the DHC. On the contrary, 15% of the students did not know whether they required orthodontic treatment. This could be because of the student's absence of introduction to orthodontics and naiveté with or inaccessibility of composed orthodontic care in the nation.

Some students were unhappy with both the arrangement (17%) and the appearance (14%) of their teeth, although satisfaction was correlated with their clinical grades of the AC and the DHC. The students who were unhappy with the arrangement and appearance of their teeth had higher clinical scores of the AC. This has likewise been seen in other studies in which dissatisfaction with dental appearance was generally related to the severity of the occlusal irregularities. This finding underlines the usefulness of the AC when evaluating need for treatment.

Most students (98%) recognized the importance of well-aligned teeth for overall facial appearance. It was amazing that sex was unrelated to satisfaction with dental appearance. Prior studies have shown that girls are more specific in their self-evaluations¹⁵.

An exceptionally fascinating finding of our study was that more awareness was found in students of employed and educated mothers and this perception also existed when compared with the dentition of their peers. This could be because of more attention paid by their mothers on them.

CONCLUSIONS

- Students with a higher objective need of treatment had also a higher subjective need of treatment and were unhappy with the arrangement and appearance of their teeth.
- Most students recognized well aligned teeth is important for overall facial appearance.
- Photographs showing severe deviations including crowding

were regarded as the most unattractive dentition.

- Students who were unhappy with their anterior teeth were more concerned for orthodontic treatment.
- More awareness was found in subjects of employed and educated mothers and this perception also existed when compared with the dentition of their peers.

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