

# Perception of Smile Esthetics among Young Rajasthani Professional College Students with Irregularly Placed Teeth

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## ABSTRACT

**Introduction:** The present study is an attempt to correlate the effects of esthetics with psychology in a professional college.

**Aim:** To know the perceptions of smile esthetics and irregularly placed teeth among professional college students.

**Materials and methods:** In the cross-sectional survey, a total of 462 professional dental students were surveyed using a self-administered structured questionnaire (the age of the participants was between 18 and 25).

**Results:** A total of 462 subjects (professional dental students) participated. The mean age of subjects was between 18 and 25 years. There is a highly significant difference in the perception of the malocclusion with the mean difference of 1.445 between males and females.

**Conclusion:** Most male students recognized that well-aligned teeth are important for facial appearance compared with females. Male students perceived severe deviation as most unattractive, suggesting that orthodontic treatment awareness among professional college students needs to be enhanced, monitored, and evaluated.

**Keywords:** Dental esthetics, Malocclusion, Oral health, Orthodontic awareness, Professional college.

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## INTRODUCTION

Facial esthetics is one of the important motivational factors to seek orthodontic treatment. Personal esthetic

perceptions of the dentofacial complex and the associated psychosocial needs are relevant to the consumers of orthodontic care. Treatment is, therefore, often influenced more by demand than by need.

Carnegie wrote a book, *How to Win Friends and Influence People* in which he wrote: One of the most important ways was to smile, "...a real smile, a heartwarming smile, one that comes from the heart."

Recently, the field of orthodontics has experienced a "paradigm shift" to focus more on esthetics, with specific emphasis on the soft tissues around the mouth.<sup>1</sup> Angle, the father of modern orthodontics, believed that ideal dental and facial esthetics would naturally result from developing an ideal occlusion.<sup>2</sup> Smile perception is one of the primary goals of orthodontics in the attainment of ideal facial and dental esthetics. Today, most orthodontists understand that the attainment of optimal esthetics is not that simple, so obtaining a balance between ideal tooth position and its effect on soft tissues of the face is extremely important.<sup>3</sup>

The psychological effect of malocclusion is so severe that sometimes it becomes a social handicap. Well-aligned teeth and a pleasing smile carry positive status at all social levels, whereas irregular and protruding teeth have a negative psychological impact. The impact on the physical "self-concept" of an individual with dental malocclusion and orthodontic problems also plays a significant role.<sup>4</sup>

The effects of malocclusion differ depending on the severity of the condition. Mild problems need little treatment or cosmetic dentistry help. On the contrary, severe malocclusion requires orthodontic treatment. Some patients may suffer from difficulty in eating and speaking, while others are embarrassed due to their crooked or protruding teeth. Although a poor bite does not usually submit to the risks of tooth decay and periodontal diseases, the patient may still develop more teeth problems because it is harder to clean misaligned teeth. Orthodontic treatment for malocclusion eliminates strain on the teeth, jaws, and muscles and thus, reduces the symptoms of temporomandibular joint disorders and lessens the risk of breaking a tooth.<sup>5</sup>

The present study is an attempt to correlate the effect of esthetics with the psychology of professional college students and to know their perception of smile esthetics and irregularly placed teeth.

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**MATERIALS AND METHODS**

In a cross-sectional survey, a total of 462 professional dental students were surveyed using a self-administered, structured questionnaire. The age of the participants was between 18 and 25 years.

**RESULTS**

**Interpretation of Results**

There are highly significant differences in the perception of malocclusion with the mean difference of 1.445 between males and females.

- In Table 1, 94.1% of males show that they have crooked or irregularly placed teeth and 89.9% of female are showing the same. The p-value of 0.067 shows that difference between male and female thinking is insignificant.
- In Table 2, 79.3% of males show that they are self-conscious because of their irregularly placed teeth and 82% female are showing the same. The p-value of 0.370 shows that difference between male and female thinking is insignificant.

**Table 1:** Total number of participants

Sex	N	Std. Mean	Mean deviation	difference	df	t	p-value
Total Male	266	8.87	1.633	1.445	460	7.086	0.000
Female	196	7.42	2.729				

**Table 2:** Sex Q1

Sex	Male	Count	Q1		Total	Chi-square	p-value
			Yes	No			
			251	15	266	3.359	0.067
		% within sex	94.4	5.6	100.0		
	Female	Count	176	20	196		
		% within sex	89.8	10.2	100.0		
Total		Count	427	35	462		
		% within sex	92.4	7.6	100.0		

**Table 4:** Sex Q4

Sex	Male	Count	Q4		Total	Chi-square	p-value
			Yes	No			
			212	54	266	16.254	0.000
		% within sex	79.7	20.3	100.0		
	Female	Count	123	73	196		
		% within sex	62.8	37.2	100.0		
Total		Count	335	127	462		
		% within sex	72.5	27.5	100.0		

**Table 3:** Sex Q3

Sex	Male	Count	Q3		Total	Chi-square	p-value
			Yes	No			
			181	85	266	1.040	0.308
		% within sex	68.0	32.0	100.0		
	Female	Count	142	54	196		
		% within sex	72.4	27.6	100.0		
Total		Count	323	139	462		
		% within sex	69.9	30.1	100.0		

**Table 5:** Sex Q5

Sex	Male	Count	Q5		Total	Chi-square	p-value
			Yes	No			
			182	84	266	26.798	0.000
		% within sex	68.4	31.6	100.0		
	Female	Count	87	109	196		
		% within sex	44.4	55.6	100.0		
Total		Count	269	193	462		
		% within sex	58.2	41.8	100.0		

- In Table 3, 68.0% of males show that they find their smile is less attractive and 72.4% females are showing the same. The p-value of 0.308 shows that difference between male and female is insignificant.
- In Table 4, 79.7% of males show that they had been a bit embarrassed in social interactions because of irregularly placed teeth and 62.8% of females are showing the same. The p-value of 0.000 shows that difference between male and female thinking is very highly significant.
- In Table 5, 68.4% of males show that they had trouble pronouncing any words because of a problem with their teeth and 44.4% of female are showing the same. The p-value of 0.000 shows that difference between male and female thinking is very highly significant.
- In Table 6, 80.8% of males show that they found it uncomfortable to eat any foods because of irregular teeth and 49.9% of females are showing the same. The p-value of 0.000 shows that difference between male and female thinking is very highly significant.
- In Table 7, 62.4% of males show that they had painful aching in mouth joints (temporomandibular joint) during chewing and 48.0% of females are showing the same. The p-value of 0.002 shows that difference between male and female thinking is highly significant.
- In Table 8, 85.7% of males had been teased in their childhood because of their irregular teeth and 60.5% of females are showing the same. The p-value of 0.000

**Table 6: Sex Q6**

		Q6			Chi-square	p-value
		Yes	No	Total		
Sex	Male	Count	215	51	266	50.100 0.000
		% within sex	80.8	19.2	100.0	
	Female	Count	95	97	192	
		% within sex	49.5	50.5	100.0	
Total		Count	310	148	458	
		% within sex	67.7	32.3	100.0	

**Table 7: Sex Q7**

		Q7			Chi-square	p-value
		Yes	No	Total		
Sex	Male	Count	166	100	266	9.572 0.002
		% within sex	62.4	37.6	100.0	
	Female	Count	94	102	196	
		% within sex	48.0	52.0	100.0	
Total		Count	260	202	462	
		% within sex	56.3	43.7	100.0	

**Table 8: Sex Q8**

		Q8			Chi-square	p-value
		Yes	No	Total		
Sex	Male	Count	228	38	266	37.725 0.000
		% within sex	85.7	14.3	100.0	
	Female	Count	119	77	196	
		% within sex	60.7	39.3	100.0	
Total		Count	347	115	462	
		% within sex	75.1	24.9	100.0	

**Table 9: Sex Q9**

		Q9			Chi-square	p-value
		Yes	No	Total		
Sex	Male	Count	223	43	266	5.523 0.019
		% within sex	83.8	16.2	100.0	
	Female	Count	147	49	196	
		% within sex	75.0	25.0	100.0	
Total		Count	370	92	462	
		% within sex	80.1	19.9	100.0	

**Table 10: Sex Q10**

		Q10			Chi-square	p-value
		Yes	No	Total		
Sex	Male	Count	233	33	266	0.003 0.958
		% within sex	87.6	12.4	100.0	
	Female	Count	172	24	196	
		% within sex	87.8	12.2	100.0	
Total		Count	405	57	462	
		% within sex	87.7	12.3	100.0	

**Table 11: Sex Q11**

		Q11			Chi-square	p-value
		Yes	No	Total		
Sex	Male	Count	247	19	266	40.947 0.000
		% within sex	92.9	7.1	100.0	
	Female	Count	138	58	196	
		% within sex	70.4	29.6	100.0	
Total		Count	385	77	462	
		% within sex	83.3	16.7	100.0	

shows that difference between male and female is very highly significant.

- In Table 9, 83.8% of males find it difficult to clean their irregularly placed teeth and 75% of females are showing the same. The p-value of 0.019 shows that difference between male and female thinking is highly significant.
- In Table 10, 87.6% of males feel that properly aligned teeth and pleasant smile will improve their job prospectus and 87.8% of female are showing the same. The p-value of 0.958 shows that difference between male and female is insignificant.
- In Table 11, 92.9% of males feel that they never had considered braces for improving their smile and 70% of female are showing the same. The p-value of 0.000 shows that difference between male and female thinking is very highly significant.

## DISCUSSION

In this cross-sectional study, perceptions of smile and opinions on irregular teeth with regard to treatment needs were evaluated among professional college students in the age group of 18 to 25 years. The study was conducted in professional colleges, where the students come from wide social backgrounds. The sample does not reflect the whole Indian population in this group, but rather gives an overview of the potential Indian orthodontic service consumers in the urban area. The response rate to the questionnaire was 100%. It was found that perceived need for orthodontic treatment varies with social and cultural conditions. It has been suggested that the public assessment of dental irregularity and perception of psychological and sociological implications of malocclusion become more critical when orthodontic services are readily available. In a population whose

general perceived need and use of dental services and orthodontic treatment exposure are low, it is necessary to investigate the perceptual awareness of malocclusion before an orthodontic care system is developed.

A number of authors have suggested that teenagers possessed oral perceptual awareness and concern over appearance and facial attractiveness that seemed to have developed during adolescence.<sup>6,7</sup> The subjects in the present sample might have been well aware of their own physical appearance of which dental appearance is an essential component. It was a surprise that gender was related to the satisfaction with dental appearance. Earlier studies have shown that girls are more particular in their self-evaluation, more often dissatisfied with their dental arrangements, and that they value dental appearance highly.<sup>8-12</sup> However, our results might reflect that there are highly significant differences in the perceptions of malocclusion with the mean difference of 1.445 between males and females.

## CONCLUSION

Most males recognized that well-aligned teeth are important for facial appearance. Compared with females, males perceived severe deviations as the most unattractive, suggesting that orthodontic-treatment awareness in the professional college students needs to be increased.

Thus, going by the results of this study, a nationwide orthodontic treatment policy in society with optimal resources should be implemented.

## REFERENCES

1. Ackerman JL, Proffit WR, Sarver DM. The emerging soft tissue paradigm in orthodontic diagnosis and treatment planning. *Clin Orthod Res* 1999;2(2):49-52.
2. Angle E. Malocclusion of the teeth. 7th ed. Philadelphia (PA): SS White Dental Mfg Co; 1907.
3. Lombardi RE. The principles of visual perception and their clinical application to denture esthetics. *J Prosthet Dent* 1973 Apr;29(4):358-382.
4. Morley J, Eubank J. Macroesthetic elements of smile design. *J Am Dent Assoc* 2001 Jan;132(1):39-45.
5. Tjan AH, Miller GD, The JG. Some esthetic factors in a smile. *J Prosthet Dent* 1984 Jan;51(1):24-28.
6. Sarver DM, Ackerman JL. Orthodontics about face: the re-emergence of the esthetic paradigm. *Am J Orthod Dentofacial Orthop* 2000 May;117(5):575-576.
7. Kokich VO Jr, Kiyak HA, Shapiro PA. Comparing the perception of dentists and lay people to altered dental esthetics. *J Esthet Dent* 1999 Nov;11(6):311-324.
8. Rosenstiel SF, Rashid RG. Public preferences for anterior tooth variations: a webbased study. *J Esthet Restor Dent* 2002 Mar;14(2):97-106.
9. Rosenstiel SF, Ward DH, Rashid RG. Dentists' preferences of anterior tooth proportion—a web-based study. *J Prosthodont* 2000 Sep;9(3):123-136.
10. Carnegie D. How to win friends and influence people. New York: Simon and Schuster; 1936.
11. Shaw WC, Humphreys S. Influence of children's dentofacial appearance on teacher expectations. *Community Dent Oral Epidemiol* 1982 Dec;10(6):313-319.
12. Baldwin DC. Appearance and aesthetics in oral health. *Community Dent Oral Epidemiol* 1980 Aug;8(5):244-256.