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Awareness of Dental Appearance and Satisfaction with Their Dental Occlusion Amongst People of Different Socio-Economic Groups: A Questionnaire Study

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ABSTRACT

Aim: The aim of this study was to assess the awareness, perception and satisfaction regarding dental appearance among patients of different socio-economic groups.

Materials & Methods: This prospective study consisted of total 457 patients. In this questionnaire based study, the first part of the questionnaire referred to the person's awareness of his or her dental appearance, while the second part concerned with satisfaction with their present occlusion.

Result: Results showed more awareness about crowding in anterior dentition than spacing and increased overjet. Also, increase in satisfaction ratio for their present dental condition from Lower to Upper Socioeconomic Class i.e. 30% (Lower), 47.46% (Upper Lower), 55.67% Upper Middle and 57.14% in Upper Class.

Conclusion: This study concluded that most of sample population was aware more about crowding in their anterior dentition and level of satisfaction with their present dental condition is more in Upper Socioeconomic Class than Lower Socioeconomic Class, along with males being more satisfied than females.

Keywords: Crowding, Awareness, Orthodontic Treatment, Malocclusion.

INTRODUCTION

Facial Aesthetics is a major contributor in development of self-esteem and have a major social and psychological impact on everyone's life. Malalignment of teeth and malocclusion can lead to social and psychological dissatisfaction due to different facial appearance. Along with that it may give rise to some other problems such as difficulties in jaw movements, temporomandibular joint disorders, masticatory problems, swallowing or speech problems and greater susceptibility to trauma, periodontal disease or caries.[1] Orthodontic treatment can alter and improve a patient's facial appearance as well as psycho-social status. Orthodontic treatment can be useful in treatment and improvement of developmental, functional and oral health problems.[2,3]

The increased self-awareness in present world makes patients to be more concerned about their health and aesthetics.[4] Demand for orthodontic treatment is influenced by various factors such as malocclusion prevalence and severity, sex, socio-economic status and ethnic origin. Orthodontic treatment in adults has gained

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social and professional acceptance in recent years. Oral health knowledge and awareness about orthodontic treatment are considered to be an essential prerequisite for health-related behavior and orthodontic treatment demand. Studies have shown that there is an association between increased knowledge and better oral health. [5]Studies have also shown that different cultural and socioeconomic conditions resulted in significant differences in awareness about orthodontics and subsequent treatment demand.[6,7]

In this context, the purpose of this study was to assess the awareness of people of different socio-economic groups about their dental appearance and satisfaction with their dental occlusion.

MATERIALS AND METHODS

A Prospective Survey to assess the perception of their dental appearance and satisfaction status in different socio-economic groups was undertaken. The sample comprised of 467 patients who reported to Faculty of Dental Science, Dharmsinh Desai University, Nadiad for treatments other than orthodontic treatment. They were examined and interviewed about perception of their own dental appearance and about satisfaction with their present dental condition. All patients seeking orthodontic treatment were excluded from sample size. None of the selected patients had any type of previous orthodontic treatment.

The interviews were performed with the use of a two-part questionnaire with the same observer present to guide the respondents. The first part of the questionnaire referred to the person's awareness of his or her occlusal status and the second part referred to satisfaction with their dental appearance. The Kuppuswamy's Socio-economic Scale was used to evaluate socio-economic status of patients.

Spacing of the upper anterior segment, crowding and irregularity of the upper and lower anterior segments, and Overjet traits in the anterior region were assessed for Assessment of occlusion. Statements about the presence of the traits were presented to evaluate awareness of their own occlusion (Part I, questions 1 through 6). The subjects were asked to confirm or reject the statements. Since only two alternative answers (yes/no) were presented, agreement could be obtained as a result of the patients' responses. Satisfaction with their dental appearance was evaluated on the basis of three questions (Part II, questions 7 through 9), each with four alternative answers, ranging from a strongly positive to strongly negative response. Question 7 related specifically to dental arrangement, whereas the other two questions pertained to overall dental appearance.

A correlation matrix of the answers to each of the questions indicated that significant agreement existed between the replies. Since such features as tooth color, size, and shape may also influence the esthetic evaluation of a person's teeth, question 7 was considered to be the best assessor of self-satisfaction with occlusion. A question was included in the questionnaire also about the respondent's appraisal of the importance of well-aligned teeth for overall facial appearance (question 10).

Furthermore, patient's socio-economic status was assessed using Kuppuswamy's Socio-economic Scale. This was done to know the education, occupation and family income per month and to compare the self-perception of individual thinking about social well-being and social status & to know correlation with their awareness regarding orthodontic treatment. Kuppuswamy's Socio-economic Scale was modified by using Price Index of year 2013.[17]

Part I *(Awareness)*

1. There are gaps between the upper front teeth. Yes/No
2. The upper front teeth are crowded. Yes/No
3. The lower front teeth are crowded. Yes/No
4. The upper front teeth are irregular. Yes/No
5. The lower front teeth are irregular. Yes/No
6. The upper front teeth are positioned too far anterior to the lower front teeth (overjet is too large). Yes/No

Part II (Satisfaction and Attitudes)

7. How satisfied are you with the arrangement of your anterior teeth?

Very satisfied / satisfied / dissatisfied / very dissatisfied

8. How would you consider the appearance of your own teeth compared to the teeth of your peers?

Among the best / better than average / below average / among the poorest

9. How would you consider the appearance of your teeth compared to other features of your face?

Among the best / better than average / below average / among the poorest

10. Do you consider well-aligned teeth important for overall facial appearance?

Very important / rather important / not important / not important at all.

KUPPUSWAMY'S SOCIO-ECONOMIC SCALE

(A) EDUCATION			**SCORE**
Profession or Honors			7
Graduate or post graduate			6
Intermediate or post high school diploma			5
High school certificate			4
Middle school certificate			3
Primary school certificate			2
Illiterate			1
(B) OCCUPATION			
Profession			10
Semi-Profession			6
Clerical, Shop-owner, Farmer			5
Skilled worker			4
Semi-skilled worker			3
Unskilled worker			2
Unemployed			1
FAMILY INCOME PER MONTH (IN RS.)- ORIGINAL	**SCORE**	**MODIFIED FOR 2007**	**MODIFIED FOR 2013[17]**
=2000	12	=19575	=22575
1000-1999	10	9788-19574	9988-22574
750-999	6	7323-9787	7523-9987
500-749	4	4894-7322	4994-7522
300-499	3	2936-4893	3036-4993
101-299	2	980-2935	1016-3035
=100	1	=979	=1015

RESULTS

The Final sample size consists of 457 patients. Table I shows Distribution of awareness (Part I). It shows awareness of 28.79% (male) and 28.57% (female) for Spacing (Upper/Lower); 73.01% (male) and 70.13 % (female) for Crowding (Upper/Lower); 57.91% (male) and 51.01% (female) for Overjet. Table II shows Distribution of satisfaction and dissatisfaction with anterior dental arrangement (Part II). Out of 457 screened patients, 217 were satisfied (120 male, 53.10%; 97 female, 41.99%) and 240 (106 male, 46.90%; 134 female, 58.01%) were dissatisfied with their anterior dental arrangement.

Table III shows detailed description for satisfaction or dissatisfaction parameter of different socio-economic groups. It shows increase in satisfaction ratio from Lower to Upper

Socioeconomic Class i.e. 30.00% (Lower), 47.46% (Upper Lower), 55.67% Upper Middle and 57.14% in Upper Class.

Table 1: Distribution of reported awareness (Part I).

Traits	Sex	Awareness		Total
		Yes (%)	No (%)	
Spacing Upper / Lower	Male	65 (28.76%)	161 (71.24%)	226
	Female	66 (28.57%)	165 (71.43%)	231
Crowding Upper / Lower	Male	165 (73.01%)	61 (26.99%)	226
	Female	162 (70.13%)	69 (29.87)	231
Overjet	Male	150 (57.91%)	109 (40.08%)	259
	Female	101 (51.01%)	97 (48.99%)	198

Table 2: Distribution of reported satisfaction and dissatisfaction with anterior dental arrangement (Part II).

Sex	Satisfaction		Total
	Satisfied (%)	Dissatisfied (%)	
Male	120 (53.10%)	106 (46.90%)	226
Female	97 (41.99%)	134 (58.01%)	231
Total	217	240	457

Table 3: Socioeconomic satisfaction data.

Socioeconomic class	Sex	Total	Satisfaction			
			Satisfied	(%)	Dissatisfied	(%)
Upper (I)	Male	45	30	57.14%	15	42.86%
	Female	25	10		15	
Upper Middle (II)	Male	92	56	55.67%	36	44.33%
	Female	111	57		54	
Middle Lower middle (III)	Male	41	14	28.24%	27	71.76%
	Female	44	10		34	
Upper lower (IV)	Male	30	15	47.46%	15	52.54%
	Female	29	13		16	
Lower (V)	Male	20	4	30.00%	16	70.00%
	Female	20	8		12	
	Total	457	217		240	

DISCUSSION

Since consciousness of body image increases during childhood and adolescence, young adults are considered to be a relevant age group for the study of perception of personal dental appearance. Only anterior traits were investigated since traits visible in normal face-to-face interaction represent the esthetic aspect of the occlusion. Previous studies have shown that self-awareness and satisfaction are related mainly to visible features. The validity of the method used for assessing dental awareness is influenced by validity of the criteria and wording of the questions. Since a previous study has shown that orthodontic treatment per se does not influence occlusal self-awareness, a pooled analysis of treated and untreated subjects was considered acceptable.

Reported dissatisfaction with dental arrangement was validated by the persons' desire to have their teeth straightened. The respondents' appraisal of importance of tooth alignment might be influenced by the dental setting. However, both

experimental studies[3, 18] and classroom settings[19] have concluded that well-aligned anterior teeth are important for facial appearance. The studied population was significantly aware of their anterior traits, which is in accordance with other studies of adult Scandinavian populations.[11, 12] This may to some extent explain why the present findings diverge from results presented in 1974, in which Swedish men were found to be rather unaware of their own malocclusion.[20]

Popular interest in dental health and dental esthetics has seemingly increased over the last decades. The subjects were more aware of moderate spacing and crowding than of moderate overjet. Previously, lower awareness of maxillary spacing has been reported. Differences in study design and methods, however, make comparisons between the various' studies difficult. The observation that persons with well-aligned teeth were satisfied with their dental arrangement supports the high level of perceptual accuracy.

Previous investigations have reported that a relatively large number of persons were not content, even though they exhibited a good occlusion.[9, 10, 11] In these studies the respondents have been asked to assess satisfaction with overall dental appearance. Other dental characteristics, such as discoloration, restorations, and crown defects, might also influence level of satisfaction, especially in adults. Furthermore, the criteria used for assessing malocclusion differ in the various studies. The close relationship that emerged in the present study between well-aligned teeth and satisfaction may be due to the use of restrictive criteria for near-ideal occlusion compared with previous studies.

This satisfaction and awareness has to be correlated with socio economic groups to know the relevant data how much awareness is there in which type of socio economic group. For that, Kuppuswamy's Socio-economic scale was used to assess the societal status of the samples. It was modified by using Price Index of 2013 year.[17]

CONCLUSION

From the present study following conclusions can be drawn

1. Majority of sample population was aware more about crowding in their anterior dentition than spacing.

2. Level of satisfaction with their present dental condition showed increase in satisfaction ratio from Lower to Upper Socioeconomic Class, along with males being more satisfied than females.

Although these results confirmed that occlusal characteristics in the anterior portion of the mouth play a role in dental esthetics, other factors, not considered in the present model (i.e., extra oral characteristics), could account for the rest of the variability.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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