

Dental Esthetics and Its Impact on Psycho-Social Well-Being and Dental Self Confidence: A Campus Based Survey of North Indian University Students

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Abstract To evaluate the subjects perceived satisfaction of their dental appearance and to compare it with a various attitudes and practices which may affect social and psychological behavior and dental self confidence. This was a questionnaire based cross-sectional study done in the campus of Aligarh Muslim University, Aligarh (India). 426 students participated in the study. Questions were pooled in from various components of psychosocial impact of dental esthetics questionnaire (PIDAQ) for various attitudes and practices. Quantitative analysis was done using descriptive analysis and Chi square test using SPSS software. Majority of subjects (57.7 %) was highly satisfied with their smile, more than one-third (37.3 %) were satisfied and there were only 4.9 % subjects who were not satisfied with their smile. Tooth color was the most common (27.9 %) smile component causing dissatisfaction amongst the subjects. More than two-fifth (42.5 %) liked to show their teeth, one-half (49.5 %) liked to see their teeth in mirror, photographs and videos, almost one quarter (23.9 %) subjects used to hide their teeth while smiling. As compared to females, significantly higher proportion of males was conscious of opposite sex while smiling. The proportion of subjects which was highly satisfied with their smile was significantly higher for the item 'like to show their teeth and who liked to see their teeth in mirror, photographs and video' whereas for all the other items the proportion of respondents which was not satisfied with their smile was significantly higher. Self perceived satisfaction of

dental esthetics has positive impact on person's social and psychological behavior and dental self confidence.

Keywords Dental esthetics · Dental self confidence · Psychological well-being · Social impact · Tooth color

Introduction

A good face is a letter of recommendation. From years it has been conceptualized that the first impact a person makes is because of his appearance which lasts for long time. Media projected perfect appearance has a strong impact on the behavior and thinking of our beauty conscious society. And it has led to an increased demand for esthetic treatment from public [1]. The dental appearance is an integral component of facial beauty. The judgments, an individual makes concerning the personal characteristics of others, can be affected by dental appearance [2]. Good dental appearances are thought to be a requirement of prestigious occupations among some professional groups [3]. Established norms for dental and facial appearance do not vary widely among industrialized nations, and extreme deviations are viewed as unacceptable [4].

Placement of a restoration, which improves dental appearance, results in a positive effect on a patient's self esteem and quality of life [5]. Oral health is not only the absence of oral disease and dysfunction but it include its influence on the subject's social life and dento-facial self confidence. This is in accordance with the WHO's definition of quality of life [6].

Subjects and Methods

This was a cross-sectional study done in the campus of Aligarh Muslim University where the subjects were the

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young adults pursuing various courses in different educational streams except for the students from dental streams. 426 students participated in the study.

Various components of psychosocial impact of dental esthetics questionnaire (PIDAQ) were analyzed and questionnaire was designed to pool the questions from four measures namely dental self confidence, social impact, psychological impact and esthetic concern (Table 1) [7].

Firstly the subject's self satisfaction of smile was evaluated by the questionnaire, where subjects were asked to rate their own smile satisfaction and to mention that component of smile which was causing dissatisfaction and then the subject's satisfaction was related to the various attitudes and practices which have bearing on social and psychological behavior and confidence level. Quantitative analysis was done using descriptive analysis and Chi square test using SPSS software.

Results

Mean age of the participants was 22.09 ± 3.59 years. A total of 201 females (47.2 %) and 225 males (52.8 %) were included in the study. Majority of subjects (57.7 %) were highly satisfied by their smile, more than one-third (37.3 %) were satisfied and 4.9 % subjects were not satisfied with their smile.

Table 1 Questionnaire to evaluate dental esthetics and its impact on psycho-social well-being and dental self confidence (tick against the appropriate option)

1	How much are you satisfied with your smile?	a. Highly satisfied b. Satisfied c. Not satisfied
2	What according to you is not satisfactory about your smile (more than one can be chosen)	a. Lip shape b. Tooth colour c. Tooth shape d. Tooth size e. Tooth position or arrangement f. Gingival color and position
3	Have you noticed that you hide your teeth when u smile	Yes/No
4	Are you comfortable with showing your teeth while smiling	Yes/No
5	Do you like your teeth display in mirror, photographs and videos	Yes/No
6	Have you perceived notion about other people's views of your smile	Yes/No
7	Does your smile makes you conscious in presence of opposite sex	Yes/No
8	Do you wish that your teeth looked better	Yes/No
9	Is your teeth the reason of your dissatisfaction with your looks	Yes/No

Gender wise more number of females was highly satisfied (60.70 %) with their smile than males (55.11 %). The proportion of females who were not satisfied with their smile was also higher (5.97 %) as compared to males (4 %). However the gender wise distribution was not statistically significant ($p = 0.219$) (Table 2).

Tooth color was the most common (27.9 %) smile component causing dissatisfaction amongst the subjects followed by tooth size (19.2 %), tooth position (16.2 %), tooth shape (15.0 %) and lip shape (11.2 %). Gingival color and position was the least common component causing dissatisfaction amongst the subjects (9.6 %). No significant gender wise difference was observed for any of the smile components except for gingival color and position which was observed to be significantly higher amongst the males than the females ($p = 0.016$) (Table 3).

When the subjects were evaluated on the basis of various components of PIDAQ more than two-fifth (42.5 %) liked to show their teeth, one-half (49.5 %) liked to see their teeth in mirror, photographs and videos, almost one quarter (23.9 %) subjects used to hide their teeth while smiling. More than one quarter (28.6 %) used to worry about what others may think of their teeth. Almost one-third (32.9 %) were conscious of opposite sex while smiling. A great majority (81 %) subjects wished to have better teeth, while 26.3 % were dissatisfied with their looks owing to appearance of teeth (Fig. 1).

As compared to females, significantly higher proportions of males were conscious of opposite sex while smiling (Table 4). For none of the other attitude and practice related items a significant difference between two genders was observed. For the items 'wish to have better teeth' and 'unhappy with looks owing to teeth' the proportion of males was higher as compared to females whereas for the items 'hiding teeth while smiling, like to show teeth, like to see one's teeth in mirror and perceived notion about other people's views' the proportion of females was higher as compared to males (Fig. 2).

The proportion of subjects who were highly satisfied with their smile was significantly higher for the item like to show their teeth and who liked to see their teeth in mirror, photographs and video whereas for all the other items the proportion of respondents who were not satisfied with their smile was significantly higher than the other two groups (Table 5). For all the items, statistically significant differences among persons with different perceptions regarding their smile was observed ($p < 0.05$).

Discussion

Aim of the study was to evaluate the subjects perceived satisfaction of their dental appearance and to compare it

Table 2 Association of gender with self satisfaction of dental esthetics

SN	Gender	Highly satisfied (n = 246)		Satisfied (n = 159)		Not satisfied (n = 21)	
		No.	%	No.	%	No.	%
1.	Female	122	60.70	67.00	33.33	12.00	5.97
2.	Male	124	55.11	92.00	40.89	9.00	4.00

Table 3 Association of gender with smile component of concern

SN	Smile component	Females (n = 201)		Males (n = 225)		Significance of difference	
		No.	%	No.	%	χ^2	p
1.	Lip shape	26	12.9	24	10.7	0.527	0.468
2.	Tooth colour	56	27.9	63	28.0	0.001	0.974
3.	Tooth shape	31	15.4	33	14.7	0.048	0.827
4.	Tooth size	37	18.4	45	20.0	0.173	0.677
5.	Tooth position	32	15.9	39	17.3	0.153	0.696
6.	Gingival colour and position	12	6.0	29	12.9	5.842	0.016

with various attitudes and practices which may have social and psychological impact, may affect individual’s confidence and his/her desire to have good appearance, and to further evaluate the component of dental esthetics which is causing most dissatisfaction among subjects. The subjects who were selected were young university students who were pursuing higher education. Dental students were excluded because the literature shows difference in perception of esthetics among dentists, dental students and laypeople [8, 9]. So the study population was a group

which is more concerned with their looks, as majority of them is in a stage of seeking job opportunities, looking for suitable partners and are more stable in their thoughts and desires.

Majority subjects were highly satisfied with their smile and the tooth color was the major reason of their dissatisfaction. Gingival color was the least common cause of concern for the subjects. This is in accordance with some studies where patient’s opinion of their smile was significantly higher than the clinician’s assessments and the patients were most dissatisfied with their tooth color and least concern with gingival color [10, 11].

There is a positive effect of the individual’s self satisfaction and his attitudes and practices as suggested by the findings. Significantly higher percentage of the subjects who were highly satisfied with their smile liked to show their teeth while smiling and liked to see their teeth in the mirror, videos and photographs. This is pertinent to the fact that high self esteem is related to practices which reflect self confidence. One study revealed strongest effect of dental esthetics on dental self confidence scale, which comprised positively phrased formulations closely related to dental appearance and indicating a sense of well-being and self-assertion with regards to one’s own dental appearance. When an individual sees his/her image in the mirror or is being photographed, a feeling of being observed or evaluated might arise, and the individual becomes self-aware [12].

Self satisfaction, social behavior and psychological well-being are inter-related. This fact is reflected by the findings that significant number of subjects who are not satisfied with their dental appearance have answered positively for the queries hold myself back when smile so that teeth donot show so much and sometimes worry about

Fig. 1 Attitude and practices related with smile posture

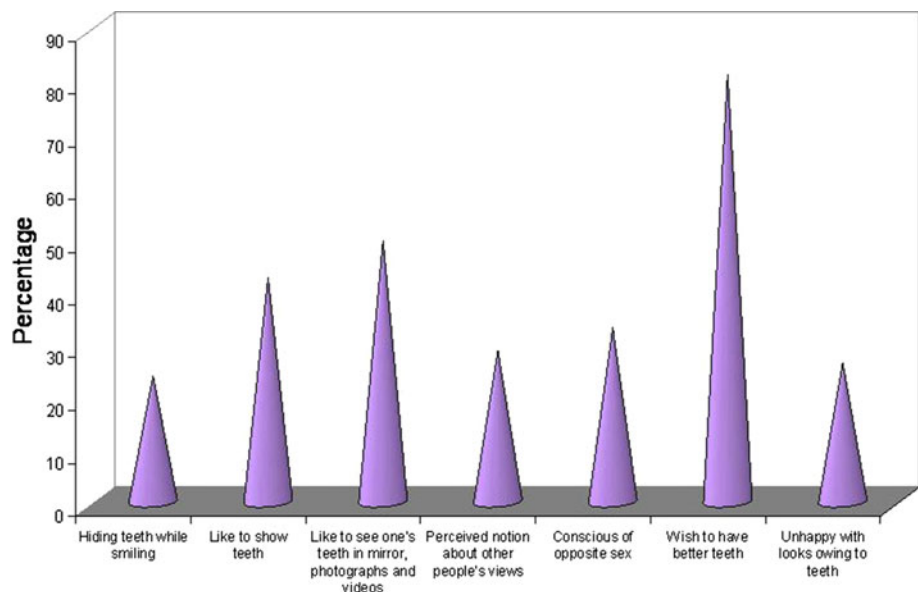


Table 4 Association of attitude and practices with gender

SN	Attitude and practices	Females (n = 201)		Males (n = 225)		Significance of difference	
		No.	%	No.	%	χ^2	p
1.	Hiding teeth while smiling	52	25.9	50	22.2	0.766	0.378
2.	Like to show teeth	87	43.3	94	41.8	0.099	0.754
3.	Like to see one's teeth in mirror, photographs and videos	101	50.2	110	48.9	0.689	0.406
4.	Perceived notion about other people's views	62	30.8	60	26.7	0.907	0.341
5.	Conscious of opposite sex	57	28.4	102	45.3	13.077	<0.001
6.	Wish to have better teeth	155	77.1	190	84.4	3.704	0.054
7.	Dissatisfaction with looks owing to teeth	50	24.9	62	27.6	0.393	0.530

what members of opposite sex think of their teeth and concerned about other people's views and remarks about my teeth. Hiding teeth while smiling is a reflection of dissatisfaction, further the major goal of dental treatment should be to restore esthetics as well as enable patients to feel confident about smiling instead of hiding their teeth [10]. Comparison with others may lead to dissatisfaction which may have negative effect on the psychological well-being. Significant numbers of subjects who are not satisfied with their smile also wish to have their teeth better and

responded positively for the query 'sometimes I am somewhat unhappy about the appearance of my teeth'.

In one study participants associated the presence of decayed and discolored teeth with lower levels of social and psychological adjustment. They suggested that individuals, for whom oral health has some importance, are more likely to use dental appearance as a basis for making judgment of psychological adjustment and intellectual competence [2]. Self perceived minor irregularities in dental esthetics might have a considerable impact on OHRQoL [12]. It has been observed that self assessments of dental appearance appeared to be more negative for participants with a depressive state compared with the other groups, depressive illness is associated with low self evaluation, low self confidence and low self esteem [13–15].

A very interesting finding is that significantly higher number of male subject is found conscious of opposite sex while smiling. This may be a reflection of changing society where previously beauty was the domain of females, now males are not second to females. This is also reflected in the marketing, where more number of male beauty commodities are being introduced.

Previous studies [2, 5, 13–15] have suggested that dental esthetics can have remarkable impact on subject's social and psychological well-being which is reflected in their behavior and can affect their self confidence. Our study has shown similar results. But there are certain limitations in the form that firstly the subjects were young adults so the relevance of our findings cannot be applied on elderly people which has more stable job situations and relationship status and may not have a strong desire for perfect appearance. The needs and desires may change at various

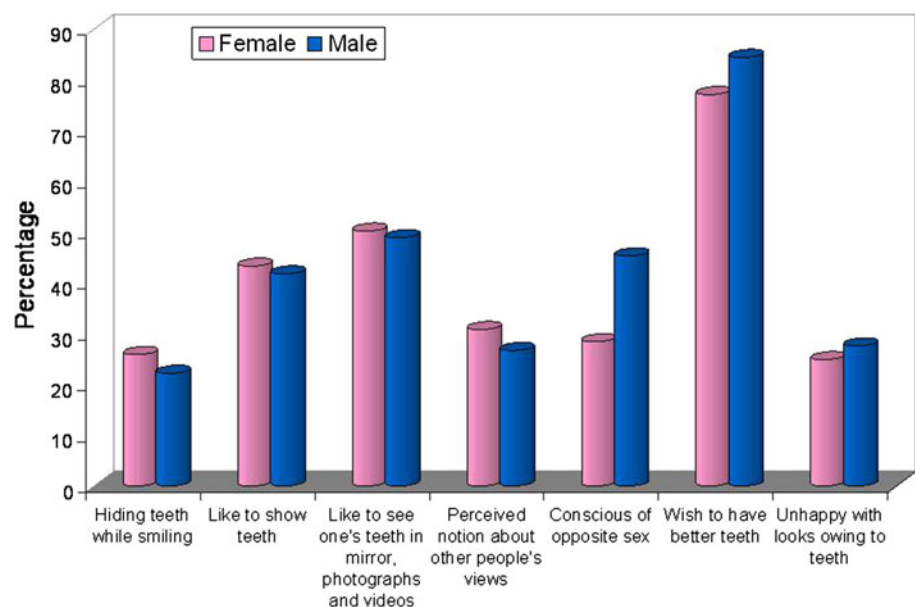
Fig. 2 Associations of attitude and practices with gender

Table 5 Self perception of smile and attitude and practices related with smile posture

SN	Attitude and practices	Highly satisfied (n = 246)		Satisfied (n = 159)		Not satisfied (n = 21)		Significance of difference	
		No.	%	No.	%	No.	%	χ^2	p
1.	Hiding teeth while smiling	40	16.3	47	29.6	15	71.4	36.73	<0.001
2.	Like to show teeth	135	54.9	40	25.2	6	28.6	34.77	<0.001
3.	Like to see one's teeth in mirror, photographs and videos	158	64.2	49	30.8	4	19.0	51.34	<0.001
4.	Perceived notion about other people's views	42	17.1	65	40.9	15	71.4	46.58	<0.001
5.	Conscious of opposite sex	82	33.3	63	39.6	14	66.7	9.753	0.008
6.	Wish to have better teeth	189	76.8	136	85.5	20	95.2	7.667	0.022
7.	Dissatisfaction with looks owing to teeth	43	17.5	52	32.7	17	81.0	45.61	<0.001

stages of life and with various conditions also. Secondly all the subjects were pursuing higher education so they are not representative of general population comprising of less educated subjects also. Age, sex and level of education may influence a person's satisfaction with his or her appearance [16, 17]. It is shown that patients self perceived needs and expressed desires are essential parts of an evidence-based model of prosthodontic treatment planning [18]. Esthetics and discomfort are mentioned as major benefit and risk related to prosthodontics [19].

One of the classic study which was done on the finalists of a beauty pageant for a period of 2 years revealed that 80 % subjects felt the need for improvement in their mouth appearance and 28 % felt that their teeth detracted from their smile [20]. Long term longitudinal studies are required to conclude to what extent the age, level of education and different conditions (physical and psychological) may influence the effect of esthetics on social and psychological well-being as well as self confidence.

Conclusion

On the basis of the findings of the current study it can be concluded that self perceived image of dental esthetics can remarkably affect an individual's social and psychological well-being which is reflected in their behavior and can affect their self confidence. However there are certain limitations of the present study. This study was conducted on young cohort of subjects so the possibility of few subjects, having received some dental treatment for esthetic correction in the past, exists. This could have resulted in the discrepancy in the final results of overall satisfaction with dental appearance and the satisfaction with the various components of smile. Further study can be designed where the subjects receiving some kind of esthetic correction of their smile can form a separate cohort and their satisfaction can be compared to those who have never received any esthetic correction of smile.

References

- Morley J, Eubank J (2001) Macroesthetic elements of smile design. *J Am Dent Assoc* 132(1):39–45
- Newton TN, Prabhu N, Robinson PG (2003) The impact of dental appearance on the appraisal of personal characteristics. *Int J Prosthodont* 16(4):429–434
- Jenny J, Proshok J (1986) Visibility and prestige of occupations and the importance of dental appearance. *J Can Dent Assoc* 52(12):987–989
- Cons NC, Jenny J, Kohout FJ (1983) Perceptions of occlusal conditions in Australia, the German Democratic Republic and United States of America. *Int Dent J* 33(2):200–206
- Davis LG, Ashworth PD, Sprigs LS (1998) Psychological effects of aesthetic dental treatment. *J Dent* 26(7):547–554
- WHOQOL-group (1995) The world health organization quality of life assessment (WHOQOL): position paper from the world health organization. *Soc Sci Med* 41(10):1403–1409
- Klages U, Claus N, Wehrbein H, Zentner A (2006) Development of a questionnaire for assessment of the psychosocial impact of dental esthetics in young adults. *Eur J Orthod* 28(2):103–111
- Kokich VO, Kiyak HA, Shapiro PA (1999) Comparing the perception of dentists and lay people to altered dental esthetics. *J Esthet Dent* 11(6):311–324
- Shulman JD, Maupome G, Clark DC, Levy SM (2004) Perceptions of desirable tooth color among parents, dentists and children. *J Am Dent Assoc* 135(5):595–604
- Samorodnitsky-Naveh GR, Geiger SB, Levin L (2007) Patient's satisfaction with dental esthetics. *J Am Dent Assoc* 138(6): 805–808
- Jornung J, Fardal O (2007) Perceptions of patients' smiles: a comparison of patient's and dentists' opinions. *J Am Dent Assoc* 138(12):1544–1553
- Klages U, Bruckner A, Zentner A (2004) Dental esthetics, self awareness and oral health-related quality of life in young adults. *Eur J Orthod* 26(5):507–514
- Wolfart S, Quaas AC, Freitag S, Kropp P, Gerber WD, Kern M (2006) General well-being as an important co-factor of self assessment of dental appearance. *Int J Prosthodont* 19(5): 449–454
- Ingham JG, Kreitman NB, Miller PM, Sashidharan SP, Surtees PG (1987) Self appraisal, anxiety and depression in women: a prospective enquiry. *Br J Psychiatry* 151:643–651
- Zlot SI, Herrman M, Hofer-Mayer T, Adler M, Adler RH (2001) A comparison of self-concept and personality disorders in women with pain accounted for by psychological factors, women with major depression and healthy controls. *Int J Psychiatry Med* 31(1):61–71

16. Neumann LM, Christensen C, Cavanaugh C (1989) Dental esthetics satisfaction in adults. *J Am Dent Assoc* 118(5):565–570
17. Vallittu P, Vallittu A, Lassila V (1996) Dental esthetics: a survey of attitudes in different groups of patients. *J Dent* 24(5):335–338
18. Rich B, Goldstein G (2002) New paradigms in prosthodontic treatment planning: a literature review. *J Prosthet Dent* 88(2):208–214
19. Tavares L, Rodrigues C (2007) Patient's self perceived impacts and prosthodontic needs at the time and after tooth loss. *Braz Dent J* 18(2):91–96
20. Goldstein RE (1969) Study of need for esthetics in dentistry. *J Prosthet Dent* 21(6):589–598