



Dental Esthetics: Perception from Future Dental Professionals

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Abstract

Dental esthetics is one of the essential components in terms of Beauty concepts. Esthetics itself is a component of Beauty. The study aimed to understand the esthetic perception among dental students of different years of the course. A Goldstein questionnaire for evaluating Dental esthetic satisfaction and perception was used in this study. Descriptive statistics, Student t-test, MANOVA (Multivariate Analyses Of Variance) were applied to the data. The data have been stored and analysed in R Version x64 3.4.1. Results showed that there is no significant difference in dental esthetic self-perception between men and women. A positive esthetic self-perception was observed in dental students when it comes to their smile. There is no gender difference between males and females on mean dental esthetic perception score. The perception score gradually increasing from initial years to senior years of the course of the study.

Keywords: Dental Esthetics; Dental Students; Esthetic Perception; MANOVA

Introduction

Dental esthetics is one of the essential components in terms of Beauty concepts. Esthetics is itself a component of Beauty. People are more adhering towards dental beauty as it is the important part in the face. Esthetics has become very important for dental patients when compared to dental function and much more preferred one in dentistry nowadays [1]. Esthetics is an important dimension in dental practice and is related to individuals' preferences, culture, sociodemographic factors and perceived dental treatments [2]. Dental esthetics always aiming to make patient satisfied in terms of high self-esteem through the creation of beauty and attraction [3,4].

Many of the people go to the dental clinic for a better smile, that directly relates to their productivity and success [5,6]. The factors such as the color, the shape of the teeth and the shape of the dental arch are main contributors of dental esthetics [7].

Beauty is a subjective term; likewise, dental esthetics has also got diverse opinion among different kinds of people. A study revealed that there exists different opinion for the different group of peoples regarding their dental esthetics perception [8].

Dental Professionals are the first person who comes to patient's mind in case of Facial beauty and esthetics. Dental students who are future Dental professionals would eventually have the higher perception of their own dental esthetics perception. The study aimed to understand the dental esthetic perception among dental students of different years of the course.

Materials and Methods

The study was designed as a cross-sectional descriptive analytical study. The research subjects were selected by randomly in the different years of the dental course (First, Second, Third, Fourth and

Fifth) at the randomly selected Dental institution from Kancheepuram district, Tamilnadu. The participants were being told about the aims of the study and each participant signed an informed consent form. A dental esthetics self-perception questionnaire, originally designed by Goldstein, was given to the respondents. The questionnaire contained 15 YES or NO questions that inquired about: confidence when smiling, whether the subject put the hand over the mouth when he/she smiles, whether he/she believes someone else has a better smile, whether the subject looks at magazines and wishes he/she had a smile as pretty as the models, whether he/she notices any defects in his/her gums or teeth, whether he/she wishes his/her teeth were whiter, whether he/she is satisfied with the size and shape of his/her teeth and gums. A score was set based on the 15 questions. Questions 1, 9 and 15 were considered negative Questions and scored when the answer was NO. The remaining questions were scored when the answer was YES. The score varied from 0 to 15, being 0 a totally positive and 15 a totally negative esthetic self-perception. The data have been stored and analysed in R Version x64 3.4.1. Descriptive statistics, Student t-test, MANOVA (Multivariate Analyses of Variance) were applied to the data ($\alpha = 0.05$).

Results

The participant mean age was of 20 years, ranging from 18 years to 26 years. Table 1 shows the answer frequency for each question. 69% of the subjects feel confident when smiling in front of other people. 73% of the participants believed someone else had a better smile, 41% have already hidden the smile with the hands, 55% of the students wish to have a smile as beautiful as the models in magazines, 47% of the students notice defects in gums and teeth, 60% of the students wish their teeth were whiter and 61% of the students dislike the shape of their teeth. The mean satisfaction index was 6.88 with Standard Deviation (S.D) of 2.50.

Question	Yes (0)	%	No (1)	%
1) Are you self-confident about smiling?	206	69	93	31
2) Do you ever put your hand over your mouth when you smile?	124	41	175	59
3) Do you photograph better from one side of your face?	181	61	118	39
4) Is there someone you believe has a better smile than you?	218	73	81	27
5) Do you look at magazines and wish you had a smile as pretty as the models?	164	55	135	45
6) When you read a fashion magazine, are your eyes drawn to the model's smile?	180	60	119	40
7) When you look at your smile in the mirror, do you see any defects in your teeth and gums?	140	47	159	53
8) Do you wish your teeth were whiter?	163	60	119	40
9) Are you satisfied with the way your gums look?	140	47	159	53
10) Do you show too many or too few teeth when you smile?	180	60	119	40
11) Do you show too much of too little gum when you smile?	146	49	153	51
12) Are your teeth too long or too short?	99	33	200	67
13) Are your teeth too wide or too narrow?	113	38	186	62
14) Are your teeth too square or too round?	118	39	181	61
15) Do you like the way your teeth are shaped?	183	61	116	39
n = 299				

Table 1

To explore the effects of Esthetic perception and age among dental students on the Year of study, History of Orthodontic treatment and Gender, Multiple analyses of variance (MANOVAs) were carried out. The variables year of study (Wilks lambda = 0.714, p-value < 0.001) and Interaction model of year of study and history of orthodontic treatment found to have statistically significant multivariate effect on the Esthetic perception score and gender (Wilks lambda = 0.919, F (8, 554) = 12.685, p-value<0.05). Student t-Test shows there is no significant difference in mean score of Esthetic perception score among males and females (p-value > 0.05) (Table 2).

Variable	Mean	SD	p-value
Dental esthetic Perception score			
Male	6.51	2.54	0.351
Female	6.96	2.49	0.322

Table 2

Perception of Dental esthetics and age among the dental students were measured in the different years of study. MANOVA analyses confirmed that there was a significant multivariate effect (Wilks lambda = 0.714, p-value < 0.001). Univariate independent one-way ANOVA showed significant main effects for year of study of Esthetic perception score (F = 4.886, p-value < 0.001) and interaction effects for year of study and history of orthodontic treatment (Wilks lambda = 0.919, F(8, 554) = 12.685, p-value < 0.05). There

was a minor violation in homogeneity of between-group variance for esthetic perception scores, but Brown-Forsythe F and Welch's F adjustments showed that this had no impact on the observed outcome. Tukey post hoc tests showed that fifth-year students showed higher esthetic perception scores than second-year students (p-value < 0.001) and first-year students (p-value = 0.03) (Table 3).

Year of the Study	N	Dental esthetic perception	
		Mean	SD
First Year	39	5.9459	2.68885
Second Year	52	6.9718	2.11776
Third Year	74	7.1282	2.50452
Fourth Year	71	7.0952	2.34668
Fifth Year	63	7.6923	2.57848

Table 3

Discussion

The dental esthetic perception remains subjective as like every other beauty concepts. The perception of dental esthetics vary from population to population and it sometimes depends on cultural and societal factors [9]. Therefore perception of dental esthetics needs to be studied in wider aspects to satisfy the people esthetic desires.

Our results revealed 69% of the students feel comfortable with their smiles; conversely, 73% of them think someone else has a better smile. Youth is highly influenced by the media and other external references [10], which act as important point in their life to know about things around and knowing personality and attractiveness in the smile that plays an important role in their life to have a high expectations of esthetic perception.

Many studies showed that women were more dissatisfied with their smile when compared to men [11] and also, they tend to show more concerned with the missing teeth that resulting esthetical dissatisfaction [12] conversely, our study has no gender difference on esthetic perception score as tested by student t-test. The mean score of males and females showed no statistically significant difference in dental esthetic perception score.

As the student progress to higher years, there have been significantly higher esthetic perception scores [13], similarly, in our study, respondents of the fifth year have higher esthetic perception score when compared to the first and second year. During the course of the study, the dental students learn things about dental structures and they have the maximum resource to treat the unpleasing structures in their oral cavity and later they have better esthetics.

Thus by knowing the physiological process of the color change, natural tooth characteristics, and their importance, the dental students eventually be less demanding and accept their dental profile related to confidence in smiling and color. In the process of becoming dental professionals, the dental student will know the color of the natural tooth and become satisfied with their smile. A study conducted previously, Preference for whiter teeth was by non-dentist when compared to the dentist [14]. Several countries had their own cultural preference in which teeth color is important in many country cultures [15]. The recent culture demands both whiter tooth and a perfect smile [16]. Contrarily to the confidence in smiling, most of them (61%) considered their shape of the teeth to be satisfactory.

More studies to be performed for the results that have been arrived, which is to be validated through the different regions and different scenarios for reliability, and also, to find the factors associated with the confidence in smiling and other significant factors which could possibly change their esthetic perception, so that Dental professionals could focus on those aspects to make a better smile and fulfilling the dental esthetic expectation of the patient.

Conclusion

Thus, the Dental esthetic perception was studied among different years of students pursuing the dental course. A positive esthetic self-perception was observed among dental students when it comes to their smile. There is no gender difference between males and females on mean dental esthetic perception score. The perception score gradually increasing from initial years to senior years of the course of the study.

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