

Female Dental Student's Perception of Their Dental Aesthetics and Desired Dental Treatment

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Abstract

Objectives: This study aims to assess the self-perception of female dental students of their dental aesthetics regarding their satisfaction, its effect on their quality of life and felt need for treatment.

Materials and Method: This is a descriptive study for 1st, 2nd and 3rd year dental students (n=110) in the College of Dentistry at Princess Nourah University (PNU). The survey was distributed via link "Google form". A 20 item questionnaire was prepared and tested before on seven students for clarity. Questions were regarding how students feel about their dental aesthetics and what they desire for treatment. Whether they felt their teeth affected their attractiveness, confidence and quality of life. Data was entered in SPSS for statistical analysis.

Results: With a response rate of 94.5% majority (89.4%) of students felt their teeth affected the attractiveness of their faces. Almost one third (30.8%) have tried to hide their smile. Around half (51%) were not satisfied with their tooth colour. Almost two thirds of students (61.5%) felt their quality of life is affected by the appearance of their teeth. 'Tooth whitening' was selected by

almost two thirds of students (64.4%) followed by almost half (46.2%) the students wanting ‘orthodontic treatment’.

Conclusion: Dental aesthetics is rated highly among female dental students. The majority of the students felt that their teeth affected the attractiveness of their face and influenced their quality of life. Students desired teeth whitening followed by orthodontic treatment as their perceived need for aesthetic dental treatments.

Keywords: Dental aesthetics, Dental treatment, Quality of life, self-perception, Dental students

Introduction

Dental factors play an important role in the physical perception of an individual (Lopez 2013). The Face is one of the most important part of the body to show physical beauty (Subait et al 2016). The dental appearance of an individual is an important feature in determining the attractiveness of a face (Qualtrough and Burke 1994) and plays a key role in human social interactions (Lopez 2013, Kershaw et al 2008, Qualtrough and Burke 1994). Dental appearance also plays an important role for boosting self-confidence (Tin-Oo, et al 2011, Manipal 2014). The main determinant factor for improving dental appearance is a person’s own desire influencing one’s self-consciousness about their smile, self confidence and self esteem (Yi et al 2016). Perception towards dental appearance is determined by cultural factors and individual preferences varying between individuals and cultures and changes over time (Qualtrough and Burke 1994).

The smile plays an important role in the evaluation of facial attractiveness and in the overall assessment of a smiling person’s attractiveness (Otta et al 1996). Beall (2007) showed that the smile has a major impact on the physical attractiveness of the person. Aesthetic dentistry is characterized primarily by the smile which serves as the primary means of emotional expression (Talarico 2006). Dentists have cited media coverage as the main reason for the increase in demand for aesthetic dental procedures (American Academy of Cosmetic Dentistry 2004). Among the significant factors affecting overall dental appearance are tooth colour, shape, and position; quality of restoration; and the general arrangement of the dentition, especially of the anterior teeth (Qualtrough and Burke 1994) with tooth colour being one of the most important factors determining satisfaction with dental appearance (Qualtrough and Burke 1994, Van der Geld et al 2007).

Treatments improving dental aesthetics have been found to increase patient quality of life and psychological status (Al-Zarea 2013, Grossmann et al 2007, John et al 2004,). Tooth whitening treatments, anterior teeth restoration, labial veneers crowns, and orthodontic treatment are frequently

demanded by patients who are interested in improving their dental appearance (Samorodnitzky-Naveh et al 2007). Manipal et al (2014) found in their study on dental students that with respect to psychological aspects, mental depression shows more significance as students feel more deprived due to their unaesthetic appearance. Nazir et al (2014) assessed the psychosocial impact of dental aesthetics and self-perceived orthodontic treatment in dental students showed a strong association between subjects perceiving the need for orthodontic treatment and their psychosocial wellbeing.

There have been very few studies in Saudi Arabia to document dental students perception of dental esthetics. (Al-Zarea 2013, Al Shahrani 2014, Bilal.R & Subait et al 2016). Therefore the aim of this study is to assess the self-perception of female dental students of their dental aesthetics regarding their satisfaction, its effect on their quality of life and felt need for treatment.

Materials and Method

This was a descriptive study conducted in College of Dentistry, Princess Nourah University (PNU), Riyadh, Saudi Arabia. The study population consisted of all the female students (n= 110) studying in the Dental College at the time of the study with first (n=44), second (n=35) and third (n=31) year female dental students only. Prior approval was obtained from the Institutional Review Board, College of Dentistry, PNU. The ages of students ranged from 17-22 years in all classes from first to third year dental students D-1, D-2, D-3 respectively. A modified 20 item close ended questionnaire was constructed after taking some questions used in Tin-Oo study (2011) and adding more questions in it . The questions in Table 1,2 and 3 were mainly regarding students' satisfaction with their dental aesthetic appearance, whether they felt their teeth affected their attractiveness, confidence and quality of life and the desired aesthetic dental treatment they wish to have. It was tested on 7 students randomly before the start of the study to check if it was clear and then corrections were made accordingly. The questionnaire was then distributed via link "Google form" to all the students (n= 110) with a short explanation of the study and their answering the questionnaire was taken as their consent. An Ivostar® Gnathostar® shade guide image by Ivoclar Vivadent. Inc. was incorporated within the questionnaire regarding the preferred shade selection by the students. Choices with shade number from lightest to darkest were given for the answers in the drop down answer options menu. Students picked the tooth shade option they would like to have. Statistical analysis using SPSS was done for percentages.

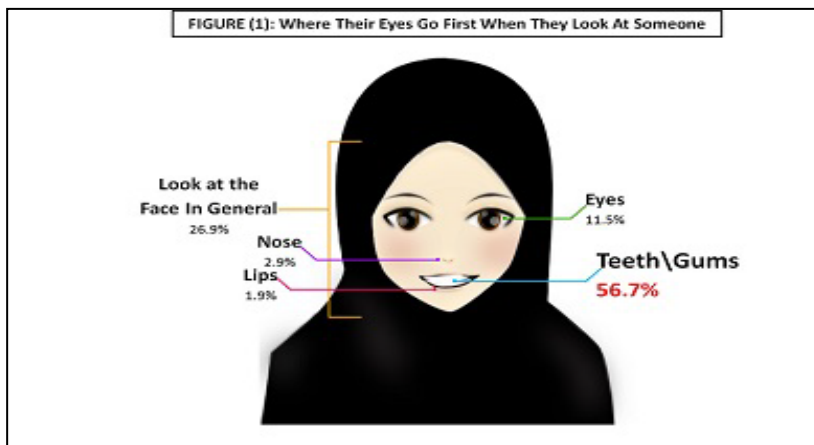
Results

The response rate was high (94.5%) as the questionnaire was completed by 104 female dental students from a total of 110 targeted for the study from the Dental College, PNU at the end of the academic year of 2015.

Dental students' self-evaluation of their dental aesthetics in Table 1 shows almost two thirds (62.5%) of students felt they had an attractive face. The majority (89.4%) felt their teeth affected the attractiveness of their faces. Around three-quarters (76%) were satisfied with the way their gums look. Just over half (57.7%) were satisfied with the general appearance of their teeth. Around half (51%) were not satisfied with their tooth colour. Around one quarter (26.9%) felt their teeth were crowded or poorly aligned. Non aesthetic restoration in their front teeth was reported by 15.4% of students. A fractured front tooth was reported by 9.6%. Tooth wear was reported in 19.2% of students.

Questions	Yes N (%)	No N (%)	Cannot Decide N (%)	Total N (%)
1- Do you feel you have an attractive face?	65 (62.5%)	6 (5.8%)	33 (31.7%)	104 (94.5%)
2- Do you feel your teeth affect the attractiveness of your face?	93 (89.4%)	5 (4.8%)	6 (5.8%)	104 (94.5%)
3- Are you satisfied with the way your gums look?	79 (76%)	19 (18.3%)	6 (5.8%)	104 (94.5%)
4- Are you satisfied with the general appearance of your teeth?	60 (57.7%)	31 (29.8%)	13 (12.5%)	104 (94.5%)
5- Are you satisfied with your tooth color?	40 (38.4%)	53 (51%)	11 (10.6%)	104 (94.5%)
6- Do you feel your teeth are crowded or poorly aligned?	28 (26.9%)	71 (68.3%)	5 (4.8%)	104 (94.5%)
7- Do you have non-aesthetic fillings (discolored filling) in your front teeth?	16 (15.4%)	84 (80.8%)	4 (3.8%)	104 (94.5%)
8- Do you have fractured front teeth?	10 (9.6%)	92 (88.5%)	2 (1.9%)	104 (94.5%)
9- Do you feel your front teeth are becoming thinner and/or chipping off in incisal edge (tooth wear)?	20 (19.2%)	77 (74%)	7 (6.7%)	104 (94.50%)

For perception of dental aesthetics and quality of life (**Table 2**) one third (30.8%) of students reported they tried to hide their smile. When students were asked where their eyes usually go first when they look at a person’s face? (**Figure 1**). Just over half (56.7%) answered ‘teeth and gums’ followed by ‘look at the face in general’ by 26.9%.



Three quarters (71.2%) of students reported looking at teeth of celebrities in social media and wishing to have pretty smiles like them. Almost two thirds of students (61.5%) felt their quality of life is affected by the appearance of their teeth. The majority of the students (95.2%) felt that at the present time people consider dental aesthetics more important than it was 10-15 years ago in Saudi Arabia.

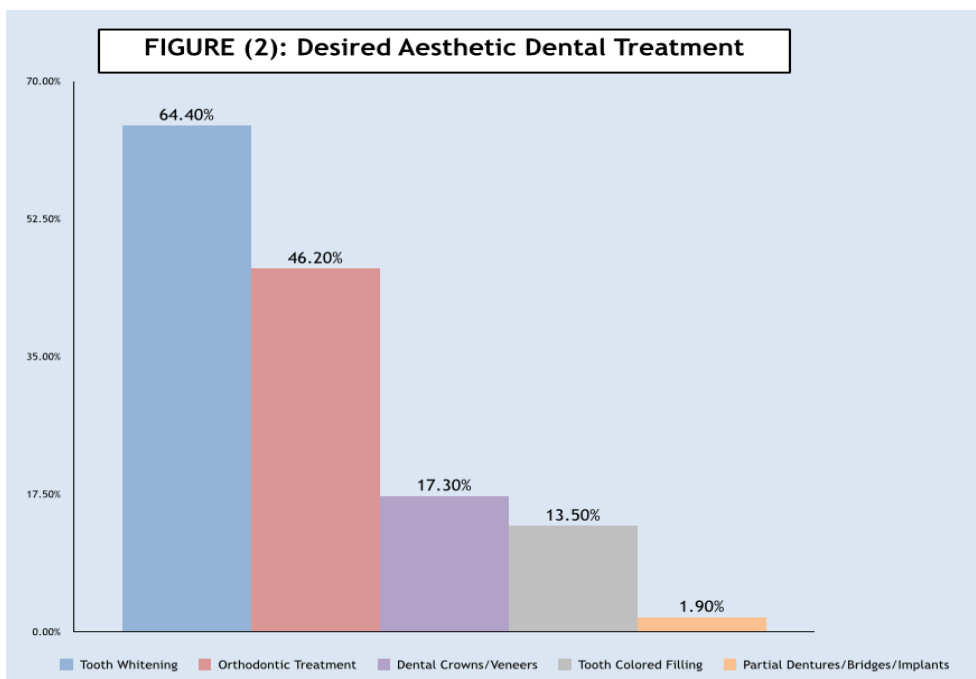
TABLE (2): Questions Regarding Perception Of Dental Aesthetics And Quality Of Life

Questions	Yes N (%)	No N (%)	Cannot Decide N (%)	Total N (%)
1- Are you self-confident about smiling?	68 (65.4%)	21 (20.2%)	15 (14.4%)	104 (94.5%)
2- Do you ever try to hide your smile?	32 (30.8%)	62 (59.6%)	10 (9.6%)	104 (94.5%)
3- Do you look at teeth of celebrities in social media, magazines or TV and wish to have pretty smiles as they do?	74 (71.2%)	23 (22.1%)	7 (6.7%)	104 (94.50%)
4- Do you feel that your quality of life is affected by the appearance of your teeth?	64 (61.5%)	32 (30.8%)	8 (7.7%)	104 (94.50%)
5- Do you feel at the present time people consider dental esthetics more important than it was 10-15 years ago, here in Saudi Arabia?	99 (95.2%)	2 (1.9%)	3 (2.9%)	104 (94.50%)

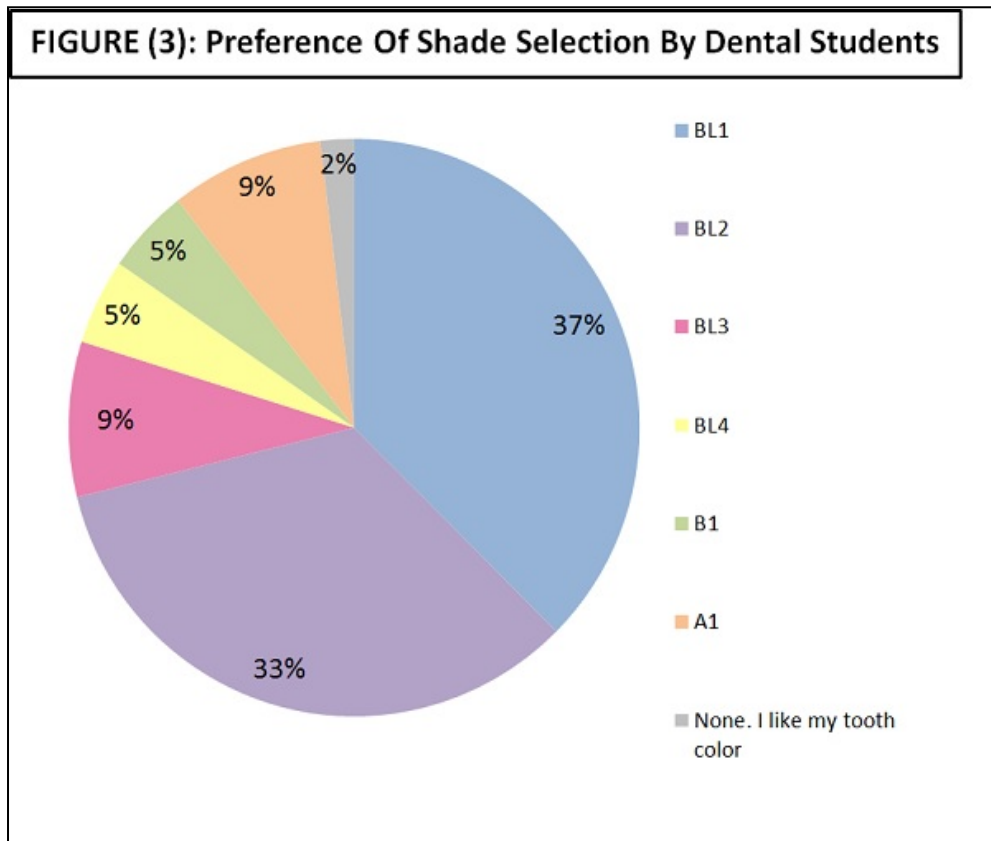
Questions regarding desired aesthetic treatments (Table 3) showed that just Over two thirds (69.2%) of students preferred to have aesthetic composite rather than mettalic amalgam restorations for posterior teeth. Almost half of the students (46.2%) felt they had enough knowledge of the available dental aesthetic treatment options.

Questions	Yes N (%)	No N (%)	Cannot Decide N (%)	Total N (%)
1- Do you prefer to have white filling (composite) on back teeth knowing that silver filling (amalgam) is stronger?	72 (69.2%)	16 (15.4%)	16 (15.4%)	104 (94.50%)
2- Do you feel you have enough knowledge of the available esthetic treatment options?	48 (46.2%)	45 (43.3%)	11 (10.6%)	104 (94.50%)

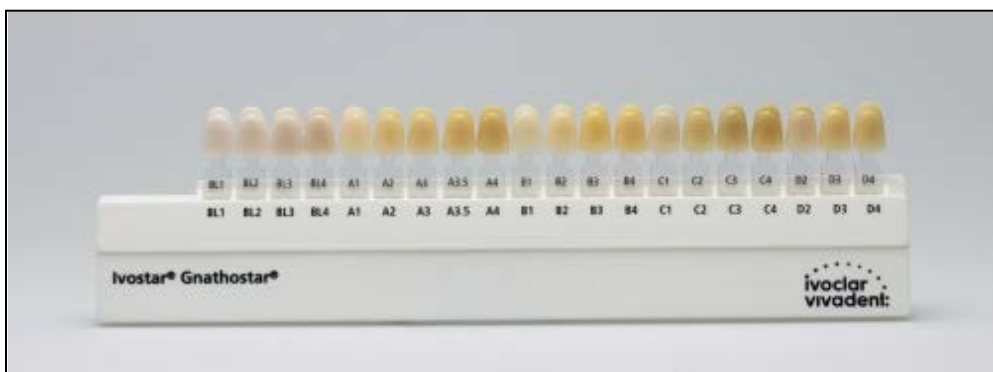
The type of desired aesthetic dental treatment the students chose for them is shown in Figure 2. Tooth whitening’ was selected the most by almost two thirds of students (64.4%) followed by almost half (46.2%) the students wanting ‘orthodontic treatment’. ‘Dental crown/veneers’ was chosen by 17.3% followed by ‘tooth coloured filling’ chosen by 13.5% of students and ‘partial dentures/bridge/implant’ by 1.9%. students only.



Preference of tooth shade selection (**Figure 3**) using Ivostar® Gnathostar® shade guide by Ivoclar Vivadent Inc. is shown in **Figure 4**. Just over one third (37%) of students chose BL1 followed closely by BL2 (34%). BL3 and A1 were chosen by 9% of students followed by BL4 and B1 were chosen by 5% of students. Only 2% did not want to pick a shade as they were happy with their tooth shade.



(Figure 4: Ivostar® Gnathostar® shade guide by Ivoclar Vivadent. Inc)



Discussion

In our modern society dental appearance is an important feature in determining the attractiveness of a face and plays a key role in human social interaction (Tin-Oo, Saddki and Hassan 2011). In this study almost all the students agreed that at the present time in Saudi Arabia people consider dental aesthetics more important than they did 10-15 years ago. They also felt that dental aesthetics is important for their quality of life. Almost two-thirds of students felt their quality of life is affected by the appearance of their teeth whereas in Manipal et al (2014) study in India dental students reported a much lower percentage (19.5%) for females. These differences may be due to cultural, religious or racial factors (Tin-Oo, Saddki and Hassan 2011, Al-Zarea 2013).

It was also found in this study that students reported having enough knowledge of the available aesthetic dental treatment options. Al-Shaharani (2014) quoted that dental students become more aware of dental aesthetics during their education and this can affect their perception of facial attractiveness. Bilal (2016) also showed that as the dental students progressed to senior years they became more aware of their own dental esthetics owing to critically appraising themselves with their increased dental knowledge. Just over half of the students in this study reported that when looking at a face of a person for the first time they look first at the teeth and gums rather than the other parts of the face like the lips, eyes, nose or face in general. This suggests these students place great importance to a person's dental aesthetics.

Almost two thirds of students in this study felt they had an attractive smile and a great majority of students felt their teeth affected the attractiveness of their face which implies teeth are very important for them to feel attractive. Around two-thirds of students felt confident about their smile however almost a third reported they try to hide their smile. Manipal et al (2014) showed a higher percentage (86.2%) of females were satisfied with their smile. As for non-aesthetic restorations both this and Al-Zarea (2013) study had similar results for students reporting of having a non-aesthetic restoration in their front teeth (15.4% and 16.4% respectively).

Almost a third of our students were not satisfied with the general appearance of their teeth. A higher percentage (50%) of university students (including dental students) were found not to be satisfied as Al-Zarea reported in 2013, along with Tin-Oo, Saddki and Hassan (2011) showing similar results (52.8%). The differences found in these studies may be due to use of different measures to evaluate satisfaction, cultural factors, religion, and racial factors as well as dental appearance is affected by individual characteristics, compliance, or unrealistic expectations (Al-Zarea 2013).

When students were asked about the choice of restorative dental material for a posterior tooth almost three-quarters reported they preferred having composite restorations rather than amalgam although amalgam is considered a stronger dental material for posterior teeth. This again suggests that students care a lot about how teeth look aesthetically. As for tooth whitening it was strongly desired in this study and almost two thirds of students wanted it. Similar results were shown by Subait et al (2016), yet this is less than what was reported by Al-Zarea (2013) and Bilal (2016) where it was wanted by a higher majority (80.9% and 87.9% respectively).

As for their satisfaction with colour of their teeth only 38.4% of the students were satisfied with the colour of their teeth which is similar (34.1%) to Al-Zarea (2013) study of university students in Saudi Arabia and Tin-Oo, Saddki and Hassan (2011) study in Malaysia that also reported similar results (43.8%). However in the study of Manipal et al (2014) in India it was reported that the majority (86.2%) of females were satisfied with the colour of their teeth. Again these differences may be due to the fact that dental appearance is affected by individual characteristics, compliance, or unrealistic expectations (Al-Zarea 2013).

The majority of students in this study desired tooth shade guide colours lighter than the natural colours of A1 and B1 as their preference for tooth whitening. This could be due to the effect of the media of exaggerating the whiteness of teeth and making it attractive and appealing to the public. Again this is emphasized in this—study where almost three-quarters of students look at teeth of celebrities in the media and wished they had smiles like them. These celebrities usually have very white and straight teeth. Besides these students wanting white teeth they also wanted straight teeth. Almost half the students wanted orthodontic treatment which was similar to Al-Zarea (2013) study (51.8%). Just over one-quarter (26.9%) of our students felt their teeth were crowded or poorly aligned which was similar to that found by Al-Zarea (2013) where one quarter reported crowding. Tin-Oo, Saddki and Hassan (2011) also reported similar results (26.4%) for crowding.

Conclusion

Dental aesthetics is rated highly among female dental students. Just under half the students were not satisfied with the general appearance of their teeth and around half were not satisfied with their tooth colour. The majority of the students felt that their teeth affected the attractiveness of their face and influenced their quality of life. Majority of students also wished they had smiles like celebrities. Students desired teeth whitening followed by orthodontic treatment as their perceived need for aesthetic dental treatments

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