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Dental Aesthetics and Attitudes among University Students in Saudi Arabia-A Cross-Sectional Study

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Abstract

Objective: The objectives of this research were to investigate the level of satisfaction, knowledge, attitudes, problems and needs related to dental aesthetic among students of King Saud bin Abdulaziz University for Health Sciences.

Methods: We used cross-sectional study design. Self-administered questionnaire were distributed among males and females dental students of first year pre professionals. The effect of parents' occupations, geographical regions, gender and type of schooling on the level of knowledge, attitudes, problems and needs related to dental aesthetics were also determined.

Results: A total of 294 students participated in the study. We found 45% of the students heard about dental aesthetics from their families and friends. Out of the total 74% subjects with non-working mother had more negative attitudes toward dental aesthetics. The most common problem reported was having protruded teeth (69%). The most common treatment need of the subjects was teeth whitening (82%) and of total 72% subjects with non-working mother had more need for treatments.

Conclusion: The majority of students showed a high level of knowledge regarding dental aesthetics. On the other hand, a low level of positive attitudes regarding dental aesthetics was observed. Awareness program may be launched for parents and young students for promoting positive attitudes towards aesthetics needs, and dental screenings may be planned so that different aesthetic requirements and needs of students may be assessed as early interventions result in better oral and dental aesthetics.

Keywords: Dental aesthetics; Beauty; Dental cosmetic; Dental attitude; Dental knowledge; Dental problems; Socio-Demographic factors

Introduction

Beauty is desirable all over the world, which may be seen in both in natural and in artificial world. It is the combination of qualities, such as shape, color, or form that pleases the aesthetic senses, especially the sight [1]. Beauty can be expressed by different ways such as ethical beauty and physical beauty. Significantly, people tend to show physical beauty differently worldwide. People might express their physical beauty by their dress. Others might show physical beauty by the shape of their bodies. Increasingly, people have been expressing their physical beauty by the way they look. Specifically, face is one of the most important ways to show the physical beauty. Many surgeries, cosmetic treatment, and make up are used to express the physical beauty of the face. One of the main ways to express this type of beauty is the appearance of the mouth. Mouth is an important organ to express aesthetics in very different and unique ways. Size and shape of the lips, mouth corners, and smile all play important roles in aesthetics. Smile is a pleased, kind, or amused facial expression, typically with the corners of the mouth turned up and the front teeth exposed [2].

Teeth play a major role in making smile perfect. Thus, teeth appearance is considered as one of the most important ways to show

mouth aesthetics. Regarding dental aesthetics, different attitudes, problems and needs are present in each human being. Many researches indicate the importance of dental aesthetics [3,4]. Many factors contribute to dental aesthetics. Each factor may be considered individually, but all components together act in concert to produce the final aesthetic effect [5].

Many studies have been conducted globally and regionally to assess the aesthetic requirements of the individual. Study conducted by Riyadh et al among 238 Saudi Arabian men between the ages of 16 and 77 concluded that three fourth of the participants required the need of tooth replacement, less than half reported that tooth loss negatively affected their appearance. This study concluded that subjective needs for aesthetic were highly variable [6]. Another study was conducted by Al Balkhi et al. reported many patients visited the orthodontic department for the treatment of different type of malocclusion that influence the aesthetic outlook of individual [7]. Study conducted in Jeddah reported that orthodontic treatment need affected self-consciousness, tension, embarrassment, irritability, and life satisfaction among 366 young adult [8].

To the best of our knowledge no study has been conducted among dental students in Saudi Arabia to assess the level of satisfaction,

knowledge and attitude toward oral aesthetic need. Our objectives in this research were to investigate the level of satisfaction, attitudes, problems, and needs related to dental aesthetics among KSAU-HS University Students. Additionally we determined the effect of gender, parent's occupations, regions and schooling on the level of knowledge and attitude towards aesthetic needs.

Materials and Methods

A cross-sectional study was conducted during 2014 among students of age 20-24 years studying in King Saud bin Abdulaziz University for Health Sciences in Riyadh, Saudi Arabia. Total 992 dental students were enrolled in 1st year pre-professional year (583 male and 412 female).

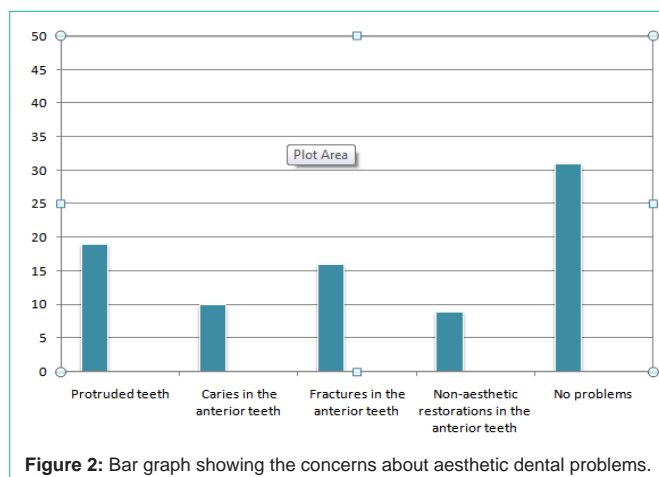
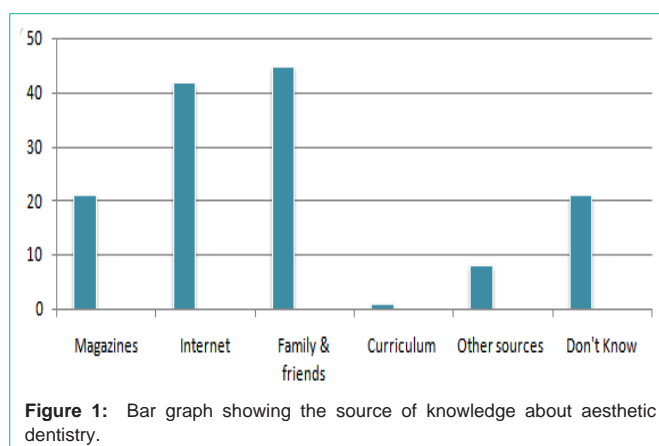
Sample size of 278 was calculated by using Rao soft sample size calculator software by keeping margin of error 5% and confidence interval of 95%. To ensure that we reach the sample size, 400 questionnaires were distributed (200 for male and 200 for female students). Non-probability convenient sampling was done in order to recruit study participants. Questionnaires were distributed to both males and females. Among males 155 responded to the questionnaires while among females 139 responded to the questionnaires. Non-responded questionnaires were the questionnaires that had not been received, or the ones that had been received back but with three or more unanswered question.

Closed-ended questionnaire was formulated by the research team by keeping in local context. The first part of questionnaire was socio-demographics, the variables included in this section were age, gender, parents' occupations, regions, gender, and type of schooling etc. Second section was regarding the assessment of knowledge and attitude towards dental aesthetics. Data were collected regarding source of knowledge, attitude towards aesthetics needed for dental problems and treatment need.

About the knowledge and attitudes, we considered positive attitudes as having subjects who were concerned about their teeth appearance and those who were satisfied with the general appearance and color of their teeth, and negative attitudes as having subjects who were not concerned about their teeth appearance or those who were not satisfied with the general appearance or color of their teeth. Descriptive analysis was run in order to calculate frequencies and percentages. Results are presented in graphical form. Moreover chi square was run to assess the difference among parents' occupations, regions, gender, and type of school. P value of 0.05 and less was considered significant.

Results

Analysis was performed using SPSS version 20. Total of 294 students of which 150 were male and 144 were females. Majority of subjects was 19 years old and were living in east of Riyadh, studying public schools. Our data showed that people who knew about aesthetic dentistry were 221 subjects which represent 75.1% of the sample. People who did not know about aesthetic dentistry were 57 subjects which represent 19.3% of the sample. The most common sources of knowledge about aesthetic dentistry were the family and friends 45%, followed by the internet 42%, and the least common was school curriculum 1% (Figure 1). Concerning about the attitudes



less than half of the students had a positive attitude that is 21.2% of the sample. Three fourth of the students had negative attitude. We found no significant relation between parents' occupations, regions, gender, and type of schooling with knowledge and attitude except for mothers occupations which had a borderline significance (P value for chi square = 0.07). Having a non-working mother increases the likelihood to have a negative attitude by 74%.

Concerning about aesthetic dental problems, 31% of the subjects did not have aesthetic dental problems, and the most common aesthetic dental problem of the remaining 69% was having protruded teeth (19%) followed by having fractures in the anterior teeth (16%), and the least dental aesthetic problem was having non aesthetic restoration in the anterior teeth (9%) (Figure 2). We found no significant relation between parents' occupation, regions, gender, and type of school on about aesthetic dental problems except for gender relation which was significance (P value for chi square = 0.005). Males had double the chance of having dental aesthetic problems than females.

Data showed that 20% of the subjects did not have aesthetic dental needs, and the most common aesthetic dental needs of the remaining 80% was having teeth whitening (62%) followed by orthodontic treatment (32%), and the least dental aesthetic need was prosthetic treatment (8%) (Figure 3). We found no significant relation between parents' occupations, regions, gender, and type of schooling with

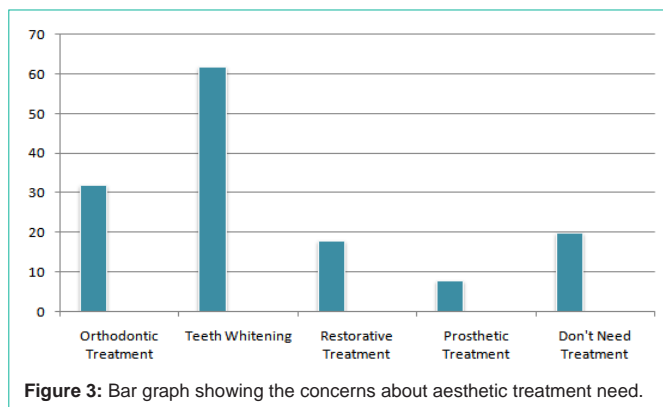


Figure 3: Bar graph showing the concerns about aesthetic treatment need.

aesthetic dental problems except for mothers occupations which had a borderline significance (P value for chi square = 0.075). Having a non-working mother increases the likelihood to have more dental aesthetic needs by 72%.

Discussion

In this study, we found that half of the participants were satisfied with the general appearance of their teeth and 26.6% were satisfied with their teeth color. In another study that was conducted in Al-Jouf et al, 50% were satisfied with their general appearance of teeth and 34% were satisfied with their teeth color [9]. However, different studies have shown different levels of satisfaction among the studied samples, for example, 47.2% in Malaysia, 57.3% in Turkey, 65% in Palestine, 65.5% in Jordan, and 76% in UK [3,10-13]. This could be attributed to the difference in sample size and used measures to evaluate satisfaction, psychological factors, and religious and sociocultural factors. Different samples, different measuring techniques, individual characteristic, and psychology, as well as cultural, religious, and racial back grounds might explain this controversy regarding the relationship between gender and satisfaction with dental appearance and tooth color.

We found no relation between gender and dental aesthetic satisfaction as was proven by other study [8]. Also, we found that most common dental aesthetic problems were having protruded teeth 19% followed by having fractures in the anterior teeth 16%. In previous studies, it has shown that most common dental aesthetic problems were related to poor tooth alignment and presence of fractured anterior teeth [9]. Moreover a recent study conducted in 18-21 years adults reported around half (45.6%) of the sample have malocclusion and those with malocclusion have higher prevalence of poor aesthetic self-perception [14]. In this study, the most common aesthetic dental need of the remaining 80% was teeth whitening (62%). Also, other studies have shown that there is a significant demand for teeth whitening 80.9% [8]. Moreover a community project was done in Hong Kong reported more than three fourth of the population were not satisfied with their tooth color and had perceived need for teeth whitening [15].

We found that having non-working mother have resulted in more dental need and negative attitude toward dental aesthetics; this could be consequence of the level of the mother's knowledge that could be gained by working experience. Likewise a recent study conducted in Mexican community reported association of maternal education

with dental aesthetics with p value <0.001 [16]. We found that risk of having dental aesthetic problems were twice in males and the reason might be that; females generally care about their appearance more than males, which could have resulted in less dental aesthetic problems.

The study has some limitation such as, we found difficulty in finding female faculty to communicate with the female students due to social limitations; the results are not generalizable as we have recruited participants from one university. The strengths of the studies are that for the first time knowledge and attitude of students were studied and despite of social limitations we tried our best to enroll both gender and the recruitment was random in nature.

Conclusion

To sum up, the majority of KSAU-HS University First Pre-Professional Year Students showed high level of knowledge regarding dental aesthetics. On the other hand, they showed low level of positive attitudes regarding dental aesthetics. Many awareness programs are needed for students and parents in order to improve the aesthetic needs of Saudi students and different screening program should be carried out in order to diagnose the treatment need and act in time so that oral aesthetics can be preserved from further deterioration. Future studies with large sample size and diverse group of students are needed to build upon the findings of our study.

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References

1. Patnaik V.V.G, Rajan SK; Sanju B. 'A Beautiful Face & Smile'. J Anat. Soc. India. 2003; 52: 74-80.
2. Goldstein RE. Change Your Smile: Discover how a New Smile Can Transform Your Life. Quintessence Pub. 2009.
3. Tin-Oo MM, Saddki N, Hassan N. Factors influencing patient satisfaction with dental appearance and treatments they desire to improve aesthetics. BMC Oral Health. 2010; 11: 1.
4. Samorodnitzky-Naveh GR, Geiger SB, Levin L. Patients' satisfaction with dental esthetics. J Am Dent Assoc. 2007; 138: 805-808.
5. Qualtrough AJ, Burke FJ. A look at dental esthetics. Quintessence Int. 1994; 25: 7-14.
6. Akeel R. Attitudes of Saudi male patients toward the replacement of teeth. J Prosthet Dent. 2003; 90: 571-577.
7. Al-Balkhi KM, Al-Zahrani A. The pattern of malocclusions in Saudi Arabian patients attending for orthodontic treatment at The College of Dentistry, King Saud University, Riyadh. Saudi Dental J. 1994; 6: 138-144.
8. Hassan AH, Amin HE. Association of orthodontic treatment needs and oral health-related quality of life in young adults. Am J Orthod Dentofacial Orthop. 2010; 137: 42-47.
9. Al-Zarea BK. Satisfaction with appearance and the desired treatment to improve aesthetics. Int J Dent. 2013; 2013: 912368.
10. Karasneh J, Al-Omiri MK, Al-Hamad KQ, Al Quran FA. Relationship between patients oral health-related quality of life, satisfaction with dentition, and personality profiles. J Contemp Dent Pract. 2009; 10: E049-56.

11. Younis A, Al-Omiri MK, Hantash RO, Alrabab'Ah M, Dar-Odeh N, Abu HO, et al. Relationship between dental impacts on daily living, satisfaction with the dentition and personality profiles among a Palestinian population. *Odontostomatol Trop*. 2012; 35: 21-30.
12. Akarslan ZZ, Sadik B, Erten H, Karabulut E. Dental aesthetic satisfaction, received and desired dental treatments for improvement of aesthetics. *Indian J Dent Res*. 2009; 20:195.
13. Alkhatib MN, Holt R, Bedi R. Age and perception of dental appearance and tooth colour. *Gerodontology*. 2005; 22: 32-36.
14. Claudino D, Traebert J. Malocclusion, dental aesthetic self-perception and quality of life in a 18 to 21 year-old population: a cross section study. *BMC Oral Health*. 2013; 13: 3.
15. Chan LC, Ho DY, Ko MS, Liu YM, Mok TY, Sou SK, et al. The pursuit of bright smile: tooth whitening among Hong Kong young adults. *Community health project (University of Hong Kong. Faculty of Dentistry)*. 2013; 186 .
16. Aguilar-Diaz FC, Irigoyen ME, Borges-Yáñez SA, de la Fuente-Hernández J. Knowledge and perception of mothers about their children's dental stains related to fluorosis and children's self-perceived oral health in a Mexican community. *J Theory Pract Dent Public Health*. 2014; 2(3 & 4).