Patient's Self-Assessment on Orofacial Aesthetic

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Abstract. Appearance is important in social interactions and are very subjective. The patients' demand is crucial to achieve successful esthetic results. Demographic background may be one of the contributing factors that lead to such a demand. Orofacial Esthetic Scale (OES) has been developed to measure these esthetic aspects. It contains seven (7) orofacial esthetic aspects. A total of 70 patients requiring anterior direct or indirect restorations were recruited through convenience sampling and answered OES during their visit to the dental clinic in Universiti Kebangsaan Malaysia. A chi-squared test was used to correlate patient's background variables and their orofacial esthetic perception. Patients were generally satisfied with their overall orofacial esthetic. Three esthetic aspects that patients were most dissatisfied with were missing tooth (77.5%), asymmetrical dental arch (42.9%) and tooth color (41.4%). Patients' orofacial esthetic perceptions did not differ significantly regardless of their various backgrounds, except ethnicity. The findings suggested that there was no significant influences of background variables on patient's orofacial esthetic perception. OES can serve as a comprehensive index for clinicians to understand patients' orofacial esthetics perception and expectation of treatment outcomes.

Keywords: orofacial esthetic, self-assessment, anterior teeth restorations, prosthodontics

1   Introduction

A dental treatment plan aims to fulfil four widely recognized aspects which includes: function, esthetic, longevity and comfort. [1] Dentists play an important role to perform proper examination, evaluation and diagnosis of the prevailing oral conditions in order to create a foundation to a rationalized treatment plan and its ultimate success. However, a successful therapy also largely depends on a good interaction between the clinician and patient, especially in situations of anterior restorations, in which esthetic is of utmost importance. The patients' perception of aesthetic may not be the same as the dentists' perception.

Esthetics are often associated with instability of self-esteem, self-confidence, self-competence and perfectionism. After tooth loss; especially on the anterior teeth, some patients are more likely to feel less confident. This supports the fact that self-esteem will influence the oral health-related quality of life (OHRQoL). [2] However, justification on esthetic values and their effects are subjective. Known variations suggested that perception of appearance is likely to be

influenced by a large number of factors, including behavioral, cognitive, and social factors. [3]

Orofacial Esthetic Scale (OES) was developed to measure oral esthetics in prosthodontic patients. This scale measures self-reported orofacial esthetics in patients with esthetic concerns as well as guidance to assess the impacts of orofacial esthetics. It characterizes the following features from a patient-based approach: facial appearance, appearance of facial profile, mouth's appearance (smile, lips and visible teeth), shape/ form of teeth, colour of teeth, gum's appearance as well as overall appearance of face, mouth and teeth. Therefore, it is the aim of this study to assess orofacial esthetics of patients based on OES and to correlate the demands to their demographic factors. [4,5]

2 Materials and Method

Ethical approval was obtained from Research Ethics Committee, Medical Research and Industry Secretariat, Universiti Kebangsaan Malaysia Medical Committee [UKM PPI/111/8/JEP-2016-580]. Informed consent was signed by all participants.

This study was carried out from November 2016 to Mac 2017 among patients who visited the dental clinic in Faculty of Dentistry, Universiti Kebangsaan Malaysia (UKM) requiring maxillary and/or mandibular anterior teeth restorations and/or replacements. Participants of this study were selected through convenience sampling. Inclusion and exclusion criteria were listed in Table 1.

Table 1. Inclusion and exclusion criteria for sample selection

INCLUSION	EXCLUSION
• Anterior fixed prosthesis: veneers, crowns or bridges • Removable partial dentures replacing anterior teeth • Class III (involving labial surface) and/or Class IV cavity restoration on anterior	• Posterior crowns and/or bridges • Removable partial dentures replacing only posterior teeth • Class I and Class II cavity restoration • Class III cavity restoration involving only palatal surface • Complete dentures

A total of 70 patients were identified to be included in this study. Informed consent was obtained from the patients before the start of examination. They were given a brief explanation on the study by 2 examiners. A structured and guided OES questionnaire was given to participants to self-assess their oro-facial aesthetic. The esthethic components of the questionnaire were given 'satisfied' or 'dissatisfied' options. Demographic questions were also included in the questionnaire. Data were then analyzed and chi-squared test was used to correlate patient's background variables and their orofacial esthetic perception.

3 Results

Demographic data of the patients are shown in Table 2. Majority of patients are Malay female with a mean age of 45.4 who have completed secondary education, working and are married. Most of them have not received any dental treatment

with regards to their maxillary anterior teeth at the time of answering the questionnaires.

Table 2. Demographic data of patients

Demographic Variables	Frequency (%) n=70
Gender	
Male	32 (45.7)
Female	38 (54.3)
Age	
<20	1 (1.4)
20-29	7 (10.0)
30-39	15 (21.4)
40-49	12 (17.1)
50-59	11 (15.7)
60-69	15 (21.4)
70-79	7 (10.0)
>80	2 (2.9)
Ethnicity	
Malay	43 (61.4)
Chinese	23 (32.9)
Indian	3 (4.3)
Others	1(1.4)
Education level	
Primary Education	9 (12.9)
Secondary Education	53 (75.7)
Tertiary Education	8 (11.4)
Work Situation	
Working	39 (55.7)
Not working	31 (44.3)
Marital status	
Single	23 (32.9)
Married, staying with partner	42 (60.0)
Married, not staying with partner	5 (7.1)
Stage of Treatment	
Before	31 (44.3)
Ongoing	23 (32.9)
After	16 (22.9)

Graph 1 shows patient's satisfaction and dissatisfaction towards the components of the OES.
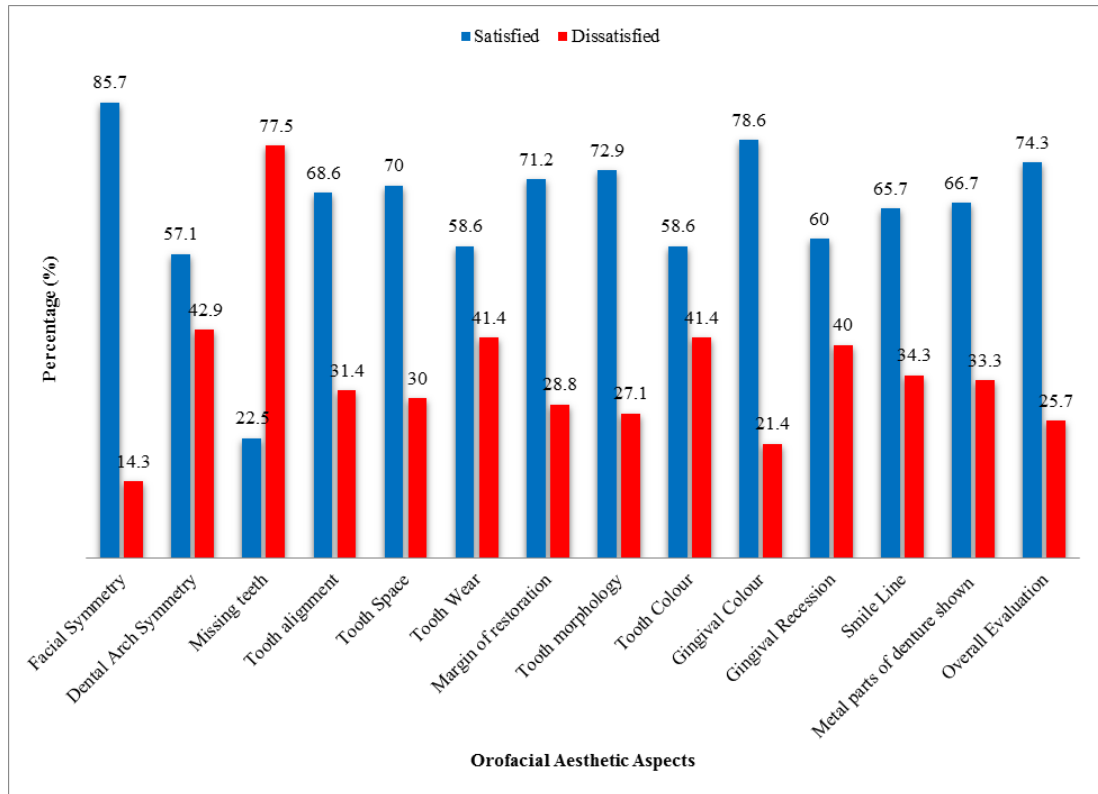
Graph 1. Patient self-evaluation of orofacial esthetic based on OES

Chi-square test analysis on the correlation of patient's demands to their demographic factors are shown in Table 3.

Table 3. Chi-square test analysis for demographic factors and esthetic demands (p<0.05)

Variables	N	Satisfied n=52 (%)	Dissatisfied n=18 (%)	p-value
Gender				
Male	32	25 (48.1)	7 (38.9)	0.5
Female	38	27 (51.9)	11 (61.1)	
Age				
<20	1	1 (1.9)	-	
20-29	7	5 (9.6)	2 (11.1)	
30-39	15	12 (23.1)	3 (16.7)	
40-49	12	6 (11.5)	6 (33.3)	0.085
50-59	11	5 (11.5)	5 (27.8)	
60-69	15	15 (28.8)	-	
70-79	7	5 (9.6)	2 (11.1)	
>80	2	2 (3.8)	-	
Work Situation				
Working	39	31 (59.6)	8 (44.4)	0.264
Not Working	31	21 (40.4)	10 (55.6)	
Education level				
Primary	9	8 (15.4)	1 (5.6)	
Secondary	53	38 (73.1)	15 (83.3)	0.551
Tertiary	8	6 (11.5)	2 (11.1)	
Ethnic				
Malay	43	30 (57.7)	13 (72.2)	
Chinese	23	21 (40.4)	2 (11.1)	0.024*
Indian	3	1 (1.9)	2 (11.1)	
Others	1	-	1 (5.6)	
Marital Status				
Single	23	20 (38.5)	3 (16.7)	
Married, staying with partner	42	27 (51.9)	15 (83.3)	0.053
Married, not staying with partner	5	5 (9.6)	-	

4 Discussion

Esthetics has been a subject of research for years, particularly factors affecting the patients' self-evaluation on orofacial esthetic as well as the impacts of demographic status towards their esthetic perception and demand. OES has been introduced and its validity as well as its reliability were tested in previous study [5].

In this study, it was found that 74.3% of patients were generally satisfied with their overall evaluation of orofacial esthetics. This is relatively similar to a study done by Azodo and Ogbomo in which the self-evaluated dental appearance satisfaction was expressed by 79.4% of the participants while Maghaireh et al. showed 69.3% of patients were satisfied with their dental appearance [6,7]. Furthermore, in the present study, facial symmetry being the most satisfied aspect with 85.7% of respondents. The high level of acceptance on facial symmetry could be due to the norm in the population to accept minor facial asymmetry. Besides, the majori-

ty of patients were satisfied with their gingival color as well as the morphology of their anterior teeth, 78.6% and 72.9% respectively. On the other hand, 77.5% of the patients regarded missing anterior teeth as the most dissatisfied orofacial esthetic aspect. Other patient's self-reported dissatisfactory aspects were dental arch symmetry with 42.9%, anterior tooth wear and anterior teeth color which account for 41.4%. These findings were different from Kershaw et al., McGrady et al. and Browne et al., in which tooth color was associated with the poorest esthetic rating, as these studies did not include missing anterior teeth in their assessment criteria. [8-10]

It is commonly thought that women were more concerned over their orofacial esthetic and more critical in judging their dental appearance [11]. In this study, both women and men expressed similar levels of satisfaction towards their orofacial esthetic. This is supported by a study carried out by Al-Zarea in 2013 that concluded that gender has no relation towards the satisfaction on the appearance of teeth [12]. At the same time, one would assume that youthful individuals would be more displeased with their orofacial condition. From the present study, it appears that there were no discernable deviations in esthetics perception among different age groups. Moreover, the present study found that education level did not have an impact on the satisfaction with orofacial perception. Akarslan et al. concluded that patient with higher academic achievement shows higher self-satisfaction [13]. On the other hand, there was a significant impact of patient's ethnicity on orofacial esthetic self-perception. This could be attributed to dental appearance is affected by individual characteristics taking into account their diverse cultural, religious and social background of different ethnics.

A dental esthetic checklist can be introduced to gain information on the patients' perception on his or her own esthetic. The questionnaires could be seen as an introduction to a deeper discussion with the patient regarding problems, needs and wishes instead of a definite list of impairments. The interview should be supplemented with open-ended questions to give the patients an opportunity to address other aspects that may not have been discussed during the interview process. Hence the initial identification of these criteria allows a clinician to acquire more details. This is crucial to achieve patients' expectations. All in all, the patient is the one who is possessing and maintaining the restoration.

However, the result of this study is limited and cannot be generalized as the survey was limited to a very specific population. This could, however, serve to encourage further study by the expansion of inclusion criteria to include those not actively seeking esthetic treatment. If so, the clinician can collect data which compare also patients' esthetic demands before and after meeting a clinician.

5   Conclusion

In this study, patients generally expressed satisfaction towards their orofacial appearance regardless of influences from demographic factors on their perceptions. This study served to introduce OES as a comprehensive index for clinicians to understand patients' orofacial esthetics perception and expectation of outcomes so that the procedures and treatment outcomes can be tailored based on what a pa-

tient's perceived need. Thus, implementation of OES is encouraged in clinical practice involving treatment of anterior teeth.

6 Acknowledgement

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