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## Analysis of a single component for assessing overall facial attractiveness: An observational study

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### Abstract

**Background:** Although certain characteristics of human faces are broadly considered more attractive (e.g. symmetry, averageness), people also routinely disagree with each other on the relative attractiveness of faces. Hence; the present study was planned for analysis of a single component for assessing overall facial attractiveness.

**Materials & methods:** A total of 100 patients were included in the present study. Only those patients were included in the present study that had undergone orthognathic surgery in the past one year. Complete demographic and clinical profile of all the patients was obtained. Two independent raters (one male and one female) assessed the pre-treatment and post-treatment frontal and lateral facial photographs. Aesthetic score rated on a scale of one to seven in which one indicated lowest score and ten indicated highest score. All the scores were recorded in Microsoft excel sheet and were analysed by SPSS software.

**Results:** Mean aesthetic score of nose, lip, eyes and skin was 6.2, 5, 5.8 and 5.6 respectively. The overall attractiveness score was 5.8.

**Conclusion:** Single component do have significant effect on the overall facial attractiveness

**Keywords:** aesthetics, attractiveness, facial

### Introduction

Although certain characteristics of human faces are broadly considered more attractive (e.g. symmetry, averageness), people also routinely disagree with each other on the relative attractiveness of faces<sup>[1- 3]</sup>. That is, to some significant degree, beauty is in the "eye of the beholder". Previous evidence has indicated that preferences for particular faces or face characteristics are shaped by a range of factors, including personality preferences, the rater's own facial characteristics, and features of the socioeconomic and cultural environment, previous visual experience, and history of social learning. Individual preferences for faces are also correlated among friends and spouses<sup>[4- 6]</sup>. Hence; under the light of above mentioned data, the present study was planned for analysis of a single component for assessing overall facial attractiveness.

### Materials & methods

The present study was conducted in the present study in the department of dentistry and it included analysis of a single component for assessing overall facial attractiveness. Ethical approval was obtained from institutional ethical committee. Written consent was obtained after explaining in detail the entire research protocol. A total of 100 patients were included in the present study. Only those patients were included in the present study that had undergone orthognathic surgery in the past one year. Complete demographic and clinical profile of all the patients was obtained. Two independent raters (one male and one female) assessed the pre-treatment and post-treatment frontal and lateral facial photographs. Aesthetic score rated on a scale of one to seven in which one indicated lowest score and ten indicated highest score. All the scores were recorded in Microsoft excel sheet and were analysed by SPSS software.

## Results

In the present study, a total of 100 patients were analysed. Mean age of the patients of the present study was 24.8 years. 55 percent of the patients belonged to the age group of less than 25 years. 60 percent of the patients of the present study were males while the remaining were females. Mean aesthetic score of nose, lip, eyes and skin was 6.2, 5, 5.8 and 5.6 respectively. The overall attractiveness score was 5.8.

## Discussion

Nowadays, society emphasizes the importance of an attractive physical appearance and especially facial beauty. The face remains a key feature in the determination of human physical attractiveness. Patients are requiring more frequently dental treatments, orthodontic and orthognatic surgical treatments and of course, plastic-surgical treatments for enhancing and optimizing their facial appearance. Social interactions are considered to be influenced by facial looks and certain features are described to play a bigger role than others in interpersonal decisions<sup>[6-8]</sup>.

In the present study, a total of 100 patients were analysed. Mean age of the patients of the present study was 24.8 years. 55 percent of the patients belonged to the age group of less than 25 years. 60 percent of the patients of the present study were males while the remaining were females. Mean aesthetic score of nose, lip, eyes and skin was 6.2, 5, 5.8 and 5.6 respectively. The overall attractiveness score was 5.8. Popenko NA *et al.* assessed the most attractive lip dimensions of white women based on attractiveness ranking of surface area, ratio of upper to lower lip, and dimensions of the lip surface area relative to the lower third of the face. A total of 60 faces were created, and each ratio was ranked by attractiveness by 428 participants (internet-based focus groups). In phase 3, the surface area from the most attractive faces was used to determine the total lip surface area relative to the lower facial third. In phase 1, all 100 faces were cardinally ranked by 150 individuals (internet-based focus groups [n=130] and raters from conventional focus groups [conventional raters] [n=20]). In phase 2, all 60 faces were cardinally ranked by 428 participants (internet-based focus groups [n=408] and conventional raters [n=20]). The surface area that corresponded to the range of 2.0 to 2.5 × 104 pixels represented the highest summed rank, generating a pool of 14 images. This surface area was determined to be the most attractive and corresponded to a 53.5% increase in surface area from the original image. Using a robust sample size, this study found that the most attractive lip surface area represents a 53.5% increase from baseline, an upper to lower lip ratio of 1:2, and a surface area equal to 9.6% of the lower third of the face<sup>[10]</sup>.

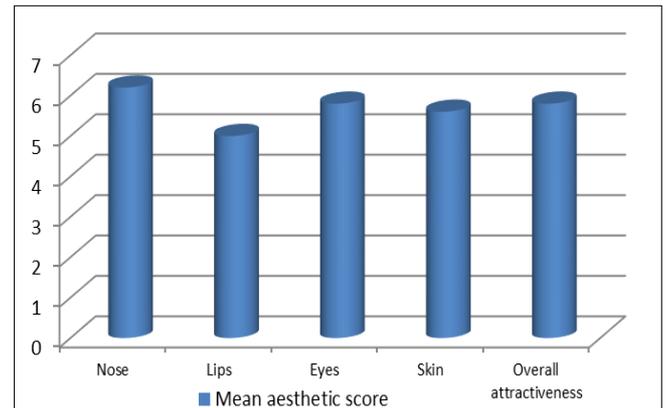
A large proportion of the literature emphasizes the importance of the presence of certain relationships such as the golden ratio between different facial proportions as a measure for facial aesthetics in the general public. Ricketts was among the first few orthodontists to use the golden ratio to assess the composition of facial hard and soft tissues. Proffit and Fields stated that the vertical height of the mid-face, from the supraorbital ridges to the base of the nose, should equal the height of the lower face, and in the lower face, the mouth should be about one third of the way between the base of the nose and the chin<sup>[11, 12]</sup>.

**Table 1:** Demographic data

Parameter		Number
Age group (years)	Less than 25	55
	More than 25	45
Gender	Males	60
	Females	40

**Table 2:** Mean aesthetic scores

Facial area	Mean aesthetic score
Nose	6.2
Lips	5
Eyes	5.8
Skin	5.6
Overall attractiveness	5.8



**Graph 1:** Mean aesthetic scores

## Conclusion

From the light of above obtained data, the authors concluded that single component do have significant effect on the overall facial attractiveness. However; further studies are recommended.

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