The Average African American Male Face

An Anthropometric Analysis

Jennifer Parker Porter, MD

Objectives: To determine the average facial proportions of the African American man and compare results with the neoclassical canons of facial proportions and the standard for the North American white man.

Design: Cross-sectional survey.

Methods: Photographs and anthropometric measurements of the face were taken of 109 men of African American descent aged between 18 and 30 years, and results were compared with the neoclassical canons of the facial proportion and the averages of the anthropometric measurements for the North American white man. Proportional relationships were calculated based on the averages. Statistical analysis was performed.

Results: The neoclassical canons of facial proportion were not found to be applicable to most of the African American men who participated in the study. Of the 24 anthropometric measurements obtained, 21 were significantly different from the measurements of the North American white man (P.<.05). We present proportional relationships in our subjects.

Conclusions: The face of the average African American man differs from the neoclassical canons of facial proportion and the averages of anthropometric measurements for the North American white man. The proportional relationships found in our subjects might serve as a template for facial analysis in this patient population.

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Facial analysis is the first step in the evaluation of patients who present for cosmetic or reconstructive procedures of the face. It is an important aspect of the initial encounter, as it helps formulate the goals and desired outcomes of the proposed surgical procedure. Typically, ideals for a white population are used to inform patients presenting for facial plastic surgery. The astute surgeon recognizes that patients of different ethnic descent differ in facial proportions and makes the appropriate adjustments. However, these adjustments are not clearly defined for the African American man.

Anthropometric analysis is a direct means of facial measurement that uses standard landmarks and instrumentation to compare populations. Anthropometry is a direct means of facial measurement that uses standard landmarks and instrumentation to compare populations. It differs from photogrammetry in that measurements are taken not from photographs but from the subject’s face. Neoclassical canons of facial proportion were derived by the artists and anatomists of the 17th and 18th centuries. Studies using anthropometry have shown little applicability of these neoclassical canons to white, Asian, Caribbean, and African American populations. Yet, these canons are still used today in facial analysis.

This study focuses on the anthropometric measurements of the average African American man and on how these measurements compare with those of the North American white man and the neoclassical canons of facial proportion. It also details an objective standard for facial analysis of the average African American man.

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United States of African American parents, and had no prior plastic or reconstructive surgery of the face.

After giving informed consent, each subject underwent standard facial photography (frontal, lateral, oblique, and base views). Then, 24 anthropometric measurements of the face were obtained using standard anthropometric technique involving placement of landmarks (Figure), and obtaining measurements from the face with the appropriate instrumentation. The average measurements were compared with the neoclassical canons of facial proportion and the North American Caucasian standard. Additionally, the average proportional relationships were calculated. Photographs were used to evaluate nasal base shape (trapezoidal, triangular, or oval), nostril inclination (vertical, horizontal, or inverted), and nasal dorsum position (concave, straight, or convex).

Data were entered on spreadsheets and analyzed using SPSS for Windows, version 10.0 (SPSS Inc, Chicago, Ill). Values were expressed as mean ± SD. The level of statistical significance was set at \( P < 0.05 \) for all tests, and 99.7% confidence intervals were used to assess differences between the results for our sample population and results of other studies. The overall chance of type I error was \( P < 0.05 \). Proportional relationships were said to exist if the difference was not greater than 1 mm or 2°.

RESULTS

Of the 24 facial measurements taken of the 109 African American male volunteers, 21 were significantly different from the corresponding measurements of the North American Caucasian standard (Table 1). The most dramatic differences in the African American man were shorter nasal length (nasion-subnasale), wider alar width (alar-alar), shorter nasal tip protrusion (subnasale-pronasale), wider nasal root width (maxillofrontale-maxillofrontale), shorter columella (subnasale-columellar apex), more acute nasolabial angle, and a nasal bridge that was less inclined.

Few of the neoclassical canons pertained to the average African American man in our study (Table 2). Of the neoclassical canons, canon VI, orbital proportion, was valid for the greatest percentage of subjects. Objective proportional relationships are outlined in Table 3. These relationships are based on the average values.

Subjective analysis of the nasal base revealed that the oval shape was the most common (in 49.5% of subjects), followed closely by the trapezoidal (in 40.4%), and the triangular (in 9.2%). Nostrils were vertically oriented in a majority of subjects (51.9%), and in the remainder nostrils were horizontal (43.5%) or inverted (4.6%). The nasal dorsum was convex in 48.6% of subjects, straight in 40.4%, and concave in 10.1%.

COMMENT

Standards for analysis of the African American male face are lacking. Grouping this patient population into the non-white category or using analysis standards used for whites are no longer acceptable practice. This study corroborates the distinct differences between the African American man and the North American white man, further emphasizing the need for separate standards for facial

![Frontal (A) and lateral (B) views of the face illustrating the location of the anthropometric landmarks referenced in this study.](image-url)
analysis. The neoclassical canons of facial proportion seldom pertained to the African American male subjects in our study. Proportional relationships and averages, which are different from those used for the facial analysis of white men, were outlined for the standard photographic views.

A comparison of the results for the average African American man and the average white man showed that the greatest differences in the measures pertained to the nose. In particular, the average nose of the African American man was shorter and projected less from the face. The columella was shorter as well and the nasolabial angle was more acute. Although these values represent the average, there was tremendous variability within our subject population. Additionally, the upper and middle thirds of the face were shorter than standards for the white man. The African American woman was noted to have similar relationships with standards for the white man; however, the forehead height was longer for the African American woman than for her white counterpart.

The neoclassical canons of facial proportion have been shown to rarely be applicable to persons from other ethnic backgrounds. In our study, too, very few neoclassical canons pertained to any percentage of subjects. The only canon with any relevance was the orbital proportion canon, which states that the eye fissure length should be equal to the intercanthal distance. However, we found this relationship in only 12% of our subjects.

Proportional relationships of the African American male face were detailed in this study. Beginning with the frontal view, the white standard for the relationship of the intercanthal distance (endocanthion-endocanthion) and nasal base width (alar-alar) was 1:1. This study revealed the relationship in African American men to be 1:1.3, with the nasal width wider than the intercanthal distance. In fact, a wider nasal base was noted in 99% of subjects. The relationship of the alar width and mouth width was reported as well as the standard relationship of the horizontal thirds. It was found that the thirds were not equal and that the middle third was shorter than both the upper and lower thirds, which were approximately equal.

Lateral view analysis revealed an acute nasolabial angle in the African American man. The nose was less...
men of African American descent may help to produce portions. Objective measures by which we can analyze to which we can add ideal values and more defined pro-

preliminary, will influence the analysis of the nose. 12,13

sum was convex, and the nasolabial angle was acute. Ad-

shorter than the upper and lower thirds, the nasal dor-

cilar, the nasal width of African American men was wider

followed by the horizontal orientation.

tril orientation was vertical in a majority of subjects, closely

the alae depended on the width of the nasal base. Nos-

lar lobule and the nasal ala. This break point had a wide

subjects, indicating a distinct break point between the

can white man. The nasal base shape was oval in most

a shorter columella, compared with the North Ameri-

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Foundation.

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Inclined than the ear and the average nasofacial angle was

38°. While increasing the projection of the nasal tip can produce an aesthetically pleasing result, rotation of the nasal tip beyond 90° should be avoided. Additionally, most subjects had a convex nasal dorsum, which was contrary to the depiction of the typical African American nose. 12,13

Base-view proportional relations of the columella to the lobule revealed a ratio distinctly different from the white standard of 2:1. In the African American man, the columella-lobule ratio was 1.4:1. This relationship was different because of 2 factors, a longer nasal lobule and a shorter columella, compared with the North American white man. The nasal base shape was oval in most subjects, indicating a distinct break point between the nasal lobule and the nasal ala. This break point had a wide range in variation and the relationship of the lobule to the alae depended on the width of the nasal base. Nos-
stral orientation was vertical in a majority of subjects, closely followed by the horizontal orientation.

In summary, African American men vary primarily in the midface from their white counterparts. In particular, the nasal width of African American men was wider than the intercanthal distance, the middle third was shorter than the upper and lower thirds, the nasal dor-
sum was convex, and the nasolabial angle was acute. Ad-
ditionally, the columella-lobule ratio was 1.4:1. This analy-

surgical results that maintain a more natural appear-
ance and avoid the overly narrow, excessively pro-

operated look.

CONCLUSIONS

Proportional facial relationships of the African American man differ significantly from those of the North American white man and from neoclassical standards. New standards are set forth for preoperative facial analysis. These normative values can be used as a basis for discussion with the patient. The goal should be to obtain an aesthetically pleasing result that is congruent with the patients’ ethnicity and heritage.

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REFERENCES


Table 3. Objective Analysis of the Average African American Male Face

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<tr>
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<th>Frontal View</th>
<th>Lateral View</th>
<th>Base View</th>
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<tr>
<td>en-en:al-al</td>
<td>1:1.3</td>
<td>127°</td>
<td>Vertical/horizontal</td>
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<tr>
<td>al-al:ch-ch</td>
<td>1:1.3</td>
<td>Nasal inclination (nasofacial angle)</td>
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<tr>
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<td>Oval/trapezoidal</td>
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<td></td>
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<td>Profile of nasal dorsum</td>
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<td></td>
<td></td>
<td>Columella-lobule ratio</td>
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Abbreviations: See Table 1.