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ANTHROPOMETRIC STUDY OF NASAL INDEX OF KALABARI PEOPLE OF RIVERS STATE

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ABSTRACT
The anthropometric study of the nasal index of the Kalabari people of Rivers state was carried out on five hundred and ten native respondents. Two hundred and fifty six were females while two hundred and fifty four were males. Measurements of the length and width of the nose were taken using a sliding caliper and the nasal index calculated. Other parameters like age and sex were also used to correlate the measurements of the nasal index as well as evaluating the proportional relationship and the degree of the variability found among the males and females. The data collected was statistically analyzed and the results show that on the average, the mean nasal index of the Kalabari people is 94.10±1.18, confirming that kalabari people have platyrrhine nose type.

***Key words: Nasal index, kalabari people*.**

INTRODUCTION
The Kalabari people are an indigenous people of the south-southern part of Nigeria in West Africa. Nasal index is very useful in anthropology as it is one of the clinical anthropometric parameter recognized in nasal surgery and medical management (Porter, 2003; Ochi et al, 1993). Nasal index measurement is utilized in the analysis and classification of fossil remains as well as the study of living populations (Alex et al, 1996). It also exhibits racial differences (Mulchand, 2004; Porter, 2003; Parker and Olson 2003). Human nose can take many different shapes according to the individual. An attempt has been made to classify the nose in relation to character or traits (Eden, 1989).

There are various categories of nose on the basis of nasal height, nasal breadth and nasal index (Williams et al, 1995; Porter and Olson 2003). Studies have shown that the Negroid race mainly of African descent have platyrrhine nose type (Carleton, 1989). In Nigeria, Oladipo et al (2007) have conducted a study on the morphometric analysis of the nasal parameters of Igbo, Ijaw and Yoruba ethnic groups in southern Nigeria.

This study was carried out to ascertain the standard value of the nasal index of the kalabari people of Rivers state and to provide a baseline data of the nasal index which could be vital in forensic and anthropological studies.

MATERIALS AND METHOD

A total number of 510 Kalabari adults aged between 18 and 45 years were used for this study. This comprises of two hundred and fifty six females (256) and two hundred and fifty four males (254). Measurements were carried out using a sliding caliper. Subjects were selected at random on the basis of the absence of any pre-existing trauma or nasal surgery. The nasal height was measured from the nasion to the nasospinale. The nasal breadth (maximum breadth of the nose) was measured at right angle to the nasal height from ala to ala. All measurements were taken with the subjects standing in an upright position with the face straight and facial muscles relaxed. The sliding caliper was handled with utmost care to avoid any form of injury to the nose or face. The data collected was statistically analyzed.

RESULTS

Table shows that the mean nasal index of both males and females was 96.30. The males have the highest nasal index of 98.50 while the females had an index of 94.10. There was no significant difference between the nasal index of the male and female kalabari people.

Table showing Mean (X), Standard Deviation (SD) and Standard Error (S.E) of nasal index of kalabari people of Rivers State in Nigeria.

	Males	**Females**	**Average**
Mean	98.5	94.1	96.3
SD	9.74	9.61	9.68
S. E.	0.93	1.18	1.06

DISCUSSION

Various studies have been carried out to determine the racial and ethnic differences in nasal index amongst different populations. It was however observed that the European Caucasoid are leptorrhine or have long and narrow nose with a nasal index of 69.90 or less, whereas the Bantu-speaking negroes and the bushmen of Africa as well as the Australoids of Australia are platyrrhine, having broad nose and a nasal index of 85.00 or more (Mulchand, 2004). This is similar to the nasal index of the kalabari people. The nasal index of African-American women is 79.70 having a mesorrhine or medium nose type. The Somalia people in East Africa have a nasal index similar to that of European Caucasoid of 69.90 or less, which is of leptorrhine nose type (Porter, 2003; Carleton, 1989). In Nigeria, studies carried out on three ethnic groups (Igbo, Ijaw and Yoruba) showed that the Igbos had a nasal index of 94.10, Ijaws a nasal index of 96.40 while the Yorubas had a nasal index of 89.20 (Oladipo et al, 2007).

The results of our study conforms with the findings of Mulchand (2004) on the nasal index of the African population which he gave as 85.00 and above, and Oladipo et al 2007 on the nasal index of the major ethnic groups in southern Nigeria which he gave as 89.00-100.00 (platyrrhine). Although there was no significant difference between the nasal index of males and females of kalabari origin, their nasal index have been confirmed to be of the platyrrhine or broad-nose type.

CONCLUSION

The nasal index of the Kalabari people have been determined and confirmed. This study should be of importance in forensic science and clinical anthropometry and could be subjected to further investigations.

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