

Distribution of Earlobe Attachment among Kalabari People of Southern Nigeria

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Abstract

Original Research Article

Background: In documenting anthropological characteristics of a population, the earlobe attachment is one of the anthropological parameters that is considered. Indigenous populations in Nigeria have had some of their anthropological features documented. Hence, this study was aimed at determining the distribution of earlobe attachment among the Kalabari people of Southern Nigeria. **Materials and Methods:** The study was descriptive and cross-sectional which involved a total of 1342 subjects which comprised 671 males and 671 females who were sampled conveniently. The participants were all from Kalabari ethnic group in Rivers State (south-south) Nigeria. All subjects included in the study were indigenes of the Kalabari extraction, participants who had distortions or any form of structural anomaly of the external ear were excluded. **Results and Discussions:** The distribution of earlobe attachment based on gender and total population showed thus: males [free 390(58.1%), attached 281(41.9%), total 671(100.0%)]; females [free 407(60.6%), attached 290(39.4%), total 671(100.0%)]; Total population gave thus [free 797(59.4%), attached 571(40.6%), total 1,342(100.0%)]. **Conclusion:** The attached and detached (free) earlobes were both more frequent in the females than the males. In general, the ratio of free (detached) and attached is 8:6. The study revealed that free (detached) earlobe was more frequently distributed than the attached among the Kalabari people.

Keywords: Earlobe, Attached, Detached/free, Kalabari, Nigeria.

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INTRODUCTION

The Kalabari Kingdom, also called Elem Kalabari, is the independent traditional state of the Kalabari people, an Ijaw ethnic group, in the Niger River Delta. It is recognized as a traditional state in what is now Rivers State, Nigeria, West Africa [1]. According to one tradition, the Kalabari people originally came from Calabar (called "Old Calabar" by the Europeans), a site further to the east occupied by Efik people. The Efik themselves say the name "Calabar" was given to their town by the Europeans [1]. Other traditions say Kalabari was founded by Ijo settlers from Amafo, on the west bank of the New Calabar River, and that they were joined there by settlers from other communities [1]. The people occupied a series of islands among the mangrove swamps of the delta, where they engaged in fishing and trading [2]. They would take the produce of the delta

region up the New Calabar and Imo rivers, and exchange them for food and goods of the hinterland.

The earlobe is the lower part of the auricle, it consists of fibrous tissue, fat and blood vessel. It is easily pierced for taking small blood samples and a popular site for wearing ornaments like earrings [3]. The earlobe is important in physical anthropology as it is helpful in defining population standard, otomorphology for identifications and it plays a vital role in forensic investigation. It also gives information on the type of genes expressed in an individual. In documenting anthropological characteristics of a population, the earlobe attachment is one of the anthropological parameters that is considered. Indigenous populations in Nigeria have had some of their anthropological features documented. Hence, this study was aimed at documenting the earlobe attachment in among the Kalabari people. This study would unveil the characteristic pattern as seen in the population.

There are previous studies on earlobe attachment in diverse regions of the world [4-12].

MATERIALS AND METHODS

The study was descriptive and cross-sectional which involved a total of 1,342 subjects which comprised 671 males and 671 females who were sampled conveniently. The participants were all from Kalabari ethnic group in Rivers State (south-south) Nigeria. All subjects included in the study were indigenes of the Kalabari extraction, participants who

had distortions or any form of structural anomaly of the external ear were excluded.

Data was collected from the participants based on consent, the earlobe of the participants were observed and recorded with the subject standing in anatomical position, both earlobes were observed from lateral view. The data was classified into attached and free earlobes. All observations were carried out by the same investigator in order to minimize bias and error in identification and classification of the earlobe type in volunteered individuals.



Fig 1: Attached earlobes



Fig 2: Free earlobes

Ethical Clearance

Before observation was carried out, a verbal consent was obtained from the families after the aim and procedure of the study was properly understood by the families. A letter of informed consent was obtained and approved by an ethical committee of the department of Human Anatomy, University of Port Harcourt and also presented to the families.

Data Analysis

The statistical analysis was done using statistical package for social sciences (SPSS) version

25. The simple descriptive statistical tool was used for descriptive statistics, and chi square test used to test for association between variables, P at 0.05, 95% confidence interval.

RESULTS

The result of the present study on earlobe pattern amongst the population of Kalabari ethnic group in Rivers State are presented on Table 1.

Table 1: The distribution of earlobe attachment based on gender and in the total population

Earlobe attachment	Male n(%)	Female n(%)	Total n(%)
Free/Detached/Unattached	390(58.1)	407(60.6)	797(59.4)
Attached	281(41.9)	290(39.4)	571(40.6)
Total	671(100.0)	671(100.0)	1,342(100.0)

DISCUSSIONS

Summary of results

In Table 1, the distribution of earlobe attachment based on gender and total population showed thus: males [free 390(58.1%), attached 281(41.9%), total 671(100.0%)]; females [free 407(60.6%), attached 290(39.4%), total 671(100.0%)]; Total population gave thus [free 797(59.4%), attached 571(40.6%), total 1,342(100.0%)].

Implication of Findings

The result of the study showed that the ratio of attached earlobe in males to females is 20:21. The females had more attached earlobes than the males, although the difference was not much. This further means that for every 20 males who have attached earlobes, there are 21 females who have attached earlobe. Similarly, for every 16 males who have free/detached earlobe, there are 17 females with a free/detached earlobe. The study indicates a difference in the mode of attachment of the earlobes, however, the difference is not significant in the attachment between both genders. This suggests that there is no sexual dimorphism in the distribution of the earlobe attachment. Hence, cannot be used as a means of identification when the gender of a person is not known. The attached and detached (free) earlobes were more frequent in the females than the males. This finding contradicts the report of Ese *et al.*, [7] who stated that the males portrayed the highest frequency distribution of attached earlobe, while the females showed more of free earlobe. However, this study affirms findings from previous reports [10-12].

In general, in the total population, the ratio of free (detached) and attached is 8:6. The study showed that free (detached/unattached) earlobe was more frequently distributed than the attached among the Kalabari people. This may be taken as the anthropological feature of the earlobe attachment for the people of Kalabari. These findings of the current study negate the reports of Rubio *et al.*, [5] who stated that the attached earlobe was more frequent than the detached. However, this current study collaborates the report of Dutta *et al.*, [6]. However, the study collaborates the reports of previous authors [8, 9].

CONCLUSIONS

The result of the study revealed that the ratio of attached earlobe in males to females is 20:21. The females had more attached earlobes than the males,

although the difference was not significant. The attached and detached (free) earlobes were both more frequent in the females than the males. In general, the ratio of free (detached) and attached is 8:6, which showed that free (detached) earlobe was more frequently distributed than the attached pattern among the Kalabari people.

Conflict of Interest: The authors declare that there is no conflict of interest.

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