

## PREVALENCE OF FACIAL DIMPLES AMONG THE NIGER DELTANS IN NIGERIA

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### ABSTRACT

**Aim:** The purpose of this study was to determine the prevalence of facial dimples among the Niger Deltans in Nigeria.

**Methods:** This is a cross sectional type of descriptive study. The nature and scope of this study encompassed 2304 subjects (1147 males and 1157 females) who were observed for the presence of cheek and chin dimples, by means of physical examination and structured questionnaires. The multistage sampling technique was used for the study. Data analysis was carried out using Statistical Package for Social Sciences (SPSS), version 18.0.

**Results:** The results revealed that a higher percentage of the study population (1447; 62.81%) did not present the dimple's trait while a lower percentage of the population (857; 37.20%) did. The gender difference in the distribution of the dimple's trait was not significant ( $P > 0.05$ ).

**Conclusion:** This study showed a higher prevalence of facial dimples among females than males.

**Key words:** Facial, dimples, Niger Deltans, Nigeria

### INTRODUCTION

Cheek dimples are caused by the presence of dermocutaneous insertion of the fibers of the inferior bundle of the double or bifid zygomaticus major muscle. Either or both of the cheeks can present with one or more dimples. Dimples occurring on both cheeks are more common than only one cheek (Pessa et al., 1998). Dimples on cheeks enhance facial beauty and expression. They occur in both sexes with no particular preponderance, may express unilaterally or bilaterally and are genetically inherited as a dominant trait (Argamaso, 1971; Daponte et al., 2004). Dimples vary in how obvious they are. Wiedemann (1990) suggests that their appearance may be affected by circulation, body weight or muscle tone, although he did not cite any evidence for this. He described several individuals who had dimples as children and lost them by adulthood. This would make it impossible to group people into two distinct types, having dimples versus not having dimples. Winchester (1951) claimed that dimples are dominant to non-dimples, but with the complicating factor of variable expression. A study was done on cheek dimples on Greek children and adolescents (Daponte et al., 2004). The prevalence of facial dimples

amongst the Yorubas in South-Western Nigeria has been investigated (Omotoso *et al.*, 2010). The incidence of cheek dimples among South-South, South-East and South-West Indigenes of Nigeria have been documented (Oladipo and Amangi-Peters, 2005; Omotoso, 2010). A research considered the incidence and heredity of chin dimples in a Nigerian population (Omotoso and Oyewopo, 2010). There is dearth of data documented on the prevalence of facial dimples among the Niger Deltans. This study will provide baseline data for forensic anthropologists and cosmetic surgeons. The objective of this study was to determine the prevalence of facial dimples among the Niger Deltans in Nigeria. The Niger Delta is the southernmost region of Nigeria. Although it occupies ninety percent of the Nigerian coastline, it is specifically between the Mahin River estuary in the west and the Cross River estuary in the east. The region has been producing oil since 1956 (Enemugwem, 2010).

### MATERIALS AND METHODS

This study was based on data collected from Niger Deltans. This cross sectional type of descriptive study was carried out using a total of

2304 subjects (1147 males and 1157 females). The multistage sampling technique was used for the study. Informed consent was obtained from each subject. Ethical approval for this study was obtained from the Anatomy Department Research and Ethics Committee in the Delta State University, Abraka. Each subject was asked to smile. Those with dimples in one or both cheeks were noted. Data collection was

done between the first day and the last day of the months of March and July respectively in the year 2013. Data analysis was carried out using Statistical Package for Social Sciences (SPSS) version 18.0. A comparison of the prevalence of facial dimples between the sexes was carried out using chi square. A 95% confidence interval was used and statistical significance was set at  $p < 0.05$ .

## RESULTS

Table 1: The distribution of dimples among the Niger Deltans

GENDER	FREQUENCY	POSITIVE	NEGATIVE	TOTAL
MALE	Count	410	737	1147
	%	17.80	31.99	49.78
FEMALE	Count	447	710	1157
	%	19.40	30.82	50.21

Table 1 admits that a higher percentage of the study population (1447; 62.81%) did not present the dimple's trait while a lower percentage of the population (857; 37.20%) did. The gender difference in the distribution of the dimple's trait was not significant ( $P > 0.05$ ).

## DISCUSSION

The incidence of cheek dimples in Niger Delta was seen as 37.2%. The present survey showed that cheek dimples occurred more frequently in females than males. The present study concurred with the trend in Southern Nigeria, where the incidence of bilateral and unilateral types of cheek dimples occurred more frequently in females than males. In Southern Nigeria, a male is more likely to have a unilateral left cheek dimple than a right cheek dimple, while a female is more likely to have a unilateral right cheek dimple than a left dimple (Oladipo and Amangi-Peters, 2005; Omotoso, 2010). Omotoso et al., (2010) in their survey, saw that 7.2% of the south-western Nigerian population studied had both cheek dimples and chin dimple, as it was found to be present in a total of 36 out of 500 south-western Nigerians. The incidence was higher in females than males. It was observed that the incidence of cheek dimples in Southern Nigeria stood at 29.4%, 37% and 37.7% in the South-West, South-South and South-East respectively (Omotoso et al., 2010). The incidence of the double zygomaticus major muscle was 34% in a certain study, as it was found to be present in 17 of 50 cadaver dissections (Pessa et al., 1998).

## CONCLUSION

This study showed a higher prevalence of facial dimples among females than males.

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