A STUDY ON CRANIOFACIAL DIMENSIONS OF OGBAS AND IBANIS OF RIVERS STATE NIGERIA.

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ABSTRACT

The aim of this study is to document the mean facial height, nasal width and height, mandibular height and width, maxillary height, orofacial height, head length, head circumference and head breadth of adult Ogbas and Ibanis of Rivers State in Nigeria and to provide a comprehensive data which will be of great importance in clinical practices, forensic anthropology, genetics and paleoanthropological studies. A total of one thousand (1000) adults comprising of 250 males and 250 females for each ethnic group with age ranging from 18-60 years old were randomly selected for this study. The results showed that Ogbas had mean head circumference of 68.80cm, head length 17.88cm, head breadth 13.41cm, facial height 10.17cm, nasal height 3.87cm nasal width 3.68cm, maxillary height 1.48cm, mandibular height 4.31cm, mandibular width 8.09cm and orofacial height 5.74cm while mean head circumference for Ibanis were 67.16cm, head length 17.85cm, head breadth 13.29cm, facial height 10.55cm nasal height 4.05cm, nasal width 3.30cm,maxillary height 1.51cm, mandibular height 4.20cm, mandibular width 8.26cm and orofacial height 5.20cm. Statistical analysis using student's z-test showed that Ogbas were significantly higher in parameters such as head circumference, head length, head breadth, mandibular height, mandibular width and orofacial height while the Ibanis were significantly higher in parameters such as facial height, nasal width, nasal height and maxillary height ($P<0.05$) and it also indicates sexual dimorphism with significantly higher values in almost all the parameters in Ibani males compared to Ibani females ($P<0.05$) while the Ogbas females had significantly higher values in

almost all the parameters compared to Ogba males which shows sexual dimorphism (P<0.05). This study will serve as the basis for future studies on other Nigerian ethnic group.

KEYWORDS: craniofacial dimensions, Ibanis,Ogbas, paleoanthropology, Rivers State, sexual dimorphism.

INTRODUCTION

Ogba/Egbema/Ndoni Local Government Area (ONELGA) is one of the local government of Rivers State. It is located at the extreme North-Western fringe of Rivers State. It comprises of Ogba, Egbema, Ndoni as Omoku as its capital. They are great farmers and fishermen and they speak distinct but familiar language. While Ibani now known and as Bonny is a town and local government area in South-East Nigeria. They are great fishermen. Anthropometry is the study of physical variations in man through measurable parameters used to characterize race and tribes, and for clinical/prediction/Forensic anthropometry. Therefore craniofacial anthropometry is a technique used in physical anthropology comprising precise and systematic measurement of the bones of the human skill. (Havilland, 1999). The human face is used for expression, appearance and identify amongst others. It is widely recognized at the features which best distinguishes a person, often at first glance. One of the primary functions of the face is physical appearance. It is a well known fact that facial features differ amongst different races and ethnic groups. For evaluation of deviation in craniofacial morphology, standards of anthropometrical measurements should be established for a particular population (Basciftel *et al.*, 2004). Facial parameters such as facial, nasal, maxillary, mandibular and Oro facial heights which are measurement of these parts of the face are the utmost importance in determining the average or normal for each population.

Oladipo *et al*., (2009) reported that the nasal index of male Andonis and Okirikas were 79.83 and 86.23 respectively and female Andonis and Okirikas were 83.77 and 86.46 respectively. Another study was carried out with a total of 200 subjects consisting of 110 males and 90 females by Didia and Dapper (2005). They reported that the facial height for males was 12.23 ± 3.39cm, nasal height 4.50± 1.23 cm, maxillary height 2.44± 0.66cm, mandibular height 4.49± 1.23cm and orofacial height 6.90± 1.89 cm. The figures obtained for female subjects were facial height 11.77± 3.53cm, nasal height 4.48± 1.37cm, maxillary height 2.30± 0.69cm, and mandibular height 4.20± 1.26cm and orofacial height 6.32± 1.91 cm. The values obtained for males were found to be significantly higher than the corresponding female values No report exists on the craniofacial parameters of the Ogba and Ibani ethnic group hence the need for this study. Furthermore this study will provide the datas on head length, head breadth, head circumference, Nasal height Nasal width, mandibular height, mandibular width, maxillary height, orofacial height, and facial heights, of the Ogbas and Ibanis of

Nigeria which could be used as anthropometric reference values in clinical practices (plastic surgery, and orthodontics) and in forensic medicine and also set the pace for further investigation.

MATERIALS AND METHODS

The present study was carried out in Bonny and Ogba communities (Omoku) in Rivers State of Nigeria. This study was carried out on Adult Ibanis and Ogbas who are selected at random from the above named communities. A total of one thousand (1000) adults (18-60 Years) comprising five hundred (500) subjects for each ethnic group. That is two hundred and fifty (250) males and two hundred and fifty (250) females were randomly selected from each ethnic group. All the subjects used for this study had normal craniofacial configuration. Subjects with any craniofacial abnormality such as macrocephaly, microcephahy, telecanthus, hypertelorism e.t.c. or prior craniofacial surgery were excluded. All the subjects used for this study gave their consent. The materials used for this study were: spreading caliper, sliding caliper, non-stretchable tape. The subject was seated comfortable on a chair with his/her head at the same level as the examiners head. The head circumference (the distance between the glabella and occipital protuberance) was determined by having the subject look straight at the examiner while the tape was used to swathe around the occiput to the anterior portion of the skull. The head length was measured with the help of a spreading caliper from glabella to union. Head breadth was measured as the maximum transverse diameter between two euryon using a spreading caliper.

All the facial parameters were taken with the aid of sliding caliper as follows: Facial height was measured as the distance between the nasion of the nose and the menton of the mandible also known as the gnathion (A+B+C). Nasal height was measured as the distance between the nasion and anterior nasal spine (A). Nasal width was measured as the distance between two alar. Maxillary height was measured as the distance between the anterior nasal spine and the junction between the upper and lower lips (B). Mandibular height was measured as the distance between the junction of the upper and lower lip and the menton (C). Mandibular width was measured as the distance between the mention and the mandibular angle. Orofacial height was measured as the distance between the anterior nasal spine and the menton. It is also gotten as the sum of maxillary and mandibular heights (B+C). Data obtained from measurements of the head circumference, head length, head breadth, facial height, Nasal height, nasal width, maxillary height, mandibular height, mandibular width and Orofacial height for normal adult Ogbas and Ibanis were analyzed using simplified statistical analysis/formular (s) while test of significance was done using Z – test (SPSS) at 5 – over critical level of ± 1.96.

RESULTS

The results of this study are shown in tables 4.1-4.3.Table 4.1 shows the mean for Ibanis both males and females with the mean for Head circumference as 67.02cm and 70.60cm, head length 17.86cm and 17.90cm, head breadth 13.59cm and 13.22cm, Facial height

10.45cm and 14.19cm, nasal height 3.86cm and 3.87cm, nasal width 3.82cm and 3.54cm, maxillary height 1.57cm and 1.39cm, mandibular height 4.85cm and 3.77cm, mandibular width 8.28cm and 7.89cm and Orofacial height 5.94cm and 5.55cm respectively.

Table 4.2 also show the mean for Ogbas both males and females with the mean for head circumference as 66.51cm and 68.00cm, head length 17.80cm and 17.90cm, head breadth 13.29cm and 13.30cm, facial height 10.61cm and 10.46cm nasal height 4.07cm and 4.03cm, nasal width 3.81cm and 3.78cm, maxillary height 1.60cm and 1.45cm, mandibular height 4.18cm and 4.22cm, mandibular width 8.22cm and 8.31cm and Orofacial height 5.09cm and 5.39cm respectively.

Table 4.3 shows the comparative analysis of the craniofacial measurement between the both ethnic groups. It was observed that the Ogbas were significantly higher in parameters such as head circumference, mandibular width and Orofacial height while the Ibanis were significantly higher in parameters such as facial height, nasal height, nasal width and maxillary height ($p<0.05$) Table 4.4 is a comparative table of various craniofacial parameters of Ogba and Ibani ethnic group and other Nigerian ethnic groups along with different population of the world previously studied. From the table it is very clear that each ethnic group or tribe has its characteristic craniofacial configuration.

Table 4.1: MEAN AND STANDARD DEVIATION OF CRANIOFACIAL PARAMETERS OF IBANIS SUBJECTS BY AGE

PARAMETERS	SEX	MEAN /SD	AGE 18 - 20	AGE 21 - 25	AGE26 - 30	AGE31 - 35	AGE 36 - 40	AGE 41 - 45	AGE 46 - 50	AGE50 - 55	AGE 55 - 60
		MEAN	65.87	63.73	68.79	65.04	61.27	64.38	65.84	69.42	78.00
	M	SD	11.31	7.67	13.59	11.79	3.37	12.11	8.61	13.72	11.09
		MEAN	70.84	68.96	65.88	60.39	67.59	69.54	66.36	70.74	70.75
HC	F	SD	12.98	13.80	9.43	2.08	11.80	6.97	7.62	12.73	14.45
		MEAN	17.82	17.91	17.77	17.83	17.46	18.10	18.08	17.85	17.40
	M	SD	0.96	1.14	0.98	1.03	0.84	0.94	1.04	1.08	0.84
		MEAN	17.75	17.90	17.94	17.64	17.94	17.91	17.68	18.03	18.04
HL	F	SD	1.03	1.52	1.03	1.34	1.44	1.19	1.14	1.37	1.31
HB	M	MEAN	13.32	12.27	13.26	13.75	13.39	13.05	18.08	13.31	13.50

		SD	0.86	3.26	0.84	3.05	0.80	0.74	0.88	0.84	1.08
	F	MEAN	13.09	13.23	13.32	13.07	13.75	13.21	13.32	13.33	13.27
		SD	2.37	0.96	0.75	1.00	1.06	0.46	1.11	0.94	2.66
	M	MEAN	10.60	10.68	10.67	10.78	10.47	10.44	13.24	10.82	10.45
		SD	0.41	0.29	0.38	0.33	0.52	0.47	0.56	0.17	0.41
	F	MEAN	10.50	10.46	10.33	10.17	10.58	10.49	10.61	10.52	10.40
FH		SD	0.46	0.51	0.57	0.55	0.27	0.45	0.35	0.58	0.52
	M	MEAN	4.11	3.72	4.09	4.30	4.14	4.06	10.55	3.94	3.95
		SD	0.41	0.14	0.40	0.44	0.36	0.39	0.46	0.37	0.31
	F	MEAN	3.95	3.98	3.87	4.01	4.08	4.02	4.12	4.14	3.97
NH		SD	0.37	0.43	0.36	3.89	0.43	0.44	0.44	0.59	0.43
	M	MEAN	3.86	3.78	3.83	3.85	3.91	3.60	4.04	3.78	3.70
		SD	0.24	0.12	0.27	0.12	0.24	0.31	0.27	0.32	0.23
	F	MEAN	3.76	3.48	3.58	3.67	3.67	3.74	3.73	3.95	3.86
NW		SD	0.20	0.40	0.27	0.24	0.30	0.44	0.45	0.40	0.32
	M	MEAN	1.61	1.59	1.59	1.64	1.56	1.38	1.43	1.52	1.61
		SD	0.16	0.14	0.22	0.14	0.15	0.25	0.23	0.19	0.16
	F	MEAN	1.63	1.46	1.32	1.41	1.45	1.44	1.49	1.46	1.50
MX H		SD	0.15	0.28	0.21	0.21	0.25	0.29	0.32	0.27	0.29
	M	MEAN	4.17	4.48	4.25	4.43	3.97	4.16	4.07	4.25	4.04
		SD	0.60	0.49	0.57	0.55	0.57	0.66	0.57	0.52	0.64
	F	MEAN	4.21	4.11	3.87	4.86	4.64	4.39	4.31	4.18	3.95
MAN H		SD	0.56	0.58	0.54	1.81	0.49	0.55	0.46	0.56	0.51

		MEAN	8.14	8.09	8.27	8.05	8.23	8.07	8.31	8.31	8.30
	M	SD	0.33	0.26	0.36	0.35	0.29	0.53	0.50	0.41	0.31
		MEAN	8.21	8.32	8.17	8.02	8.25	6.41	8.42	8.32	8.32
MAN W	F	SD	0.33	0.65	0.57	0.59	0.66	0.58	0.57	0.63	0.59
		MEAN	5.02	5.07	5.06	4.66	5.09	5.25	5.22	5.10	4.94
	M	SD	0.51	0.41	0.42	0.46	0.44	0.50	0.78	1.67	0.53
		MEAN	4.95	5.41	5.36	5.26	5.23	5.49	5.53	5.40	5.33
ORF H	F	SD	0.43	0.61	0.73	0.55	0.66	0.54	0.62	0.54	0.65
			(m)-35	(m)-13	(m)-77	(m)-12	(m)-41	(m)-21	(m)-25	(m)-20	(m)-
N=			(f)-33	(f)-31	(f)-31	(f)-14	(f)-16	(f)-34	(f)-25	(f)-40	(f)-26

HC=Head circumference, HL=Head length, HB=Head breadth, FH=Facial Height, NH=Nasal Height, NW=Nasal Width, MXH=Maxillary Height, MANH=Mandibular Height, MANW=Mandibular Width, ORFH=Orofacial Height, N=Sample size, SD=Standard Deviation, M=Male, F=Female.

Table 1: MEAN AND STANDARD DEVIATION OF CRANIOFACIAL PARAMETERS OF OGBA SUBJECTS BY AGE

AGE/ PARAMETERS	SEX		**18 - 20**	**21 - 25**	**26 – 30**	**31 - 35**	**36 - 40**	**41 - 45**	**46 - 50**	**50 - 55**	**55 – 60**
		MEAN	66.61	68.48	68.61	63.50	66.43	70.23	68.15	62.69	64.53
	MALE	SD	12.07	11.23	13.87	5.51	16.65	6.52	11.14	1.45	10.30
HC M	FEMALE	MEAN	68.45	69.70	70.61	70.81	78.15	66.79	73.19	89.75	78.42

		SD	12.90	14.32	13.83	14.36	15.32	11.65	11.81	5.63	15.48
		MEAN	17.84	17.52	17.91	18.83	17.14	18.44	18.27	17.69	17.97
	MALE	SD	1.11	1.45	1.35	1.47	0.69	1.09	1.21	1.14	1.26
		MEAN	17.76	18.06	17.76	17.97	17.95	18.00	18.38	18.00	17.83
HL M	FEMALE	SD	1.34	1.03	1.09	1.19	1.23	0.85	1.06	1.00	0.98
		MEAN	13.43	13.56	13.52	14.00	13.14	13.88	13.69	13.25	13.94
	MALE	SD	0.99	1.11	1.16	0.89	0.90	1.15	1.05	1.00	1.14
		MEAN	13.29	13.18	13.27	13.24	13.10	13.00	13.25	13.11	13.00
HB M	FEMALE	SD	0.75	0.77	0.74	0.90	1.29	1.04	0.71	0.58	0.89
		MEAN	10.45	10.40	10.53	10.39	10.72	10.40	10.55	10.20	10.51
	MALE	SD	0.39	0.27	0.37	0.16	0.47	0.29	0.32	0.37	0.28
		MEAN	9.77	31.00	9.90	9.81	10.10	9.67	10.09	10.79	9.63
FH M	FEMALE	SD	1.15	149.83	0.52	0.46	0.51	0.45	0.39	0.10	0.27
		MEAN	3.86	3.79	3.97	3.81	3.73	3.81	3.98	3.85	3.85
	MALE	SD	0.20	0.20	0.26	0.22	0.17	0.21	0.28	0.12	0.11
		MEAN	3.72	3.70	3.77	4.76	3.74	3.91	3.65	3.59	3.89
NH M	FEMALE	SD	0.43	0.41	0.43	5.31	0.38	0.48	0.48	0.14	0.18
		MEAN	3.86	3.75	3.81	3.82	3.89	3.71	3.97	3.83	3.79
	MALE	SD	0.25	0.19	0.13	0.19	0.17	0.20	0.35	0.15	0.15
		MEAN	3.55	3.53	3.55	3.58	3.47	3.57	3.62	3.26	3.50
NW M	FEMALE	SD	0.28	0.29	0.33	0.28	0.27	0.27	0.23	0.35	0.17
		MEAN	1.62	1.50	1.56	1.51	1.49	1.48	1.57	1.67	1.62
MX H M	MALE	SD	0.24	0.19	0.25	0.19	0.16	0.17	0.27	0.21	0.23

	FEMALE	MEAN	1.35	1.38	1.43	1.43	1.40	1.45	1.36	1.33	1.36
		SD	0.32	0.32	0.22	0.25	0.27	0.18	0.35	0.22	0.28
	MALE	MEAN	4.66	5.08	4.34	4.10	5.17	4.79	4.37	5.02	5.49
		SD	0.79	0.91	0.71	0.76	0.56	0.83	0.69	0.63	0.48
	FEMALE	MEAN	3.69	3.80	3.65	3.96	3.86	3.72	3.66	3.76	4.23
MAN H M		SD	0.36	0.40	0.35	0.37	0.41	0.28	0.36	0.32	0.38
	MALE	MEAN	8.21	8.39	8.38	8.28	8.53	8.49	7.92	8.27	8.25
		SD	0.45	0.39	0.47	0.24	0.63	0.52	1.40	0.43	0.27
	FEMALE	MEAN	7.84	7.91	7.77	8.00	7.99	7.98	7.78	8.19	8.12
MAN W M		SD	0.56	0.55	0.51	0.44	0.40	0.47	0.40	0.43	0.40
	MALE	MEAN	6.03	5.71	6.02	6.25	5.77	5.84	6.13	6.06	5.98
		SD	0.35	0.80	0.44	0.48	0.41	0.48	0.42	0.23	0.21
	FEMALE	MEAN	5.55	5.54	5.57	5.37	5.83	5.06	5.97	5.41	5.97
OR H M		SD	0.56	0.53	0.63	0.66	0.41	0.54	0.50	0.08	0.30

N= (m)-58 (m)-65 (m)-23 (m)-6 (m)-7 (m)-16 (m)-26 (m)-16 (m)-33
(f)-76 (f)-51 (f)-41 (f)-33 (f)-20 (f)-12 (f)-8 (f)-3 (f)-6

TABLE 4.4: COMPARISON OF VARIOUS CRANIOFACIAL PARAMETERS OF OGBAS AND IBANIS WITH OTHER POPULATIONS

Author/year	**Population**	**Head Circumference**	**Head Length**	**Head Breadth**	**Facial Height**	**Nasal Height**	**Nasal Width**	**Maxillary Height**	**Mandibular Height**	**Mandibular Width**	**Orofacial Height**	**Nasal Index**
Ozturk et al; (2006)	Turkish	58.0cm (M) 55.9CM (F)	-	-	-	4.7CM (M) 4.2CM (F)	-	-	-	-	-	-
Oladipo etal; (2007)	Nigeria Ogorus	-	-	-	-	3.99cm(M) 3.91CM (F)	-	-	-	-	-	-
Oladipo etal; (2008a)	Nigeria Ijaws	-	-	-	11.87cm (m) 10.70cm (F)	4.71CM (M) 4.43CM (F)	-	2.49CM (M) 2.39CM (F)	**4.**60CM (M) 4.28C**M (F)**	-	7.12CM(M) 6.50CM (F)	-
Oladipo etal; (2010)	Nigeria Ijaws	57.49cm (M) 56.25CM (F)	-	-	-	4.08CM (M) 3.89CM (F)	4.06CM(M) 3.79CM(F)	-	-	-	-	-
Erika etal; (2005)	Latvian	-	-	-	12.41cm (M) 11.76CM (F)	5.87CM (M) 5.67CM (F)	-	-	-	-	-	-
Shrestha etal (2009)	Rain and Limbu	- -	179.9mm(M) 171.32MM(F) 180.01mm(M) 171.94MM(F)	- -	- -	14.78MM(M) 12.91MM(F) 14.82MM(M) 13.91MM(F)	**38.36MM(m)** **36.01mm(F)** **38.08MM(M)** **37.73MM(F)**	- -	- -	- -	- -	-
Didia and Dapper (2005)	Adult Nigerians	-	-	-	12.28cm (m) 11.77cm (f)	4.50cm(m) 4.48cm(f)	-	2.44cm (m) 2.30cm (f)	**4.49cm (m)** **4.20cm(f)**	-	6.90cm(m)	-

											6.32cm(f)	
Olalipo etal; (2009a)	Nigerian Yoruba's	-	-	-	-	-	-	-	-	-	-	90.02(m) 83.38(f)
Oladipo etal; (2009c)	Nigerian Andonic and Okrikas	-	-	-	-	-	-	-	-	-	-	79.83(M) 83.77(F) 86.23(M) 86.46(F)
Franuscus & Long (1991)	Onges	-	-	-	-	-	-	-	-	-	-	77.3-97.7(M) 70.5-97.4(F)
Present study	Ogba Ibani	66.51 (M) 68.00 (F) 67.02 (M) 70.60 (F)	17.80 (M) 17.90 (F) 17.86 (M) 17.90 (F)	13.29 (M) 13.30 (F) 13.59 (M) 13.22 (F)	10.61 (M) 10.46 (F) 10.45 (M) 14.19 (F)	4.07 (M) 4.03 (F) 3.86 (M) 3.87 (F)	**3.81 (M)** **3.78 (F)** **3.82 (M)** **3. 54 (F)**	1.60 (M) 1.45 (F) 1.57 (M) 1.39 (F)	**4.18 (M)** **4.22 (F)** **4.85 (M)** **3.77 (F)**	8.22 (M) 8.31 (F) 8.28 (M) 7.89 (F)	5.09 (M) 5.39 (F) 5.94(M) 5.55 (F)	

M= Male , F= Female

DISCUSSION

Craniofacial anthropometry is important in the evaluation of facial trauma, facial defect, congenital and post traumatic deformities, and easy identification of certain congenital malformation and diagnosis of hypo/hypertelorism (Oladipo *et al*., 2008a). It is necessary to have local data of these parameters since this standard reflect the potentially different pattern of craniofacial growth resulting from racial, ethnic, sexual and dietary differences (Oladipo *et al.*, 2009b).

From the study, the mean craniofacial dimensions for Ogba males and females were: head circumference 66.51cm and 68.00cm, head length 17.80cm and 17.90cm,head breadth 13.29cm and 13.30cm, facial height 10.61cm and 10.46cm, nasal height 4.07cm and

4.03cm, nasal width 3.81cm and 3.78cm, maxillary height 1.60cm and 1.45cm, mandibular height 4.18cm and 4.22cm, mandibular width 8.22cm and 8.31cm and Orofacial height 5.09cm and 5.39cm respectively. The mean craniofacial dimensions of Ogba males were slightly significantly higher in some parameters while the females were significantly higher in some parameters.

The mean craniofacial dimensions for Ibani males and females were: head circumference 67.02cm and 70.60cm, head length 17.86cm and 17.90cm, head breadth 13.59cm and 13.22cm, facial height 10.45cm and 14.19cm,nasal height 3.86cm and 3.87cm,nasal width 3.82cm and 3.54cm, maxillary height 1.57cm and 1.39cm, mandibular height 4.85cm and 3.77cm, mandibular width 8.28cm and 7.89cm and Orofacial height 5.94cm and 5.55cm respectively. The craniofacial dimensions of Ibani males were significantly higher in some parameters while the females were significantly higher in some parameters ($P<0.05$).

The mean craniofacial dimensions Ogba females and Ibani females showed that Ibani females had significantly higher values than Ogba females in parameters such as head breadth, nasal height, nasal width, maxillary height, mandibular height and mandibular width, while the Ogba females had slightly significantly higher values in parameters such as head circumference, Orofacial height and facial height. While the mean craniofacial dimensions for Ogba males had significantly higher values than Ibani males in parameters such as head circumference, head length, head breadth, nasal width, mandibular height, mandibular width and Orofacial height, while the Ibani males had slightly significantly higher values in parameter such as maxillary height, nasal height and facial height.

Many investigators have shown significant differences in craniofacial complex among ethnic and racial groups (Hwang *et al*., 2002; Mlyajima *et al.*, 1996). Several other investigators (Hivthitis et al, 1994) suggested also that genetic factors exert a substantial influence on the individual differences in body shape and configuration and therefore should be considered in developing standards for various population(bascifitel et al., 2004).

From the study carried out on the Rai and Limbu population of Sunsari district or Nepal (Shrestha et al., 2009), the craniofacial parameters were measured in millimeters. Rai males and females had head length of 17.99cm and 17.13cm, nasal width 3.83cm and 3.60cm and nasal height 1.47cm and 1.29cm respectively. While the Limbu males and females had head length 18.00cm and 17.19cm, nasal width 3.80cm and 3.77 cam and nasal height 1.48cm and 1.39cm respectively. These values were significantly higher in head length and nasal width than those of the Ogbas and Ibanis while the values obtained from the nasal height were significantly higher in Ogbas and Ibanis than those of the Rais and Limbus ($P<0.05$).

CONCLUSION

This study have been able to establish the mean Craniofacial dimensions of adult Ogbas and Ibanis, it agrees with other ethnic group along with different population in the world as Craniofacial parameters are sexually dimorphic among the Ogbas and Ibanis and that

the Ogba males had significantly higher values in Parameters such as head circumference, head length and breadth, nasal width, mandibular height and width and Orofacial height than those of the Ibani males ($P<0.05$) while the Ibani Females has significantly higher values in parameters such as head breadth, nasal height and width, maxillary height, mandibular height and width than those of the Ogba females ($P<0.05$). knowledge of mean Craniofacial dimension is important in evaluation of age, sex and racial differences and in clinical applications. Thus plastic surgeons and Orthodontics should utilize this knowledge during facial reconstructive surgery and in recommending Orthodontic appliances when facial aesthetics is to be improved upon.

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