

## Full Length Research Article

### Anthropometric Study of Halba Tribe in Gariyab and District of Chhattisgarh State

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#### ABSTRACT

**Objective:** Anthropometric study of Halba Tribes in Gariyaband, District Of Chhattisgarh state.

**Method:** The present study was carried out on 100 Halba Tribes of Gariyaband Block Chhattisgarh region. The following data taken in to consideration, body weight, stature, height tragus, head length, head breath, head circumference, Physiognomic superior facial length, nasal breadth, nasal height, nasal depth, ear length, ear breadth external ocular breadth inter ocular breadth, bigonial breadth, bizygomatic breadth.

**Key words:** Gond, Tribe, Anthropometric, Circumference.

#### INTRODUCTION

Tribe has been defined as a social group usually with a definite area, dialect, cultural homogeneity and unifying social organization. The tribals form a substantial fraction of the Indian population. The anthropologists have started focusing their attention towards the anthropogenetic aspects of various tribal population found in different parts of India.

#### Chhattisgarh

It is one of the newer states in India, Formed in year 2000 It occupies 135,191 Sq. Km. and is inhabited by 2,55,40,196 persons (2011 Census) of which about 34% population is tribal (Govt. of C. G., 2014). The region is predominantly an agricultural area. About 80% of the working population is engaged in agriculture. Cultivable land (43.3%) and Forests (34%) constitute the two largest land uses in the region.

#### Gariyaband

Gariyaband is one of 27 districts of Chhattisgarh. has a population of 5,75,480 (2011 Census). The tribal inhabitants are 2,09,418 in number, which forms 36.39% of the total population (Joshua Project, 2015). The main tribes in this region are Gond, Halba, Bhunjia, Kamar, Kawar, Binjharwar etc. For the present study the tribes Halba have been chosen.

#### Halba

Believed to be of Dravidian origin, the tribe is proficient in cultivation and farm work. Agriculture, therefore, forms the mainstay of their economy. Educationally, the tribe is slightly more awakened in comparison to other resident tribes. Halbas in most places are civilized cultivators.

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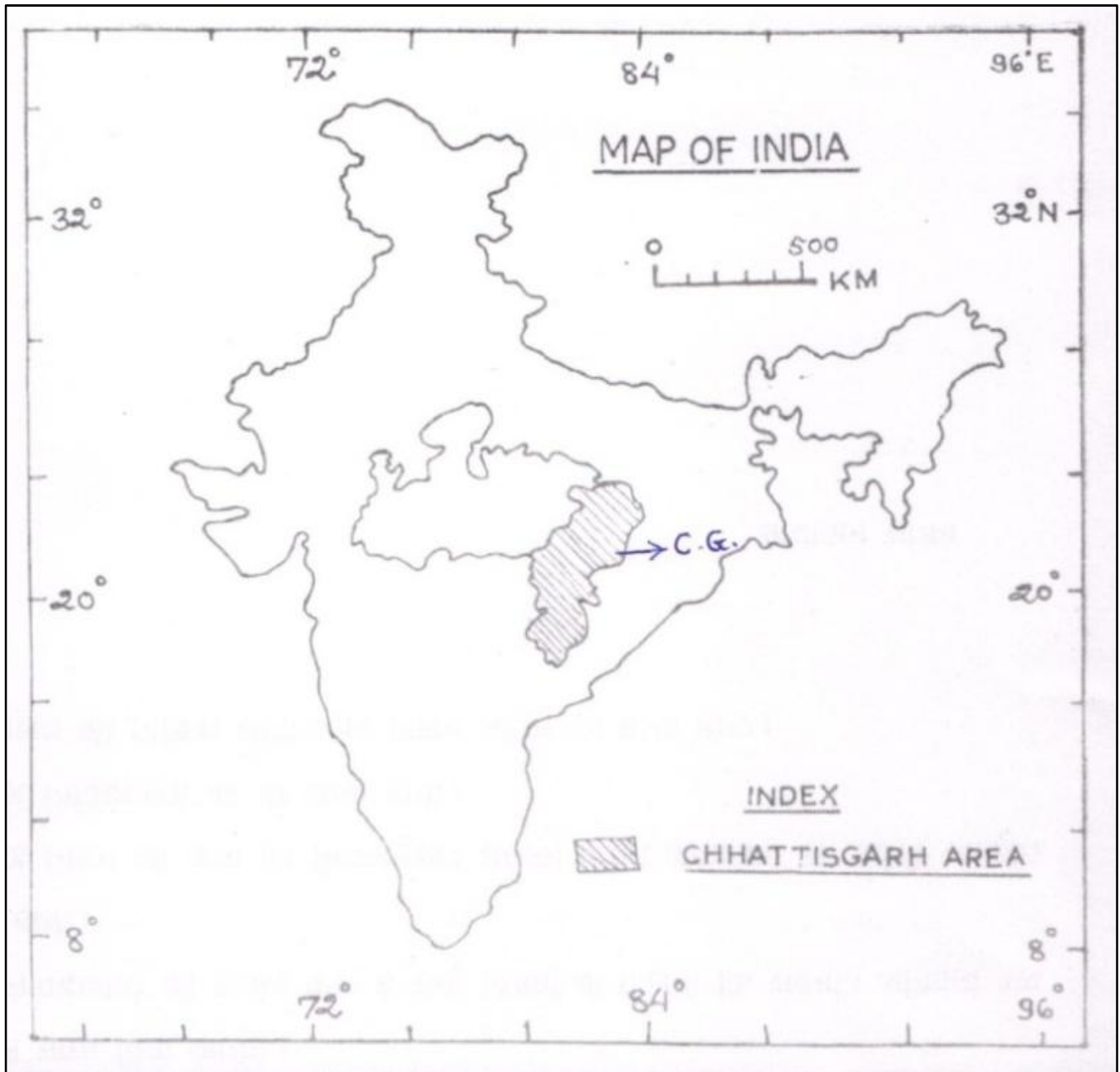
They are sub-divided in Bastaraha, Chhattisgarhiya and Marethia. Halbas permit widow marriage and divorce (Raipur District Gazetteer, 1973). Their language, Halbi is used in many areas as the mother tongue, although in some parts other dialects are also spoken. Total population in India in 888000 (Joshua Project, 2015).

#### MATERIALS AND METHODOLOGY

##### Sample

The subjects for this study were selected from an area extending to 10 Km. surrounding Gariyaband district headquarter. The age varied from 18 years to 45 years. Various anthropometric measurements were made on 100 Halbas living in the same area but not belonging to any of the specified tribes (Ahmad, 1976). Measurements were taken in their respective villages. Care was taken not to include very close relations like father, son and brothers in the sample. The subjects were free from deformities and were apparently healthy. Too old and too young subjects were not included in this study (Basu, 1970). Somatometric observations on Stature, head, face, nose, ear, eye were recorded by means of standardized anthropometric instruments. Weight was taken by portable weighing machine in kilograms. The following measurements were taken:

- Stature (ST in cm.)
- Height Tragus (HT in cm.)
- Maximum Head Length (HL in cm.)
- Maximum Head Breadth (HB in cm.)
- Head Circumference (HC in cm.)
- Bizygomatic Breadth (BZB in cm.)
- Bigonial Breadth (BGB in cm.)
- Morphological Upper Facial Height (MUFH in cm.)
- Morphological Facial Length (TFH in cm.)
- (Total Facial Height)



**Table 1: Statistical constants of the measurements (in cm) with their Respective standard errors**

TRAIT	RANGE	MEAN ± S.E.	S.D. ± S.E.	C.V. ± S.E.
WT in Kg.	42 - 68	52.32±0.6437	6.437±0.4551	12.3033±0.8599
ST	149 - 171.2	161.312±0.4452	4.452±0.3146	2.7601±0.1951
HT	141 - 159.3	148.904±0.4692	4.692±0.3317	3.1510±0.2228
HL	17.1 - 21	19.09±0.0952	0.953±0.0673	4.9911±0.3529
HB	13.6 - 16	14.7±0.0593	0.593±0.0419	4.0374±0.2854
HC	51 - 58.8	54.64±0.1662	1.662±0.1175	3.0424±0.2151
PFH	15.9 - 18.8	17.224±0.0783	0.784±0.0554	4.5512±0.3218
TFH	10.4 - 12.5	11.128±0.1714	1.715±0.1212	15.4097±1.0896
PUFH	6.2 - 9	7.166±0.0582	0.583±0.0411	8.1300±0.5748
MUFH	5.4 - 8	6.412±0.0576	0.577±0.0407	8.9971±0.6361
NH	4.3 - 5.9	4.964±0.0394	0.394±0.0278	7.9411±0.5615
NB	3.6 - 4.5	4.064±0.0232	0.233±0.0164	5.7258±0.4048
ND	1.7 - 2.5	2.11±0.0220	0.221±0.0155	10.4549±0.7392
EL	5.4 - 7	6.028±0.0404	0.404±0.0286	6.7103±0.4744
EB	2.6 - 4	3.242±0.0327	0.328±0.0231	10.1048±0.7145
EBB	9.1 - 10.5	9.724±0.0375	0.375±0.0265	3.8564±0.2726
IBB	3 - 3.8	3.386±0.0245	0.246±0.0173	7.2563±0.5131
BGB	10 - 11.5	10.83±0.0518	0.518±0.0366	4.7894±0.3386
BZB	13 - 14.5	13.714±0.0412	0.412±0.0291	3.0078±0.2126

n = Total number, S.E. = Standard Error, S.D. = Standard Deviation,  
C.V. = Coefficient of Variation

**Table 2. Statistical constants of the Indices with their Respective standard errors**

Trait	Range	Mean ± S.E.	S.D. ± S.E.	C.V. ± S.E.
Cephalic index	67.14-90.05	77.1574±0.4053	4.0537±0.2866	5.2538±0.3714
Nasal index	66.66-95.45	81.6994±0.6671	6.6713±0.4717	8.1656±0.5773
Ear index	44.44-66.66	53.9861±0.4740	4.7402±0.3351	8.7804±0.6208
Total facial index	73.23-95.38	82.9608±0.4438	4.4387±0.3138	5.3503±0.3783
Upper facial index	38.57-56.33	46.7878±0.3869	3.8691±0.2735	8.2694±0.5847
Jugo-mandibular index	71.83-85.71	79.0142±0.2910	2.9108±0.2058	3.6838±0.2604

- Physiognomic Facial Height (PFH in cm.)
- Physiognomic Upper Facial Height (PUFH in cm.)
- External Biocular Breadth (EBB in cm.)
- Internal Biocular Breadth (IBB in cm.)
- Nasal Breadth (NB in cm.)
- Nasal Height (NH in cm.)
- Nasal Depth (ND in cm.)
- Nasal Length (NL in cm.)
- Ear Length (EL in cm.)
- Ear Breadth (EB in cm.)

From these observations, certain indices and relative proportions of various parts of the body were calculated.

**Observations**

Table 1 shows mean values of 19 characters in Halba population with standard deviation, coefficient of variation and standard error from these observation, different dimensions and indices have been calculated and statistically analyzed.

The important measurements are discussed below:

**Table 3. Stature**

Class	Range in cm.	No.
Very Short	130 – 149.9	2
Short	150.0 – 159.9	44
Below Medium	160.0 – 163.9	22
Medium	164.0 – 166.9	22
Above Medium	167.0 – 169.9	8
Tall	170.0 – 179.9	2

**Table 4. Cephalic index**

Class	Range	No.
Hyperdolichocephalic	X – 70.9	6
Dolichocephalic	71.0 – 75.9	41
Mesocephalic	76.0 – 80.9	49
Brachycephalic	81.0 – 85.4	3
Hyperbrachycephalic	85.5 – 90.9	1
Utrabrachycephalic	91.0 – X	

**Table 5. Morphological Facial Index**

Class	Range	No.
Hypereuryprosopic	X – 78.9	18
Euryprosopic	79.0 – 83.9	40
Mesoprosopic	84.0 – 87.9	26
Leptoprosopic	88.0 – 92.9	14
Hyperlepstprosopic	93.0 – X	2

**Table 6. Morphological upper facial index**

Class	Range	No.
Hypereuryen	X – 42.9	18
Euryen	43.0 – 47.9	50
Mesen	48.0 – 52.9	26
Lepten	53.0 – 56.9	6
Hyperlepten	57.0 – X	0

**Table 7. Nasal - index**

Class	Range	No.
Hyperleptorhinae	X – 54.9	0
Leptorhinae	55.0 – 69.9	4
Mesorhinae	70.0 – 84.9	56
Chamaerhinae	85.0 – 99.9	40
Hyperchamaerhinae	100.0 – X	0

**Table 8. Jugo-mandibular index**

Class	Range	No.
Very Narrow	X – 69.9	0
Narrow	70.0 – 74.9	28
Medium	75.0 – 79.9	42
Broad	80.0 – 84.9	26
Very Broad	85.0 – X	4

**DISCUSSION**

Phenotype of every individual is determined by interaction of the genetic constitution and environment, which consists of social, economical and geographical factors. More or less the same is true for any subgroup of mankind. However, while discussing the tribal affinities and interrelationships cultural and linguistic factors should not be lost sight of. Present work deals with purely physical aspects of Halba tribe and so has its own limitations. However, the conclusions arrived at as a result of these investigations are relevant enough for critical appraisal by social anthropologists (Chatterjee, 1982). On the basis of the present anthropometric measurements and observation, Following results were obtained.

**Stature**

In the Halba tribe the frequency of ‘short’ stature was highest (44%) followed by ‘below medium’ (22%) and ‘medium’ (22%).

**Cephalic Index**

Mesocephalic element (49%) was predominant among the Halbas, closely followed by Dolichocephalic element (41%).

**Nasal Index**

Halbas are characterized by Mesorhinae (56%) to chamaerhinae (40%) nose.

**Upper Facial Index**

Among Halbas, the percentage of ‘Euryen’ type of face was as high as 50%. Next was Mesen type (26%).

**Total Facial Index**

Total facial index of Halbas fell mainly in Euryprosopic group (40%). Next came the Mesoprosopic (26%)

**Conclusion**

Halbas of Gariyaband are 'short' to 'below medium' in height having a mean value of stature as 161.312cm. They have got mesocephalic head (49%) but the percentage of Dolichocephalic element (41%) is also quite high. They are characterised by Mesorhinae (56%) nose. Halbas in general have broader faces as evident by their upper facial and total facial indices.

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