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RESEARCH ARTICLE

Anthropometric Study Of Gond Tribe In Gariyaband, District Of Chhattisgarh State.

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Abstract

Objective- Anthropometric study of Gond Tribes in Gariyaband, District of Chhattisgarh State**.**

Method- The present study was carried out on 100 Gond Tribes of Gariyaband Block Chattishgarh 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.

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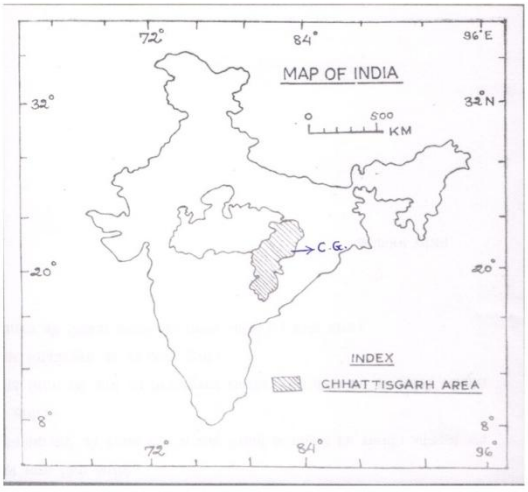
INTRODUCTION

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. [10]

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.

The main tribes in this region are Gond, Halba, Bhunjia, Kamar, Kawar, Binjhwar etc. For the present study the tribes Gond have been chosen.

Gond :

This is the principal tribe of the Dravidian family and perhaps the most important of the non-Aryan or forest tribes in India.[5]

The Gonds form the largest and most populous scheduled tribe in India and are widely distributed in the Central Provinces. Madhya Pradesh and Chhattisgarh shows the highest distribution of Gonds (78%) as compared to Orissa (10.4%), Maharashtra (7%) and the other five states (Andhra, Bihar, Karnataka, Gujrat and West Bengal) together 4.5%.[4]

The Gond population totaled 12.66% of the total scheduled tribes.
In Chhattisgarh population is 4,4080000 in last Census Gonds are mostly forest dwelling people and are at present settled agriculturists. 70.04% of the total are cultivators They cultivate rice Javar (creeds) and green dal (pulses) and 20.16% are agricultural laborers in rural areas.

The food habits of the Gonds are somewhat uniform. Their staple food is the gruel of millet and boiled rice. Both vegetarian and non-vegetarian foods are common among them. Tending goats & cattle are also common Beef taking is generally restricted, which indicates their orientation towards Hindu religion.[9]

Gonds follow tribal endogamy and clan exogamy. Monogamous marriage is common among the Gonds but polygamy is not altogether unknown. Child marriage is not absolutely absent. Divorce in the society is allowed. Re-marriage and widow marriage is also permitted.[9]

MATERIAL 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 Gond living in the same area but not belonging to any of the specified tribes.

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.[1]

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 :

(1) Stature (ST in cm.) :
(2) Height Tragus (HT in cm.) :
(3) Maximum Head Length (HL in cm.) :
(4) Maximum Head Breadth (HB in cm.) :
(5) Head Circumference (HC in cm.) :
(6) Bizygomatic Breadth (BZB in cm.) :
(7) Bigonial Breadth (BGB in cm.):
(8) Morphological Upper Facial Height (MUFH in cm.) :
(9) Morphological Facial Length (TFH in cm.) :
(Total Facial Height)
(10) Physiognomic Facial Height (PFH in cm.) :
(11) Physiognomic Upper Facial Height (PUFH in cm.):

(12) External Biocular Breadth (EBB in cm.) :
(13) Internal Biocular Breadth (IBB in cm.) :
(14) Nasal Breadth (NB in cm.) :
(15) Nasal Height (NH in cm.) :
(16) Nasal Depth (ND in cm.) :
(17) Nasal Length (NL in cm.) :
(18) Ear Length (EL in cm.) :
(19) Ear Breadth (EB in cm.) :

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

O B S E R V A T I O N S

Table 1 shows mean values of 19 characters in Gond 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:

Stature :-

Among the Gonds 'short stature' was found to have highest frequency (42%). Next came 'below medium' (19%), Medium (18%) and 'very short' (13%). The frequency of 'above medium' (8%) was low. The mean value of stature was 160.102 $\pm$ 0.7224cm. which falls in the 'below medium' class. The classification frequencies of stature are given in Table No. 1.

Cephalic Index :-

In Gonds Mesocephalic element (58%) predominated. Dolichocephalic element was (38%). There was no Hyperdolichocephalic and Hyperbrachycephalic element. Brachycephalic element was as low as 4%.

Nasal Index :-

Gonds are predominantly mesorhinae (66%). Both chamaerhinae (18%) and Leptorhinae (16%) are also seen. The mean value of Nasal Index was 79.9945 $\pm$ 0.6440 which is classified under Mesorhinae class.

Upper Facial Index :-

Gonds show high percentage (48%) of Euryen type of face. The occurrence of Mesen was also relatively high (38%). The percentage of Hypereuryen(8%) and Lepten (6%) were considerably low.

Total Facial Index :-

Total facial index of Gonds fell mainly in Euryprosopic (58%) group while the Mesoprosopic group was in 24%. The percentage of Hypereuryprosopic group (10%) and Leptoprosopic (8%) was low.

Table -1
STATISTICAL CONSTANTS OF THE MEASUREMENTS (in cm) WITH THEIR RESPECTIVE STANDARD ERRORS
GOND

n = 100

TRAIT	RANGE	MEAN $\pm$ S.E.	S.D. $\pm$ S.E.	C.V. $\pm$ S.E.

WT in Kg.	40 66	51.13± 0.6457	6.457± 0.4566	12.6299± 0.8930
ST	143.1 -169.8	160.102± 0.7224	7.224± 0.5108	4.5810± 0.3239
HT	139.1 -154.4	147.98± 0.4891	4.891± 0.3458	3.3278± 0.2353
HL	17.5 - 20.5	18.846± 0.0761	0.761± 0.0538	4.0627± 0.2872
HB	13.5 - 15.6	14.6± 0.0579	0.579± 0.0409	4.0243± 0.2845
HC	51- 57	54.22± 0.1651	1.651± 0.1167	3.0838± 0.2180
PFH	15.5 - 17.8	16.987± 0.0713	0.713± 0.0504	4.2757± 0.3023
TFH	10.1 - 12.1	11.244± 0.0531	0.531± 0.0375	4.7269± 0.3342
PUFH	6- 8.4	7.202± 0.0640	0.640± 0.0453	8.8989± 0.6292
MUFH	5.4- 7.3	6.44± 0.0526	0.526± 0.0372	8.1678± 0.5775
NH	4- 6.1	4.99± 0.0549	0.549± 0.0388	11.0136± 0.7787
NB	3.3- 4.5	3.989± 0.0314	0.314± 0.0222	7.8716± 0.5566
ND	1.8- 2.6	2.156± 0.0244	0.244± 0.0173	11.1520± 0.7885
EL	5.1- 6.6	5.90± 0.0415	0.415± 0.0293	7.1512± 0.5056
EB	2.5- 3.5	3.14± 20.028	0.280± 0.0197	9.2044± 0.6508
EBB	8.5 -10.3	9.548± 0.0473	0.437± 0.0334	5.0599± 0.3577
IBB	3- 3.7	3.311± 0.0174	0.174± 0.0123	5.3064± 0.3752
BGB	10.1-11.8	10.89± 0.0494	0.494± 0.0349	4.5408± 0.3210
BZB	12.3-14.4	13.594± 0.0508	0.508± 0.0359	3.7369±.02642

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

TABAL – 2
GOND STATURE

Class	Range in cm.	No.
Very Short	130 – 149.9	13
Short	150.0 – 159.9	42
Below Medium	160.0 – 163.9	19
Medium	164.0 – 166.9	18
Above Medium	167.0 – 169.9	8
Tall	170.0 – 179.9	0

TABAL – 3
GOND
CEPHALIC INDEX

Class	Range	No.
Hyperdolichocephalic	X - 70.9	0
Dolichocephalic	71.0 -75.9	38
Mesocephalic	76.0 – 80.9	58
Brachycephalic	81.0 – 85.4	4
Hyperbrachycephalic	85.5 – 90.9	0
Utrabrachycephalic	91.0 - X	0

TABAL – 4
GOND
NASAL - INDEX

Class	Range	No.
Hyperleptorhinae	X - 54.9	0

Leptorhinae	55.0 – 69.9	16
Mesorhinae	70.0 – 84.9	66
Chamaerhinae	85.0 – 99.9	18
Hyperchamaerhinae	100.0 - X	0

TABAL – 5
GOND
MORPHOLOGICAL UPPER FACIAL INDEX

Class	Range	No.
Hypereuryen	X - 42.9	8
Euryen	43.0 – 47.9	48
Mesen	48.0 – 52.9	38
Lepten	53.0 – 56.9	6
Hyperlepten	57.0 - X	0

TABAL – 6
GOND
MORPHOLOGICAL FACIAL INDEX

Class	Range	No.
Hypereuryprosopic	X -78.9	10
Euryprosopic	79.0 -83.9	58
Mesoprosopic	84.0 – 87.9	24
Leptoprosopic	88.0 – 92.9	8
Hyperlepstoprosopic	93.0 - X	0

TABAL – 7
GOND
JUGO-MANDIBULAR INDEX

Class	Range	No.
Very Narrow	X - 59.9	0
Narrow	70.0 – 74.9	14
Medium	75.0 – 79.9	40
Broad	80.0 – 84.9	44
Very Broad	85.0 - X	2

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 Gond 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.[7]

On the basis of the present anthropometric measurements and observation, Following results were obtained.

Stature :-

In the Gonds tribe the frequency of 'short' stature was highest (42%). Next came 'below medium' (19%).

Cephalic Index :-

Mesocephalic element (58%) was predominated among the Gonds Dolichocephalic element was (38%).

Nasal Index :-

Gonds are predominantly mesorhinae (66%).

Upper Facial Index :-

Gonds also show high percentage (48%) of Euryen type of face. The occurrence of Mesen was also relatively high (38%).

Total Facial Index :-

Total facial index of Gonds fell mainly in Euryprosopic (58%) group.

CONCLUSION :-

On the basis of the present anthropometric measurements and observation, it is found that Gonds are 'short' in height a mean value of stature 160.102cm. They have got Mesocephalic head (58%). The nose is mesorhinae (66%). Their faces are broad with Euryprosopic mean (58%).

References

1. Ahmad, S.H. : 1977; An anthropometric study of the Nagesias of Surguja (M.P.) J. of Physical Anthropology and Human Genetics 3:1:51

2. . Bhargava I. & Kher, G.A. : 1960; An Anthropometry Study of Central India-Bhils of Dhar District of M.P., J. Anat. Soc. India 9, 14-19

3. Chatterjee, M. : 1982; Comparative Anthropometry of Gond, Halba and Nontribal Population of Gariyaband Block of Chhattisgarh Region.

4. Cesus of India : 1981; Preliminary Report Madhya Pradesh District Census Hand Book - Raipur

5. Das, N.C. : 1979; Demographic Aspects of the Gonds Man In India 59:3:218

6. Majumdar, D.N. : 1941; Racial Affiliation of the Gonds of the Central Provinces. Jour. Royl. Asiat. Soc. Bengal Science, 7:35-56

7. Park, J.E. : 1980; Test Book of Preventive and Social Medicine 8th Ed. Sept. 1980

8. Rakshit, H.K. : 1974; Anthropometry of Bastar Tribes Man In India 54:2:101

9. Russell, R.V. & Hiralal : The Tribes and Castes of the Central Provinces of India

10. cgstate.gov.in/census