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The AB Ridge count Percentage Disribution of the Ntamante People of Boki LGA, Cross River State ,Nigeria.

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I. Introduction

Galton (1892) and Wilder (1902) were the first to study the hereditary basis of dermal patterns, suggesting that these ridge patterns are under genetic influence. AB ridge count had been linked with Schizophrenia.It is believed that in schizophrenics the number of AB ridge count is reduced. A number of studies have examined dermatoglyphic A-B ridge count as a possible marker for developmental disturbance in schizophrenia.

One part of the morphological variability of the a-b .ridge count is determined by intrauterine environmental influences acting during the period of ridge differentiation (Babler, 1978), when development of the brain, another ectodermal derivative, is also taking place (Rakic, 1988).

This research work is an ethnographic research.Ethnography (from Greek ἔθνος *ethnos* "folk, people, nation" and γράφω *grapho* "I write") is a branch of anthropology and the systematic study of individual cultures.Ethnography explores cultural phenomena from the point of view of the subject of the study.Ethnography is also a type of social research involving the examination of the behaviour of the participants in a given social situation and understanding the group members' own interpretation of such behaviour.

The AB ridge count is the ridge count most frequently obtained between tri – radii ‘a’ and ‘b’ and is referred to as a-b ridge count counting is carried out along a straight line connecting both tri-radial points

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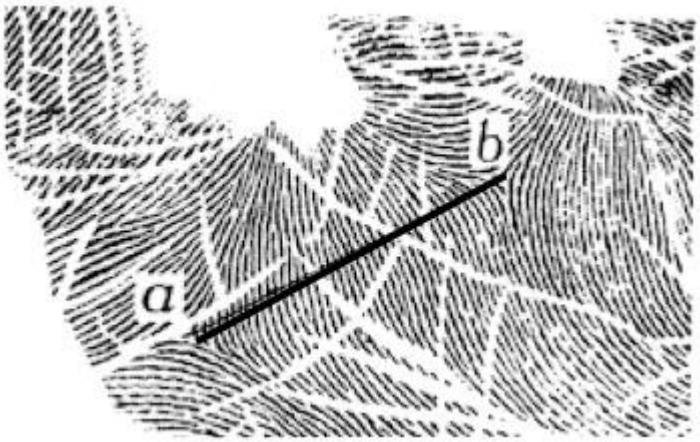

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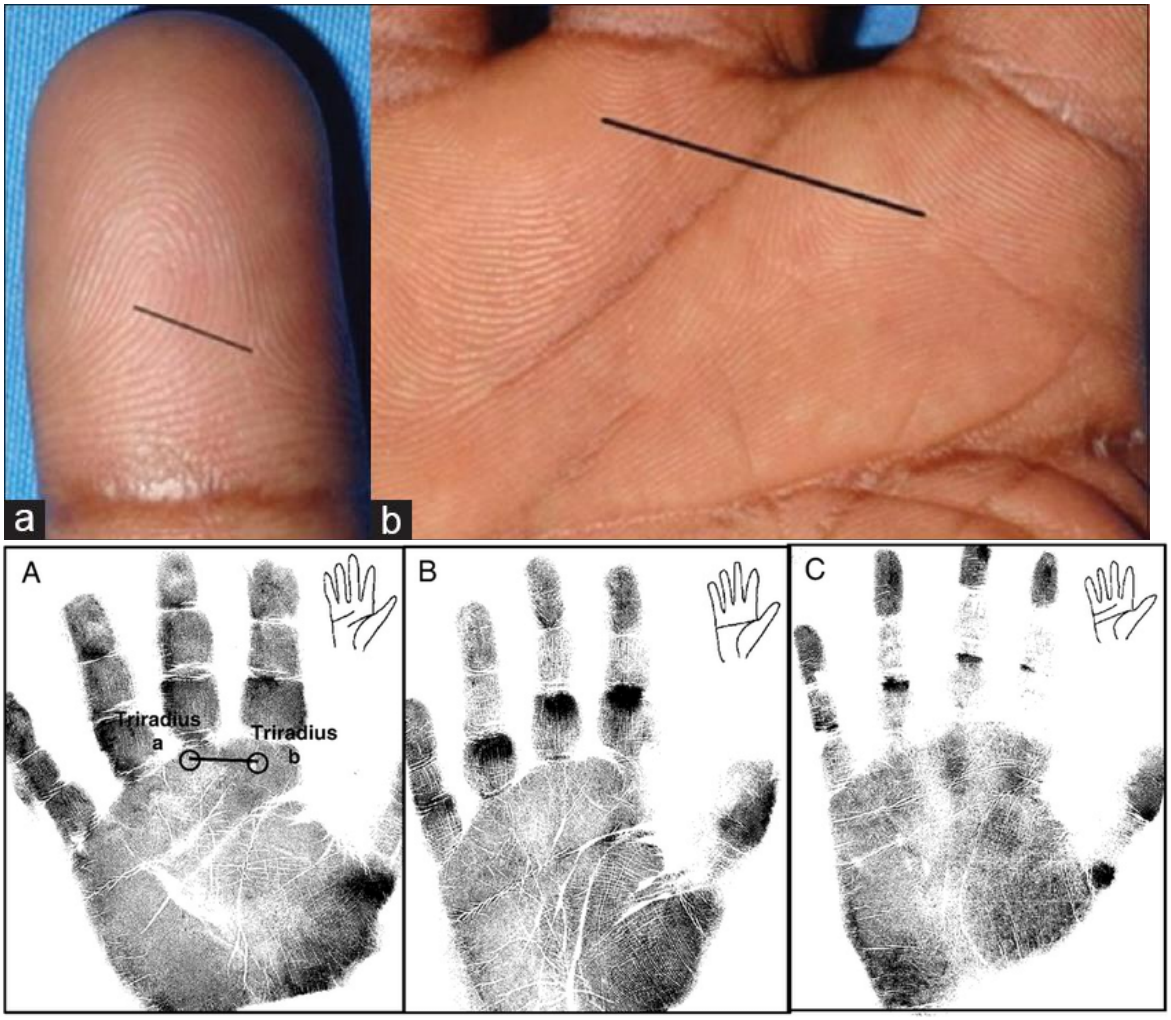

Developmental Anatomy of the hand

Foetal volar pads are mound shaped elevations of mesenchymal tissue situated above the proximal end of the most distal metacarpal bone on each finger, in each interdigital area, in thenar and hyposthenia areas of the palms. Secondary foetal pads may be found on the central palm or as pairs on the proximal phalanges. The formation of these pads is first visible on the fingertips in the sixth to seventh week of embryonic development, (Moore et al., 2006). During the twelfth and thirteenth weeks, while the pads begin to regress in relative size, the ridges begin to develop at the dermal-epidermal junction while the surface remains smooth. These primary dermal ridge subdivide to form more parallel ridges through the seventeenth week. During the twentieth week, the underlying patterns become reflected by identical configurations on the skin surface. (Mulvhill et al., 1969). Babler (1978)reported that ridge formation in the foetus begins at about three months of intrauterine life when the volar pads are at or near their peak development, and completed by sixth month of intrauterine life, when then sweat gland formation and gelatinization have began. Schaumann et al. (1976) pointed out that besides nerve and blood vessels, there are so many factors such as inadequate supply of oxygen to the tissue, deviations in the formation and distribution of sweat glands, disturbances in the proliferation of the epithelial basal layer and disturbances in gelatinization of epithelium as other factors that may influence epidermal ridge pattern. They also stated that environmental factors such as external pressure on the foetal pads and embryonic foetal finger movement could influence ridge formation.

COMPARATIVE ANATOMY

Similarities between humans and apes are evident in anatomy, brain structure, genetics, and biochemistry. The physical similarities between humans and apes are recognized in zoological taxonomy – the assignment of organisms to categories (taxa, singular, taxon) according to their relationship and resemblance, (Coplan et al., 2001; Conrad, 2004). Many similarities between organisms reflect their common phylogeny – their genetic relatedness based on common ancestry. In other words, organisms share features they have inherited from the same ancestor. Humans and apes belong to the same taxonomic superfamily, Hominnoidea

(hominoids). Monkeys are placed in two others (Ceboidea and Cercopithecoidea). This means that humans and apes are more closely related to each other than either is to monkeys, (Coplan et al., 2001; Conrad et al., 2004).

JUSTIFICATION FOR RESEARCH

Population diversity/ethnographic and racial studies, (Erickson et al., 2003; Carneiro, 2003; Crawford et al., 2014).The AB ridge count of the Ubangs had not been studied.

Specific Objective

To determine the A-B ridge count of the Ntamante People Boki LGA(male and female).

Materials and Method

Cross sectional simple random sampling method was adopted in selecting the
subjects

A total of two hundred samples were collected .

The sample size for this study was obtained using the formula;

$[n=z^2pq/d^2]$ (Naing , 2006)

Where:

n = the desired sample size

z= the standard normal deviation, usually set at 1.96 (=2.0)

p=the proportion in the target population having the particular trait (when no estimate 50% is used ; i.e. 0.05)

q= 1.0-p

d=degree of accuracy desired, usually set at 0.04

Therefore, $n= (1.96)^2(0.5)/(0.04)^2=800$. For the purpose of this study a total of two hundred (200) samples were collected for the Ntamantes ..

Materials

i. Questionnaires and oral interviews were used
ii. Carmel quick drying duplicating ink to collect the prints
iii. Inking slab
iv. Stamp pads for absorbing the ink
v. Cotton wool for easy spread of the endorsing ink
vi. Duplicating papers (A4) for collection of the prints
vii. Water and soap for washing of hands
viii. Hand lens for magnifying and reading the ridges and patterns
ix. Pencil for recording and drawing
x. Pen for recording and drawing
xi. Ruler for marking the outlines
xii. Calculator
xiii. Needle with a sharp point for counting the ridges

II. Methods

Steps in Obtaining the Prints;

The subjects were asked to clean their hands with soap and water. There were also asked to dry their hands but to leave some moisture.

i. Requisite amount of ink was rubbed on the stamp pad and was uniformly spread.
ii. The left hand of the subject was placed on the stamp pad which is placed on a hard surface.
iii. The left palm was examine for uniformity of the ink on the palmer surface of the hand.
iv. The right hand of the subjects were placed on the sheet of paper kept over the firm board from proximal to distal end. The palm is gently pressed between inter-metacarpal grooves at the root of the fingers and on the dorsal side corresponding to the thenar and hypothenar eminence. The palm was then lifted from the paper in the reverse order from the distal to the proximal end. The fingers printed below the palmar print. The tip of the fingers were rolled from the radial to ulnar side to include all the patterns.

The same procedure were repeated for the left hand on a separate paper

v. The print sheet were coded with research ID, age, sex and for group .

III. Results

Table I- Percentage frequency of AB ridge count for males and females In Ntamante

	DISTRIBUTION					
	MALES			FEMALES		
RIDGE COUNT	L	R	Mean±SD	L	R	Mean±SD
22	2.46	0	1.23±1.74	0	0	0±0
25	3.81	7.31	6.1±1.72	0	2.7	1.35±1.91
27	0	0	0±0	0	5.41	2.71±1.91
28	0	2.44	1.22±1.73	0	2.7	1.35±0.95
29	0	0	0	2.7	0	1.35±1.91
30	26.85	21.95	24.39±3.46	35.14	16.21	25.68±13.39
31	0	0	0	0	2.7	1.35±1.91
32	0	2.44	1.22±1.73	10.81	10.81	10.81±0
33	3.86	3.86	3.86±0	0	2.7	1.25±1.91
34	3.44	0	1.22±1.73	0	0	0±0
35	24.39	19.51	21.95±3.45	18.92	32.43	25.68±9.55
37	0	2.44	1.22±1.73	2.7	2.7	2.7±0
38	4.88	4.88	4.88±0	5.41	0	2.71±3.83
39	2.44	0	1.22±1.73	0	0	0±0
40	17.07	7.31	12.19±6.90	16.21	5.41	10.81±7.64
$\bar{X}$ =			4.34±7.90			6.05±9.10

Chisquare P value =16.30, Prob>chisq = 0.0122^{x}, R = 0.57

IV. Discussion of Results

The Result shows significant differences in both males and females and in both hands in both sexes .

The interpretation of prints was done according to Cummins et al., (1961) and by Penrose (1963) and includes identification of patterns, ridge counts , measurement of distances .Quantitative study consist of the study which data concerned can be analyzed in terms of numbers. **Finger ridge –** Ridge count is done by counting ridges along a straight line connecting the tri radial point and the point of the core. Ridges on the point are excluded during counting. The largest count is used in whorls and double loops. The a-b ridge count of arch and tented arch Patients with schizo phrenia have been reported to have lower a-b ridge counts compared to normal controls (Turek, 1990; Fañanás et al., 1990; Fañanás et al., 1996; Fearon et al., 2000). One study found that this association was especially marked in those without a family history of schizophrenia (Fañanás et al. 1990), and a second attempt at replication only found a sim-ilar trend (Fañanás et al, 1996). These findings are compatible with the suggestion that lower a-b ridge count in patients with schizophrenia represents the impact of an environmental risk factoris zero. Total finger ridge count (TFRC) is the sum of ridge count in 10 fingers, here also, in pattern with two tri- radii, the larger count is taken.

The A-B ridge count amongst the Ntamante people is within the normal range in both gender and hands.The incidence of Schizophrenia is expected to be very low amongst this group of people in Boki local government Area of Cross river State.

V. Conclusion

The A-B ridge count is both an ethnographic and a diagnostic tool in Anthroplogy in studying populations.

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