

Palmar dermatoglyphics of Nigerians residing in Lagos- Nigeria

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Abstract: The finger ridge configurations do not change throughout life of individuals by environment or age factors except in events such as bruises and cuts on the finger tips (Henneberg et al, 1997).

A sample size of 396 Nigerians residing in Lagos was obtained, 327 were males and 75 were females. The ink procedure was used to obtain samples and analyzed.

The result obtained showed that the ulnar loop had the highest percentage frequency in both thumbs of both hands (79.5%), followed by the whorls (42.4%), Arch (12.6%) and radial loop (9.3%) respectively. The mean percentage of patterns frequencies in all the ten digits of the hand was in this order; ulnar loop = 58.93%, whorls = 29.63%, Arch = 8.86% and radial loop = 2.5%.

This result tallies with data obtained from the ikwerres and okrika of river state and berber population, in morocco. It agrees partially with Danberno et al on the hausa ethnic group of Nigeria in terms of percentage frequencies distribution pattern of ulnar loop > whorls.

Keywords: Dermatoglyphics, digit, Lagos, loops, whorls

I. Introduction

Dermatoglyphics is a scientific study of papillary ridges in the palms of the hand and soles of the feet (Purkinje, 1823).

Sir Francis Galton (1889), a British anthropologist began his observation of finger prints as a means of identification. His attention had first been drawn to ridges in 1888 when he was studying the problems of person's identification.

Skin ridges are never duplicated in 2 persons even in identical twins similarities are closer among some individuals while in others the differences are marked. They are typical for higher primates but occur sporadically in other mammals (Henneberg et al, 1997).

Oguranti and Michael Sorgia (1984) carried out a research work on the Bodo people of Ogoni South – South Nigeria, their results revealed that whorls had the highest percentage frequency on the digits. No work had been done on Nigerians residing in Lagos state.

Lagos state is the commercial nerve centre of Nigeria a highly industrialized city. Samples were collected from Nigerians of varied ethnic group. This work is conducted to establish a reference data for Nigerians residing in Lagos.

II. Materials And Methods

A cross – sectional survey was carried out on Nigerians who had lived in Lagos for over 15 years. The ink procedure was applied in obtaining the prints. The sample size was 396 comprising of 327 males and 75 females.

The materials used include question, endorsing ink, stamp pad, firm support for the prints, magnifying lens and duplicating papers. Subjects were asked to wash their hands with soap and water for better prints. Starting with left hand, the hands were soaked with inks by placing the hands on a stamp pad soaked with ink on a firm support. The hands were transferred to the palm duplicating papers where prints were collected for analysis with the magnifying lens.

III. Results

Table 1- Percentage Frequency Distribution Of Digital Patterns In Nigerians Residing In Lagos
LEFT HAND RIGHT HAND

PATTERN	5	4	3	2	1	1	2	3	4	5	MEAN % OF PATTERN
ULNAR LOOP	225 =56.8 %	190 =48.0% %	25 =64.1 %	222 =56.1% %	315 =79.5 %	200 =50.5 %	200 =50.5 %	253 =53.9 %	176 =44.4 %	184 =46.5 %	= 58.93
RADIAL LOOP	4 =1.0% %	26 =6.6% %	8 =2.0% %	4 =1.0% %	2 =0.5% %	1(f))=1.25 %	4 =1.0% %	4 =1.0% %	37(3f) =9.3 %	9 =2.3% %	=2.5
WHORL	120 =30.3 %	136 =34.3% %	97 =24.5% %	148 =37.4% %	56 =14.1 %	61 =15.4 %	168 =42.4 %	100 =25.2 %	134 =33.8 %	154 =38.9 %	= 29.63
ARCH	48 =12.1 %	44 =11.1% %	37 =9.3% %	22 =5.6% %	21 =5.3% %	19 =4.8% %	22 =5.6% %	39 =9.8% %	49 =12.4 %	50 =12.6 %	= 8.86

IV. Discussion

The percentage frequencies for both hands as shown on table I indicates that the ulnar loop was most frequent (58.93%), followed by the whorl pattern (29.63), followed by archs and radial loop respectively. The ulnar loop were most prevalent on the thumb of both hands (79.5%). The middle finger of the left hand was next (64.1%) followed by the little finger of left hand (44.4%). The mean percentage of the pattern on both hands was as follows

Ulnar loop – 58.93%

Whorls – 29.63%

Arch – 8.86%

Radial loop – 2.3%

The radial loop was least present on the thumb of the right hand (0.5%) Arch was least present on the thumb of right hand (4.8%)

The whorls were least present on the thumb of the right hand (15.4%) the highest frequency of the arches was on the ring finger of the right hand (12.4%) the highest frequency of the radial loop was on the ring finger of the right hand (9.3%). The highest frequency of the whorls was on the wider finger of the left hand (37.4%).

The result obtained in the research work agrees with Danborn et al (2001) work on the hausa ethnic group of Nigeria in terms of their percentage frequencies of digital pattern viz ulnar loop being the highest (48.38%), followed by whorls (29.74%). The research work varied with result of danborn et al (2007) in terms percentage frequencies of the archs and radial loop. In this research work the percentage frequencies of pattern was least in radial loop not the archs as observed by panborn et al (2007).

The result obtained in this research work agrees with that of osunwoke et al (2008) on the dermatoglyphic patterns of okrika and ikwerre ethnic groups of Nigeria in terms pattern of percentage frequencies distribution of ulnar loop > Archs > Radial loop.

The result obtained here also tallies with what was obtain on the Berber populations of western high atlas (massakash) of morocco in terms of frequencies of pattern i.e Ulnar loop > whorls > Archs > Radial loop.

V. Conclusions

The dermatoglyphic pattern of the digits and palms of Nigerians residing in Lagos – Nigeria followed a particular pattern of percentage frequency which is ulnar loop > Whorls > Archs > Radial loops (79.5%), 42.4%, 12.4%, 9.3% respectively).



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