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RESEARCH ARTICLE

FINGER DERMATOGLYPHIC VARIATION STUDY AMONG THE YERUKULAS: A TRIBE OF ANDHRA PRADESH, INDIA

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ABSTRACT

This paper describes finger dermatoglyphics of 130 men and 130 women belonging to Yerukula Tribe, an endogamous population of Andhra Pradesh were studied for qualitative and quantitative finger dermatoglyphic characters. Among qualitative and quantitative characters, Bisexual and bimanual differences are also observed. This population records higher incidence of Ulnar loops followed by whorls.

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INTRODUCTION

A number of dermatoglyphic studies were carried out among tribes, although several reports are available on castes of Andhra Pradesh, only few are available on Andhra Tribe populations (Narahari, 1979; Mathew and Ram Mohan, 1981; Babu and Jaikishan, 1983; Reddy and Anuradha, 1984, Raghavaiah 1962, Srinadh 1977). In the present paper an attempt has been made to report the finger dermatoglyphic variables – finger patterns, ridge counts among the Yerukula Tribe (males and females) who are inhabiting in and around the Narsapuram Mandalam, west Godavari district of coastal Andhra Pradesh. Dermatoglyphics possesses greater potentialities as a tool for study ethnic variations due to its nature and extent of variability. Therefore an attempt has been made to inquire into the variation of Finger dermatoglyphic variation study among the Yerukula Tribe population of Andhra Pradesh. Yerukula, Kaikadi, Korwah a vagrant gypsy tribe, was bearing an evil reputation as professional criminals, pork sellers, basket makers and inhabiting the country between Krishna, Godavari and Narmada rivers. This yerukula are migrated to all over the state but basically these are from Prakasam, Krishna districts.

Actually, these tribes are criminals and dacoits. Anciently, these tribes are criminals, because they have no education no properties, no particular traditional occupation. That's why, they become criminals, thieves, kidnappers and dacoits. Ostensibly, the men of this tribe work as basket makers, mat makers, piggery, pork sellers, day labourers and musicians. In the Godavari districts, these tribes grow the pigs with paddy powder, vegetables, and they sell the pig meat or pork. This is the main occupation of these tribes. Some others are basket makers, mat makers, and daily labourers. While the women wander from village to village as future-tellers and as tatoosers. They speak a mongrel dialect, which appears to be a mixture of Tamil, Telugu and Konkani. Their huts generally funnel shaped, are made of date mats, twigs, palm leaves and coconut leaves. The men are scantily clothed, wearing a piece of cloth above the loin (gochi) and a dirty old turban on the head. The women wear sarees and have brass bangles on both arms.

MATERIALS AND METHODS

Bilaterally rolled finger ball prints of 260 unrelated yerukula individuals (130 males and 130 females) were collected in and around of West Godavari District of Andhra Pradesh.

Table 1. Distribution of Basic Finger Dermatoglyphic Study among Yerukula Tribe of Andhra Pradesh

Sex	Hand	Pattern Types			
		Whorl	Ulnar loop	Radial Loop	Arches
Males (n = 130)	R	130 (20%)	474(72.9%)	21(3.23%)	25(3.84%)
	L	116(17.84%)	484(74.4%)	23(3.53%)	27(4.15%)
	R+L	246(18.9%)	958(73.6%)	44(3.38%)	52(4%)
Females (n=130)	R	100(15.38%)	502(77.23%)	21(3.23%)	27(4.15%)
	L	135(20.76%)	440(67.69%)	25(3.84%)	50(7.69%)
	R+L	235(18.07%)	942(72.46%)	46(3.5%)	77(5.92%)
Male + Female (n= 260)	R	230(17.69%)	976(75.07%)	42(3.2%)	52(4.8%)
	L	251(19.31%)	924(71.07%)	48(3.6%)	77(5.92%)
	R+L	481(18.5%)	1900(73.07%)	90(3.46%)	129(4.96%)

² Bimanual – Male = 1.0662, Female = 16.5098, Total = 17.57² = Bisexual – Right side = 4.7931, Left Side = 10.4866, R+L = 15.279¹ p > 0.05; ²p > 0.01

Table 2. Distribution of papillary indices of Yerukula Tribe

Sex / Hand	Digital Indices		
	Finger Pattern intensity Index	Furhutas Index	Dankmeijers Index
Male R+L	14.0	86.1	10.2
Female R+L	13.3	66.7	15.0

Table 3. Frequency of Total Finger Ridge Count (TFRC) and Absolute Finger Ridge Count (AFRC) among Yerukula Tribe.

Sex	Mean ± S.E.	S.D ± S.E.	Variance
1.Total Finger ridge count (TFRC)			
Male	133.5 ± 3.4.	36.3 ± 2.4.	1317.7
Female	126.1 ± 3.6.	38.5 ± 2.5.	1484.4
2.Absolute Finger ridge count (AFRC)			
Male	173.4 ± 6.3.	67.1 ± 4.4.	4507.4
Female	164.3 ± 7.5.	80.7 ± 5.3.	6513.7

The Dermatoglyphic prints of finger and palm were collected by Ink method on dermatoglyphic sheets. Classification of finger pattern types was restricted to four main types, arches, ulnar loops, radial loops and whorls. The method of analysis were those of Cummins and Midlo (1961). In case of ridge counting the general adopted by Holt (1968) were followed for the analysis of data.

RESULTS AND DISCUSSION

The details of frequencies of pattern types are presented in table 1. Yerukula tribe shows a preponderance of loops. Females record higher frequency of arches (5.92%) and radial loops (3.5%) than males (4% and 3.38% respectively). However, males record higher incidence of ulnar loops (73.6%) and whorls (18.9%) than females (72.6% and 18.07% respectively). Significant bisexual differences are evident in this population. Left hands register higher frequencies of whorls (19.31%), radial loops (3.6%) and arches (5.92%) than right hands in which ulnar loops are more (75.07%). The bilateral differences are significant in females and also in the total mentioned in table.1. The values of quantitative characters like Finger Pattern intensity Index (FPII) occur more among males (14.0) than the females (13.3) in table 2. The mean total ridge count and absolute total ridge count is found to be higher among the males among females, but the bisexual differences and not statistically not significant. Table .3

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