

THE STUDY OF FINGER DERMATOGLYPHICS AMONG YADAVS AND LODHIS OF RUDAHI VILLAGE OF LUCKNOW

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ABSTRACT

Dermatoglyphic patterns of individuals, which are formed early in the fetal life, are also determined by both genetic and environmental factors. Finger dermatoglyphic traits vary widely and are unaffected by age, gender and least by environment. Unlike configurations and their distinctiveness with every individual, it also shows bilateral, bisexual and population variations. The study reports on bisexual, inter-population variation and bilateral variations in finger prints among Lodhis and Yadavs, using standard ink method as a tools for data collection from Rudahi Village of Bakshi Ka Talab area of Lucknow District. The finger prints of 112 individuals, aged between 16 and 50 years, of the two caste, including 56 Yadavs and 56 Lodhis males and females, were collected for delineating variations in finger print pattern and ridge counting. Both these are endogamous groups of Rudahi Village. Indices such as Pattern Intensity Index, Furuhata Index and Dankmeijer's Index were also calculated. Appropriate statistics was used to evaluate bisexual, bilateral and intergroup variability among Yadavs and Lodhis.

Keywords: *Finger dermatoglyphics, Finger pattern, Ridge counting, Yadavs, Lodhis,*

INTRODUCTION

Human population is known to differ in number of characteristics of anthropological significance. It is largely believed that the genetically controlled traits retain their endowment through generations in a population. Even among the genetic traits, all those controlled by many genes are considered to be more effective and reliable in the study of population variation. The importance of dermatoglyphics in comparative human population study hardly needs emphasis for the simple reason that dermatoglyphic traits are under genetic control. In addition, they are known to vary considerably due to the fact that they are

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controlled by many additive genes. In addition, they are less adaptive and are not known to be associated with post-natal modifications or any parasitic influences. Dermatoglyphic patterns have been employed in the study of population variation (Rife, 1953; Holt, 1966). Dermatoglyphics is derived from the Greek word "derma" which means skin and "glyph" which means carving. It gives the impression that something has been carved out of the skin. These features of dermatoglyphics are formed during the 13th/14th weeks of the developing embryo and once formed, they remain permanent and never change throughout the lifetime of an individual. Dermatoglyphics is the science of configuration of the epidermal ridges of the volar surfaces of the fingers, toes, palms, and soles (Babler, 1978). Besides anthropology, the science of dermatoglyphics has its application in forensic science for criminal identification.

Dermatoglyphic traits such as finger ridge count develop within 10 week post-conception (Babler, 1991). These features inherited through a polygenic system with individual genes, contribute to the formation of an additive genetic component (Chakraborty, 1991). The formation of ridge is influenced by individual differences in developmental stability and the 1st and 2nd trimester insults on the embryo which result in dermatoglyphic changes.

According to Cummins and Midlo (1926) and Holt (1961), basic finger print patterns can be grouped into three categories: (1) arches, (2) loops, and (3) whorls. Arches are the ridges run from one side to another of patterns, making no backward turns. Ordinarily, there is no delta in an arch pattern and it is found only in 5% of finger print patterns. There are four types of arch patterns—plain, radial, ulnar, and tented arches. In loops, one or more ridges enters on either side of impression, recurve, touch or cross the line running from the delta to the core and terminates in the direction of the side, where the ridges enter. Ulnar loop opens on the ulnar side while a radial loop opens on the radial side and it occurs in about 60 to 70% of finger prints. Any finger print pattern which contains two or more deltas will be a whorl pattern. In a whorl some of the ridges make a turn through at least one circuit and is seen in about 25% to 35 % of fingerprint patterns. There are six types of whorls: (a) concentric whorl, (b) spiral whorl, (c) mixed whorl, (d) central pocket whorl, (e) twin whorl and (f) accidental whorl (Cummins and Midlo, 1943).

Dermatoglyphic studies have been done by several investigators on different population inhabiting in different parts of India. Mention among these can be made for Biswas (1939, 1947, 1976), Gupta (1973), Pateria (1973), Singh and Bhasin (1980), Kumbnani (1991), Bansal (1966), Bhasin and Walter (2001). The study of the finger patterns was done by a number of scholars, such as Collins (1913), Verma (1952), Tiwari (1955), Srivastava (1963), Shukla and Rastogi (1944), Singh (1996), Singh and Garg (2004), Banik *et al.* (2009), who took the samples from Indian populations.

The present study was aimed to investigate the dermatoglyphic features of two caste groups of Rudahi Village of Lucknow District of Uttar Pradesh State.

This paper aims to evaluate the differences in the bilateral, bisexual, inter-population dermatoglyphic characteristics of the Yadavs and Lodhis castes.

MATERIALS AND METHODS

The data for the present study was collected from the Yadavs and Lodhis of Rudahi Village of Lucknow District. The finger prints of 112 individuals aged between 16 and 50 years of two castes, namely Yadavs and Lodhis, were collected. The finger prints data included 56 Yadavs (28 males and 28 females) and 56 Lodhis (28 males and 28 females). Finger prints were examined for pattern types, finger ridge counting, total finger ridge counting and several indices namely, Pattern Intensity Index, Furuhata's Index, Dankmeijer's Index.

The equipments used for dermatoglyphic study included wooden table of proper height, glass plate, duplicating ink, rubber roller, white executive bond paper of 15 × 20 cm size, soap and water for washing hands, towel for drying the cleaned hand, scale, pencil, protractor, magnifying hand lens, and needle with a sharp point for ridge counting. The subjects were asked to clean their hands with soap and water.

The Study Area

The data was collected from the Bakshi ka Talab area, which is situated at a distance of 20 km from Lucknow. Bakshi ka Talab was constructed by Tripur Chandra Bakshi, and hence it is called Bakshi ka Talab in Rudahi Village, which is also known as Nirmal village. Its population is about 2,700 approximately and 520 families reside there. The Gumani and Bargadi Villages are situated in the east of this area and Rampur Devariya Village in the north, Vishrampur Village in south and Bhauli Village in the west.

It is not easy to tell, how and when the village originated and even most of the old people were not able to answer the questions about the origin of Rudahi. But yet, there are some stories regarding its origin. One of the famous stories is that, many years ago this village was not situated, where it is found presently, but it was present half a kilometre away in the west where the Sariasanda pond is found today. There are some evidences as well today in the form of some red bricks and an old Ramayana found at that place. After some time, there was an epidemic which was either plague or diarrhoea in the village, which was called 'Tanu' and that took a toll on the lives of people. A large number of people died and because of these continuous deaths, there was no place in the village to cremate the bodies. Hence, the dead bodies were thrown in the ponds and wells. A woman who belonged to this village became very disappointed and sad after seeing so many deaths in the village. She used to cry a lot and for this reason she was also called 'Rudan' (means to cry) and her village was then called 'Rudana'. Later a saint Randev Lala Ji asked her to leave the place and establish the village in a new place. She did as she was told and her children laid the foundation of the present village and it was because of

her name, Rudana, that this village is called as Rudahi today. According to another view, it is said that this village was established by 'Rudrasen' and on his name, the village was named as Rudahi. Though, people of different castes live in the village but the families of Yadavs and Lodhis predominate.

The People

The data for this research work was collected from Yadavs and Lodhis caste groups of the area.

The Yadavs: The Yadavs are supposed to be the descendant of 'Yaduanshi' the vansh of Lord Krishna. Yadavs are mainly bifurcated into two sects: one is called 'Ghosi' and the second one is 'Kkamaria' Ghosi or Gwalley. Kamaria perform the agricultural work. In Uttar Pradesh, Yadavs are also known as 'Ahir'. The Yadavs depend on agricultural and animal husbandry. Now many of them have taken up business, trade, and industry as occupations, while some are also in government or private service. Marriages are performed in Yadavs after matching 'Gotra' and marriages are not connected outside the 'Gotra'. Early marriage are not common in Yadavs.

The Lodhis: The Lodhis are the sub-caste of shudra. The Lodhis in the village Rudahi generally are divided into either Vermas or among Rajputs. Marriage among Lodhis is generally according to the general hindu marriage pattern. In the village they marry their children at early adulthood, generally in between the age of 18 to 20 years. But '*gauna*' is done later on after 2 to 3 years.

RESULTS AND DISCUSSION

The interpretation of data is based on finger dermatoglyphics of two endogamous groups of Rudahi Village, that is Yadav and Lodhis. An effort has been made for a comprehensive evaluation of the finger dermatoglyphics of the two groups.

Table-1 shows the percentile frequency of whorls, loops and arches on each digit of both hands in the of Yadav males. It is found that of the four types, whorls are recorded in all digits of both hands. Simple whorls have maximum frequency compared to twin loops and central pocket loops, but the highest frequency is shown by the fourth digit and least by the fifth digit.

Loops show higher frequencies of ulnar loop and radial loops are less frequent and these are completely absent in the first, third, fourth and fifth digits of both hands. Simple arch (SA) and tented arch (TA) are found rarely, as compared to whorls and loops. SA and tented arch are present only on second digit but TA is present only on third digit of right hand. Simple arch is completely absent on first, third, fourth and fifth digits. TA is completely absent in first, fourth and fifth digit of both hands and third digits of left hand.

Table-1: Percentile frequency of pattern types of male Yadavs (n=28; 280 impressions)

Digit	Side	Whorls				Loops		Arches	
		Simple	TL+LPL	CPL	AC	UL	RL	SA	TA
First	R	17.8	32.1	-	-	46.4	-	-	-
	L	7.1	42.8	-	-	50.0	-	-	-
	R+L	12.45	37.45	-	-	48.2	-	-	-
Second	R	17.8	17.8	10.7	-	28.6	10.7	10.7	3.6
	L	10.7	10.7	10.7	3.6	42.8	7.1	7.6	7.1
	R+L	14.25	14.25	10.7	1.8	35.7	8.9	7.15	5.35
Third	R	14.3	7.1	3.6	-	76.90	-	-	7.1
	L	7.1	17.8	-	-	75.0	-	-	-
	R+L	10.7	12.45	1.8	-	71.45	-	-	3.55
Fourth	R	42.8	3.6	17.8	-	35.7	-	-	-
	L	35.7	3.6	14.3	-	46.4	-	-	-
	R+L	39.25	3.6	16.05	-	41.05	-	-	-
Fifth	R	7.1	7.1	17.8	-	67.8	-	-	-
	L	3.6	7.1	10.6	-	78.6	-	-	-
	R+L	5.35	7.1	14.2	-	73.2	-	-	-
All Digit	R	19.96	13.54	9.98	-	49.28	2.14	2.14	2.14
	L	12.84	16.4	7.12	0.72	58.48	1.78	0.76	1.42
	R+L	16.4	14.97	8.55	0.36	53.88	1.78	1.45	1.78
All Type	R		43.48			51.42		4.26	
	L		37.08			59.9		2.18	
	R+L		40.28			55.66		3.22	

A perusal of Table-2 reveals that the frequency of simple whorls is higher than twin and central pocket loops. The fourth digit has the highest frequency of simple whorls in both hands. Frequency of twin loops and central pockets is more or less similar. The fourth and the fifth digit show complete absence of twin loops. Ulnar loops are present in more numbers than radial loops. Radial loop is absent in first, third, fourth and fifth digit of both hands. Tented arch is completely absent in all digits. Simple arch is present in high frequency in the second digit and absent in the third digit of both hands. It has been observed that the higher frequency in loops pattern is seen in Yadav females as compared to other patterns.

Table-2: Percentile frequency of pattern types of female Yadavs (n=28; 280 impressions)

Digit	Side	Whorls				Loops		Arches	
		Simple	TL+LPL	CPL	AC	UL	RL	SA	TA
First	R	28.6	10.7	-	3.6	-	-	7.1	-
	L	21.4	25.0	3.6	-	3.6	-	7.1	-
	R+L	25.0	17.85	1.8	1.8	1.8	-	7.1	-
Second	R	21.4	-	14.3	-	3.6	10.7	14.3	-
	L	14.3	3.6	25.0	-	7.1	7.1	14.3	-
	R+L	17.8	1.8	19.65	-	5.35	8.9	14.3	-
Third	R	17.8	3.6	7.1	-	7.1	-	-	-
	L	21.4	3.6	7.1	3.6	7.1	-	-	-
	R+L	19.6	3.6	7.1	1.8	7.1	-	-	-
Fourth	R	39.3	-	14.3	-	-	-	3.6	-
	L	28.6	-	25.0	-	-	-	-	-
	R+L	33.95	-	19.65	-	-	-	1.8	-
Fifth	R	10.7	-	10.7	-	-	-	-	-
	L	7.1	-	14.3	-	-	-	3.6	-
	R+L	8.9	-	12.5	-	-	-	1.8	-
All Digit	R	23.56	2.86	9.28	0.72	2.14	2.14	5.0	-
	L	18.56	6.44	15.00	0.72	3.56	1.78	5.0	-
	R+L	21.06	4.65	12.14	0.72	2.85	1.78	5.0	-
All Types	R		36.42			59.26		5.0	
	L		40.72			54.26		5.0	
	R+L		38.57			56.76		5.0	

Table - 3 shows a higher frequency of simple whorls than twin loops and CPL. The highest frequency is shown by simple whorls in fourth digit of both hands. Twin loops are completely absent in the fifth digit of both hands while first digit have a higher frequency of this pattern in both hands. CPL shows higher frequency in the fifth digit of both hands. Ulnar loop has a higher frequency in comparison to radial loops. The fifth digit have maximum frequency of ulnar loops. Radial loops are completely absent in the first, second and fourth digit of both hands and third digit of left hand. Arches have unequal distribution and simple arch has higher frequency in comparison to tented arch. TA is not found in the first, fourth and fifth digit of both hands.

Table-3: Percentile frequency of pattern types of male Lodhis (n=28; 280 impressions)

Digit	Side	Whorls				Loops		Arches	
		Simple	TL+LPL	CPL	AC	UL	RL	SA	TA
First	R	14.3	17.8	14.3	-	46.4	-	7.1	-
	L	14.3	28.6	3.6	-	50.0	-	3.6	-
	R+L	14.3	23.2	8.95	-	48.2	-	5.35	-
Second	R	17.8	3.6	14.3	-	39.3	3.6	17.8	3.6
	L	17.8	7.1	7.1	-	39.3	3.6	17.8	7.1
	R+L	17.8	5.3	10.7	-	39.3	3.6	17.8	5.3
Third	R	10.7	7.1	3.6	-	64.2	-	14.3	-
	L	7.1	7.1	10.7	-	53.6	-	17.8	3.6
	R+L	8.9	7.1	7.15	-	58.9	-	16.05	1.8
Fourth	R	28.6	7.1	10.7	-	46.4	3.6	3.6	-
	L	25.0	-	14.3	-	42.8	-	7.15	-
	R+L	26.1	3.55	12.3	-	44.6	1.8	5.35	-
Fifth	R	10.7	-	17.8	-	67.8	-	3.6	-
	L	3.6	-	17.8	-	75.0	-	3.6	-
	R+L	7.15	-	17.8	-	71.4	-	3.6	-
All Digit	R	16.14	7.12	12.14	-	52.82	1.44	9.28	0.7
	L	13.56	8.56	8.7	-	52.14	0.72	9.98	2
	R+L	14.99	7.84	10.42	-	52.48	1.08	9.63	2.1
									4
									1.4
									3
All Types	R		35.68			54.26		10.0	
	L		30.82			58.86		12.12	
	R+L		33.25			53.56		11.6	

Table-4 shows that in the Lodhi females of CPL that are more frequent than simple whorls and twin loops. The highest frequency of CPL is in fourth digit. Twin loops are completely absent on third and fourth digits. Ulnar loops are more frequent in comparison to radial loops whose highest frequency is shown on third digit. Radial loops are completely absent on the first, third, fourth and fifth digits of both hands. Arches have unequal distribution and simple arches have higher frequency in comparison to tented arch, which is completely lacking in the first and third digits.

Table-4: Percentile frequency of pattern types of female Lodhis (n=28; 280 impressions)

Digit	Side	Whorls				Loops			Arches	
		Simple	TL+LPL	CPL	AC	UL	RL	SA	TA	
First	R	17.8	17.8	3.6	-	53.6	-	7.1	-	
	L	14.3	17.8	10.7	-	46.4	-	10.7	-	
	R+L	16.05	17.8	7.15	-	50.0	-	8.6	-	
Second	R	7.1	3.6	28.6	3.6	50.0	-	3.6	3.6	
	L	14.3	3.6	21.4	-	46.4	10.7	3.6	-	
	R+L	10.7	3.6	25.0	1.8	48.2	5.35	3.6	1.8	
Third	R	3.6	-	7.1	-	85.7	-	3.6	-	
	L	7.1	-	10.7	-	67.8	-	14.3	-	
	R+L	5.35	-	8.9	-	76.75	-	8.95	-	
Fourth	R	28.6	-	28.6	-	39.3	-	-	3.6	
	L	17.8	-	35.7	-	42.8	-	-	3.6	
	R+L	23.2	-	32.15	-	41.05	-	-	3.6	
Fifth	R	10.7	-	7.1	-	82.14	-	-	-	
	L	3.6	3.6	21.4	-	64.28	-	3.6	3.6	
	R+L	7.15	1.8	14.25	-	73.21	-	1.8	1.8	
All Digit	R	13.56	4.28	15.00	0.72	62.14	-	2.86	1.44	
	L	11.42	5.00	19.98	-	53.53	2.14	6.44	1.44	
	R+L	12.49	4.64	17.49	0.36	57.83	1.07	4.65	1.44	
All Type	R			33.56				54.26	4.3	
	L			36.40				58.86	7.8	
	R+L			34.98				53.56	6.09	

Table-5 shows the frequency of whorls, loops and arches of all groups, i.e. Yadavs and Lodhis of both sexes. It is a master table of frequencies of all groups for comparative analysis. It has been observed that the frequency of loops is higher in all the digits of Yadav males in comparison to Lodhis. On the other hand a higher frequency of loops is seen in Lodhi females than Yadav females. The order of frequencies in finger pattern types among Yadavs and Lodhis is as follows:

Yadavs
M: L>W>A
F: L>W>A

Lodhis
M: L>W>A
F: L>W>A

Table-5: Percentile frequency of finger pattern types of both groups (n=112; 1120 impression)

Digit	Side	Yadav Males			Yadav Females			Lodhi Males			Lodhi Females		
		W	L	A	W	L	A	W	L	A	W	L	A
First	R	16.6	23.2	-	13.1	26.8	3.5	15.5	32.2	3.5	13.1	26.8	3.5
	L	16.6	25.0	-	16.7	21.4	3.5	15.5	25.0	1.8	13.1	23.2	5.3
	Mean	16.6	24.1	-	14.9	24.1	3.5	15.5	24.1	2.65	13.1	25.0	4.4
Second	R	15.4	19.7	7.1	11.9	25.0	7.1	11.9	21.4	10.7	13.1	25.0	3.6
	L	10.4	4.9	0	14.3	21.4	7.1	10.6	21.4	12.4	13.1	28.5	1.8
	Mean	13.1	22.3	6.2	13.1	23.2	7.1	11.3	21.4	11.6	13.1	26.8	2.7
Third	R	8.3	33.9	3.5	9.5	35.6	-	7.1	32.1	7.1	3.5	42.8	1.8
	L	8.3	7.5	-	10.7	32.1	-	8.3	26.8	10.7	5.9	33.9	1.8
	Mean	8.3	35.7	1.8	10.1	33.9	-	7.7	29.8	8.9	4.7	38.4	1.8
Fourth	R	21.7	17.8	-	17.9	21.4	1.8	15.5	25.0	1.8	28.6	19.6	1.8
	L	17.9	23.2	-	17.9	23.2	-	13.1	21.4	3.5	17.8	21.4	1.8
	Mean	19.7	20.5	-	17.9	22.3	0.9	14.3	23.2	2.7	23.2	20.5	1.8
Fifth	R	10.7	33.9	-	7.1	39.3	-	9.5	33.9	1.8	5.9	41.7	-
	L	7.1	39.3	-	7.1	37.5	1.8	7.1	37.5	1.8	9.5	32.1	1.8

AllTypes	Mean	8.9	36.6	-	7.1	38.5	0.9	8.3	35.7	1.8	6.2	36.9	0.9
	R	43.5	51.4	4.2	36.4	59.3	2.5	35.7	54.3	10.0	33.5	62.1	4.3
	L	37.1	59.9	2.2	40.6	54.3	2.5	30.8	52.9	12.1	36.4	55.7	7.8
	Mean	40.3	55.7	3.2	38.6	56.8	2.5	33.3	53.6	11.1	35.0	58.9	8
													6.0
													9

Table-5 shows the frequency of whorls, loops and arches of all groups i.e. Yadavs and Lodhis of both sexes. It is a master table of frequencies of all groups for comparative analysis; It has been observed that the frequency in loops as clearly indicated above is higher in all the digits of Yadav males in comparison to Lodhis. On the other hand more frequency in loops is seen in Lodhi females than Yadav females. The orders of frequencies in finger pattern type are as follows:

Yadavs Lodhis

M: L>W>A

F: L>W>A

M : L>W>A

F: L>W>A

Pattern Intensity Index: The pattern intensity is presented in Table-6 along with standard deviation. The pattern intensity index is the average number of tri-radii, which depend on the incidence of finger patterns. The table shows a comparison of Yadavs and Lodhis. The pattern intensity index is found to be higher in Yadav females (14.32) in comparison to males (14.16) and Lodhi females (14.28) in comparison to males (13.98). Its intensity among both groups of females is higher than males. It is further noticed that pattern intensity index is higher among Yadavs than Lodhis.

Table-6: Pattern intensity index of male and female Yadavs and Lodhis

Population		Number of Individuals	Mean	Standard Deviation	Standard Error
Yadavs	Male	28	14.16	2.675	±1.009
	Female	28	14.32	2.706	±1.021
	Total (M+F)	56	14.24	2.690	±1.015
Lodhis	Male	28	13.98	2.641	±0.996
	Female	28	14.28	2.699	±1.018
	Total (M+F)	56	14.13	2.67	±1.007

Furuhata's Index: This is a method which gives an idea of the number of whorls in relation to loops. This was devised by Furuhata and it is also known as whorl/loop index. Table-7 indicates that the higher frequency of Furuhata's index is found in males than females of both the groups. It is further noticed that Furuhata's index is higher among Yadavs than Lodhis.

Table-7: Furuhata's index of males and female Yadavs and Lodhis

Population		Number of Individuals	Right	Left	Mean
Yadavs	Male	28	84.63	61.93	73.28
	Female	28	61.48	74.72	68.10
	Total (M+L)	56	73.05	68.32	70.69
Lodhis	Male	28	65.74	58.22	61.98
	Female	28	54.74	65.35	59.96
	Total (M+L)	56	60.16	61.78	60.97

Dankmeijer's Index: Dankmeijer's index expresses that, there is a reciprocal relationship in the frequency of whorls and arches. Table-8 indicates that Yadav females (13.02) have a higher value of this index than males (7.38). On the other hand Lodhi males (33.67) have higher value of this index than females (17.22). It is further indicated by the table that there is a higher frequency of Dankmeijer's index in Lodhis (25.44) as compared to Yadavs (10.42).

Table-8: Dankmeijer's index of male and female Yadavs and Lodhis

Population	Number of Individuals	Right	Left	Mean
Yadavs	Male	28	9.79	12.32
	Female	28	13.72	12.32
	Total (M+L)	56	11.75	9.10
Lodhis	Male	28	28.03	39.32
	Female	28	12.81	21.64
	Total (M+L)	56	20.42	30.48

The Table-9 reveals the distribution of mean ridge counts of digits among Yadavs and Lodhis. In first and fifth digits, mean ridge count is highest in Yadav males and lowest in Lodhi males, the same condition is with Yadav females and Lodhi females. In second, third and fourth digits, highest ridge count is seen in Yadav females in comparison to Lodhi females. Mean finger ridge count on both hands is found to be higher in Yadavs than Lodhis.

Table-9: Mean Ridge Counting for each digit of male and female Yadavs and Lodhis

Digit	Side	Yadavs Male	Yadavs Female	Lodhis Male	Lodhis Female
First	R	20.10	18.60	16.20	14.30
	L	18.05	15.40	16.00	13.25
	Mean	19.07	17.00	16.10	
Second	R	12.05	12.20	8.70	11.20
	L	11.70	13.40	9.30	10.60
	Mean	11.87	12.80	9.00	10.60
Third	R	12.40	13.20	11.05	13.90
	L	14.50	14.20	11.00	11.40
	Mean	13.45	13.70	11.12	12.65
Fourth	R	16.50	16.90	14.90	14.05
	L	17.20	17.60	14.50	15.05
	Mean	16.80	17.20	14.60	14.55
Fifth	R	15.80	13.90	13.80	12.10
	L	17.50	14.60	14.40	12.05
	Mean	16.60	14.20	14.10	12.07

Total-10: Total finger ridge counts of male and female Yadavs and Lodhis

Population	Number of Individuals	Mean	Standard Deviation	Standard Error
Yadavs	Male	28	15.55	2.56
	Female	28	14.98	7.83
	Total (M+F)	56	30.53	10.39
Lodhis	Male	28	12.98	2.56
	Female	28	12.72	1.36
	Total (M+F)	56	25.70	3.92

Table-10 displays the total finger ridge counts (TFRC) of male and female Yadavs and Lodhis

TFRC is the sum of the single largest counts on all 10 fingers of an individual. It can be seen that standard deviation (SD) is higher in the Yadav females in comparison to the males. On the other hand Lodhis have highest SD in the males than females. It is further noticed that total finger ridge count is higher among Yadavs than Lodhis. However, the inter-population comparison shows a non-significant difference.

CONCLUSIONS

After the analysis of quantitative characters of finger prints of the Yadav and Lodhi males and females, it is observed that the higher frequencies of loops in comparison to whorls and arches are seen in the Lodhi females. Higher frequency is observed in the loops of both the genders of the Lodhis as well as Yadavs. Least frequency is recorded of arches among Yadavs and Lodhis. When subtypes of loops are taken in to consideration, ulnar loops are present in higher frequencies in comparison to radial loops in Yadavs as well as Lodhis. Simple whorls are present in higher frequencies in the Yadav females than males and Lodhis. The gradational order of whorls types seen is SW>TW>CPL>ACC in both caste groups. Simple arches have dominance over tented arches in both groups. Higher frequency in simple arches is observed in males of Lodhis. The higher frequency of Furuhat's index is observed in Yadav males while higher frequencies in Dankmeijer's index is observed in Lodhi females. The mean value of pattern intensity is the highest in Lodhi females. Finger ridge count on both hands is found to higher in Yadavs of both genders. Total finger ridge count is higher among Yadavs and Lodhis.

From the present data, it appears that Yadav and Lodhi of both sexes are more or less similar to each other, but degree of similarity is variable to a large extent.

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