MIDDLE PHALANGEAL HAIR IN SOME SOUTH INDIAN POPULATIONS

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The study of middle phalangeal hair on a sample of some 5000 nonrelated subjects of both sexes and different age groups, representing 11 South Indian populations, has shown very limited sex and age variability. The frequencies fall within the general range of Indian population groups. Most of the groups tested show genetic homogeneity.

Middle phalangeal hair (MPH) was studied on a sample of 4987 subjects of both sexes, 7 to 21 years of age, from 11 populations groups in Mysore, South India. Only nonrelated individuals were included in the analysis.

The 4 finger middle segments were examined with the aid of an illuminated magnifying glass, for the presence or absence of hair follicles. Out of the $4^2 = 16$ possible combinations (for each hand), only 8 were found to occur. Absence of hair follicles on all 4 middle segments appeared to be by far the most frequent combination ($\sim$ 59-76%). The remaining 7 combinations were: presence on IV ($\sim$ 8-17%), III-IV and III-IV-V ($\sim$ 1-15%), down to II-III-IV-V, IV-V, III, and II-III-IV.

Total symmetrical combinations were in the range of 70-90%, and only a total of 24 subjects (13 of which are Kannada Brahmans) were found to be unilaterally affected for one or more combinations.

Table 1 shows that the frequency of MPH in the 11 populations tested did not significantly differ in the two sexes (the range being 60.7-75.3% for males and 59.4-75.6 for females) and generally fell within the range of Indian

Table 1. *Frequency of Middle Phalangeal Hair in Different South Indian Populations*

Population *	Males		Females	
	N	With MPH (%)	N	With MPH (%)
KB	447	25.8	691	32.0
LG	369	38.6	255	34.1
VK	505	36.7	369	31.9
KU	127	29.9	110	30.9
AK	501	38.9	224	40.2
Ta B	185	29.5	252	38.1
Ta M	56	35.7	84	23.5
Te B	50	30.0	77	40.3
Te V	73	23.6	114	25.7
MR	85	38.8	127	23.7
MS	111	38.7	175	40.6

* KB = Kannada Brahman; LG = Lingayat; VK = Vokkaliga; KU = Kuruba; AK = Adikarnataka; Ta B = Tamil Brahman; Ta M = Tamil Mudaliar; Te B = Telugu Brahman; Te V = Telugu Vaisya; MR = Maratha; MS = Muslim.

Table 2. *Intergroup Differences for Middle Phalangeal Hair in Different South Indian Populations*

Populations compared	λ^2 value (1 DF)	
	M	F
KB × AK	18.56*	5.10*
KB × LG	15.38*	0.38
KB × VK	13.05*	0.00
KU × AK	3.51	2.69
KU × LG	3.09	0.36
KU × VK	2.06	0.03
KU × KB	0.87	0.05
VK × AK	0.51	4.19
VK × LG	0.32	0.38
LG × AK	0.00	1.87
Ta B × Ta M	0.80	5.84*
Te B × Te V	0.64	4.52*
MR × MR (Basu 1967)	1.44	—
MS × MS (Basu 1967)	2.08	—

population groups, estimated at 20-76% (Dutta 1966, Tewari and Bhasin 1967).

Possible age variations were tested by subdividing the sample, for each population, into two age groups, 7-13 and 14-21. Out of the resulting 22 groups, only 3 (Lingayat females, Mudaliar females, and Muslim males) appeared to show heterogeneity for age.

Possible sex differences (as reported by Saldanha and Guinsberg 1961) were tested by homogeneity test. Out of the 11 populations tested, only 2 (Kannada Brahman and Maratha) appeared to show sex variations.

Finally, intergroup differences were considered and λ^2 values calculated. As shown in Table 2, a total of 14 groups were tested (the Maratha and Muslim having been compared to those of Maharashtra studied by Basu in 1967). Out of these, significant differences, indicating genetic heterogeneity, were found in 3 comparisons for males and 3 for females. The highest difference, common for both sexes, was recorded between the Kannada Brahman and Adikarnataka, This finding, together with that of a very limited difference, if any, between the Lingayat and Adikarnataka, agrees with the similar findings reported by Sastry (1974) on the basis of color blindness.

The three Brahman samples show homogeneity for both males ($\lambda^2 = 1.16$, 2 DF, $0.70 > P > 0.50$) and females ($\lambda^2 = 4.40$, 2 DF, $0.20 > P > 0.10$). All the five Kannada speaking groups together exhibit heterogeneity for males ($\lambda^2 = 24.14$, 4 DF, $0.01 > P$) and homogeneity for females ($\lambda^2 = 5.95$, 4 DF, $0.30 > P > 0.20$).

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