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HAND CLASPING AND ARM FOLDING AMONG THE NICOBARESE OF CAR-NICOBAR ISLAND

ABSTRACT — 450 males and 291 females from Nicobarese of Car-Nicobar Island were examined for hand claspings and arm folding. Only for arm folding was the sexual variation significant.

KEY WORDS: *Nicobarese — Heredity — Hand claspings — Arm folding.*

Lutz (1908) was the first person to suggest the inheritance of hand claspings. Wiener (1932) further pointed out the hereditary nature of hand claspings and arm folding and the utility of these traits in population variation studies. Since then, several population studies have been carried out throughout the World by numerous investigators with regard to these two traits. The present study attempts to highlight the pattern of hand claspings and arm folding among the Nicobarese of Car-Nicobar Island.

The Nicobar Archipelago is situated in the South eastern portion of the Bay of Bengal between the parallel of 6° and 10° N latitude and meridians 92° and 94° E longitude. According to 1971 census the total population of Nicobarese is 18,000. They are spread over in twelve islands — Car-Nicobar, Chowra, Teressa, Bompaka, Katchal, Camotra, Trinket, Nancwory, Pilomilo, little Nicobar, Kandal and Great Nicobar. The Car-Nicobar is the most progressive of all the islands, covering the area of 49 square miles and is the northernmost island of the Nicobar group of islands. The Nicobarese inhabiting various islands belong to mongolian stock and the difference existing in culture, language and morphology among these people has been attributed to their life in isolation in different islands, (Temple 1901). According to Boden Kloss (1903) and Man (1886) the Nicobar islands were originally inhabited by Malaysians who were gradually driven south by immigrants from the coast of Burma. They speak

their own language which belongs to Mon-Khmer group of languages. Slight differences in their languages have been noted from island to island.

MATERIAL AND METHOD

The material analysed consists of 741 unrelated Nicobarese (450 males and 291 females) from various villages of Car-Nicobar island. Subjects were asked to clasp their hands and fold their arms in a natural way. In case of hand claspings if right thumb comes over the left individual was classified as *R*-type and vice-versa as *L*-type, whereas in case of arm folding if right fore-arm comes over the left individual was classified as *R*-type and vice-versa as *L*-type.

RESULTS AND DISCUSSION

Table 1 displays the occurrence of *R* and *L*-types of hand claspers and arm folders among the Nicobarese of Car-Nicobar island. It is observed that *R*-type of hand claspers is more common among both the sexes, 54.0 per cent in males and 56.7 per cent in females, than *L*-types, 46.0 per cent in males and 43.3 per cent in females. The sexual variation for the occurrence of this particular trait is observed to be statistically non-significant ($\chi^2 = 0.5206$, *d.f.* = 1, $.50 > p \geq .30$).

TABLE 1. *Distribution of Hand Clasping and Arm Folding among the Nicobarese of Car-Nicobar*

Population	Sex	No.	Hand Clasping				Arm Folding			
			R-type		L-type		R-type		L-type	
			No.	%	No.	%	No.	%	No.	%
Nicobarese	Males	450	243	54.0	207	46.0	219	48.7	231	51.3
	Females	291	165	56.7	126	43.3	119	40.9	172	59.1

TABLE 2. *Percentage Distribution of Hand Clasping and Arm Folding Among males of certain Tribal Populations of India*

Population	No. tested	Hand Clasping		Arm Folding		Investigators
		R-type	L-type	R-type	L-type	
Gond	150	60.00	40.00	39.33	60.67	Tewari and Tyagi (1978)
Oraon	89	65.40	34.60	29.90	70.10	Singh (1978)
Kendareddy	163	45.40	54.60	47.85	52.15	Swaruparani (1971)
Bagatha	214	42.99	57.01	50.47	49.53	Rao and Reddy (1973)
Khowa	103	70.83	29.12	40.77	59.23	Das and Buragohain (1972)
Aka	110	60.00	40.00	40.00	60.00	Das and Buragohain (1972)
Nicobarese	450	54.00	46.00	48.7	51.3	Present study

For the distribution of arm folding, it is seen that *L*-type of arm folders is more frequent among both the sexes of Nicobarese of Car-Nicobar i.e. 51.3 per cent in males and 59.1 per cent in females than *R*-type 48.7 per cent in males and 40.9 per cent in females. The sexual variations for the occurrence of *R* and *L*-types of arm folders are observed to be statistically significant ($\chi^2 = 4.3180$, *d.f.* = 1, .50 > *p* > .02).

Comparison of Nicobarese males with other available tribal populations of India for the incidence of hand clasping and arm folding indicates that the preponderance of *R*-type of hand clasps and *L*-type of arm folders in the present study is found to be in conformity with the findings of Tewari and Tyagi (1978), Singh (1978) and Das and Buragohain (1972), however it differs from the observations of Rao and Reddy (1973) and Swaruparani (1971) as evident from Table 2. More population data with regard to these two traits will be of great help to learn the exact nature of distribution pattern of hand clasping and arm folding.

CONCLUSION

Nicobarese of Car-Nicobar island show preponderance of *R*-type in hand clasping and *L*-type in arm folding. Females show higher incidence of *R*-type of hand clasps (56.7 percent) over the males (54.0 percent). Among both the sexes of Nicobarese, *L*-type shows preponderance for the incidence of arm folders. Here again the higher incidence is shown by females, 59.1 percent, than by males 51.3 percent. Sexual variation for the occurrence of hand clasping is observed to be non-significant, whereas it is significant for arm folding. Comparison of Nicobarese male with other available tribal populations for the incidence of hand clasping and

arm folding is found to be in conformity with the earlier studies reported by Tewari and Tyagi (1978), Singh (1978) and Das and Buragohain (1972) whereas it deviates from the observations of Rao and Reddy (1973) and Swaruparani (1971).

REFERENCES

- DAS P. B., BURAGOHAIN S. N., 1972: A study of some Genetic Traits in two tribes of Arunachal Pradesh. *Bull. Deptt. of Anthropology, Gauhati University*, Vol. 1: 28-37.
- KLOSS, BODEN C., 1903: *In the Andaman and Nicobar*. London John Murrey.
- LUTZ E. E., 1908: Inheritance of the manner of clasping of Hands. *Am. Nat.* 42: 195-196.
- MAN E. H., 1886: *The Nicobar Island and their People*. Guldfor.
- SWARUPARANI B., 1971: Cited from Singh 1978.
- SINGH J., 1978: A Note on Hand Clasping and Arm Folding among the Oraons. *Ind. J. Phy. Anthropol. and Hum. Genet.* Vol. 4. No. 2: 193-194.
- TEMPLE R. C., 1901: *Census of India. Andaman and Nicobar Islands*. Calcutta. Govt. of India Publication.
- TEWARI P. K., TYAGI D., 1978: Hand Clasping and Arm Folding among Gonds of Bastar (M.P.) *Ind. J. Phy. Anthropol. and Human Genet.* Vol. 4. No. 2: 195-196.
- VENKATESHWARA R. T., REDDY G., 1973: A Population Genetic Survey of the Bagatha and Valmiki tribes of Visakhapatnam (A. P.) *Jap. J. Hum. Genet.* 18: 226-236.
- WIENER A. S., 1932: Observation on the Manner of Clasping the Hands and folding the Arms. *Am Naturalist*, 66: 365-370.

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