

Marital Distance and Village Endogamy in Bhilala and Barela Tribes of West Nimar in Central India

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ABSTRACT This report presents the distribution of marital distance and frequency of village endogamy in two tribes, Bhilala and Barela inhabiting — Khargone district (West Nimar) in western part of central India. The differences in distribution of marital distance and frequency of village endogamy clearly predicts higher level of inbreeding in Barelas confined mainly in Nimar region than Bhilalas who have comparatively larger population size and wider geographical distribution. The distribution of marital distance was found to be positively skewed for Barela and negatively skewed for Bhilala tribe. It was leptokurtic for both the tribes.

INTRODUCTION

Genetic traits determined by rare recessive genes are more likely to appear among the offsprings of closely related parents as compared to that of unrelated one. Factors like consanguinity, endogamy, marriages at close distances and in the same village, might cause differential degrees of inbreeding, which in fact, increase the chance of heterozygote matings and further enhance the production of homozygotes which facilitates expression of recessive genes and mostly result in hereditary defects or genetic diseases.

Inbreeding coefficient, a measure of the inbreeding level, originally defined by Wright (1921, 1922), on the basis of incidence of different types of consanguineous marriages has been of considerable importance in the assessment of familial or genetic risk factors. Studies on marital distance and effective population size have also been employed to predict the inbreeding level and, in the absence of consanguinity, they may be taken as alternatives of inbreeding coefficient estimation, at the population level. Studies carried out earlier on the relationship between marital distance and

inbreeding understandably reported a negative correlation (Cavalli-Sforza et al., 1966; Morton et al., 1971; Malhotra, 1978; Ramesh, 1979). However, a positive correlation between marital distance and inbreeding was observed in two Schedule Castes (Madiga and Mala) and two forward castes (Reddy and Vysya) in Andhra Pradesh (Rao and Murty, 1990). Theoretically, inbreeding coefficient decreases with the increase in marital distance (Malecot, 1967; Salzano and Freire-Maia, 1970; Imaizumi 1986) and effective population size (Cavalli-Sforza and Bodmer, 1971). Majumder and Malhotra (1979) found marital distance to be more useful in predicting the inbreeding level than population size.

The present investigation examines the distribution of marital distances and frequency of village endogamy in two tribes, namely Bhilala and Barela having variable population size and geographical distribution, inhabiting West Nimar of Central India.

MATERIALS AND METHODS

Bhilala and Barela tribes being an offshoot of Bhils are considered to be of mixed origin and descendants of Rajput and Bhil marriages. They have attained independent tribal status avoiding marriages with other tribal groups, in the

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Fig. 1. Location of West Nimar District (black) and study area Barwani (white spot in the black area) in Central India

same clan and among relatives. population of Bhilala is significantly larger than Barela and they are scattered in a wider geographical region including districts of Khargone, Khandwa, Dhar and Jhabua in western part of central India and adjoining parts of neighbouring states of Gujarat and Rajasthan, whereas the Barela tribe is mainly confined to Nimar region of Central India (Gazetteer of Nimar, Government of Madhya Pradesh, 1970).

Bhilalas, in 1951 numbered 100 thousand and increased significantly in 1961 to 142 thousand as against 72 thousand Bhils in West Nimar. The population of Barelas has not been indicated separately. Census 1981 enumerated population of Bhilala and Barela collectively with Bhil and Patelia tribes to be 0.68 million, which constitute 97 per cent of the total tribal population of West Nimar, the region selected for the present study (Fig.1). In this region metal roads connect the major towns with each other where regular buses ply on all these roads.

Table 1 : Distribution of marital distance in Bhilala and Barela tribes

Marriage distance (km)	Tribe	
	Bhilala	Barela
At 0	2 (1.11)	20 (11.49)
0-5	0 (0.00)	18 (10.34)
5-10	6 (3.33)	60 (36.48)
10-15	2 (1.11)	32 (18.39)
15-20	18 (10.00)	30 (17.24)
20-25	8 (4.44)	0 (0.00)
25-30	22 (12.22)	2 (1.15)
30-35	20 (11.11)	2 (1.15)
35-40	42 (23.33)	5 (2.87)
40-90	58 (32.22)	2 (1.15)
90-140	2 (1.11)	1 (0.57)
140-190	0 (0.00)	1 (0.57)
190-240	0 (0.00)	1 (0.57)

Figures in parenthesis indicate percentages

Structured schedules were administered in all the households of selected tribes in twelve randomly chosen villages for obtaining information on marital distance that was recorded in kilometers as the actual walk-

ing/traveling distance between villages of the spouses. The distance was estimated by coverage time on foot or the fare charged by the vehicle on kilometer basis. Therefore, the distances noted were along the travel route between the place of birth and not the crow fly distances. Possible discrepancies in distance estimates were avoided by enquiring from neighbouring elder persons and social workers as the name of the birth place of females were also on record.

Distribution of marital distance was analysed statistically by working out mean, median and variance. The normality of distribution was tested by computing measures of skewness and kurtosis.

RESULTS

a) Marriage Pattern

Both the tribal groups, Bhilala and Barela follow similar traditions and cultural patterns for matings. Consanguineous marriages are avoided in both the societies and incest is considered to be taboo. This was evident in the present investigation also as no incidence of consanguineous marriage was recorded in either of the tribes with inbreeding coefficients of the order of 1/8 (uncle- niece, aunt-nephew, double cross cousins), 1/16 (between first cousins) and 1/64 (between second cousins). Furthermore, no incidence of marriage with members of other tribal groups and in the same clan was noted in the tribes investigated. Polygamy is traditionally permitted, but was noted to be very rare in both the tribes.

b) Marital Distance

Distribution of marital distances in the tribes exhibited striking differences (Table 1). In Bhilala, 15.55% marriages took place at a distance below 20 km, the corresponding figure for Barela tribe was 91.94%. In Bhilala, maximum number of marriages (78.88%) took place between 25 and 90 km, while the frequency of marriages in Barela in the same distance range was 6.32 per cent only. The mean marital distance (MMD) showed considerable variation

and were 36.43 and 14.23 km for Bhilala and Barela, respectively (Table 2).

Table 2 : Statistical analysis of the data on marital distance in Bhilala and Barela tribes

Tribe	n	Marital distance			β_1	β_2
		Mean	Median	Variance		
Bhilala	180	36.43	40	236.07	0.62	4.54
Barela	174	14.23	10	594.76	36.82	44.36

Variances also exhibited large differences indicating differential range of marital distance in the two tribes (Table 2). The distribution in Bhilala was found to be negatively skewed while for Barela the same was positively skewed. However, it was leptokurtic for both the tribes.

c) Village Endogamy

Marriage in the same village and therefore, at zero distance was defined as intra-village marriage or village endogamy. Table 1 depicts the percentile frequency of such marriages that was considerably high (11.48%) in Barela compared to that of Bhilala (1.11%).

DISCUSSION

The generally positively skewed, leptokurtic form of distribution of marital distances (MD) have been observed in different tribal and caste groups of Bihar, Maharashtra and Andhra Pradesh (Basu, 1973 : Malhotra and Kanhere, 1975 : Majumder and Malhotra, 1977; Malhotra 1978; Majumder, 1979; Rao and Murty, 1990).

The distribution of MD among 21 endogamous caste groups in Maharashtra was reported to be extremely positively skewed and leptokurtic (excepting one caste group, Hande).

A bimodal distribution of MD, one mode lying near zero and the other at a distance of 144.83 km was noted for Khatiks (Majumder and Malhotra, 1979). The distribution of MD in Bhils and Pawras of Maharashtra was also reported to have positively skewed and leptokurtic form. The mean marital distance

(MMD) among these tribes was noted to be 8.36 km and 8.9 km for Bhils and Pawras respectively (Malhotra, 1978) which are lesser than the values obtained in the present investigation (Table 2). The distribution of MD in two Scheduled Castes and two forward castes of rural villages of Mahabubnagar district along-with one urban forward caste group from Nagarkurnool of Andhra Pradesh was also found to be positively skewed and leptokurtic. Scheduled Caste groups had low MMD of 10.75 and 12.95 km for Madiga and Mala compared to other castes showing a range of 18.66 to 30.67 km. In the present investigation, the MMD recorded for Bhilala and Barela were 36.43 and 14.23 km, respectively.

Apart from this, in the present investigation, the distribution of MD was generally positively skewed, leptokurtic for Barela tribes. The negatively skewed and leptokurtic form of distribution of MD noted in the Bhilala is associated with larger population size and very wide area of their geographical distribution in the western part of central India and adjoining parts of neighbouring states of Gujarat and Rajasthan showing longer MD and very low frequency of village endogamy (1.11%). In contrast, Barelas, partially sharing the same habitat exhibiting positively skewed and leptokurtic form of distribution of MD are mainly confined in the Nimar region with comparatively small population size and limited geographical distribution exhibiting high village endogamy (11.49%) and shorter marital distances.

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