

Consanguineous Marriage Among Social and Occupational Groups in North India

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ABSTRACT The data were collected from 3799 families, residents of six regions of Aligarh district, North India to examine how the social and occupational variability and the trends of consanguineous marriage may interact in the Muslim community. The nine groups were identified in the six regions with an average coefficient of inbreeding (F) of 0.0417 and the results indicated that each of the nine Muslim groups have strong preference for consanguineous marriages. However, there are significant differences in the distribution of consanguineous marriages among the groups.

INTRODUCTION

The highest rates of consanguineous marriages, so far have been found in Japan, India, Israel and Brazil though there is wide variability within each country and in local populations (Mukherjee, 1994). In the Indian population, the highest rates of consanguinity have been associated with religious and sect affiliations, linguistic and cultural diversities, socio-economic status, urban/rural residence, literacy level and traditions (Bittles et al., 1991; Badaruddoza and Afzal, 1992). About 75% of the Indian population belong to the traditional Hindu society, about 8% belong to the Scheduled tribes near forests and hills, about 13% belong to Muslim communities and the rest to Sikh, Christian, Buddhist, Jain, Parsee and Jewish groups. These populations are converted mainly from indigenous people (Hindus) and are divided and subdivided into endogamous, occupational, local and cultural units (Mukherjee, 1973). This overlapping consanguineous marriages and biosocial variables pose considerable difficulty for evaluating the effect of inbreeding on reproductive behaviour,

as well as on the levels of morbidity and mortality in present generations. In such cases, it appears probable that the coefficient of inbreeding (F) calculated for a particular couple, $F = \Sigma(1/2)^n (1+F_a)$, may estimate the actual proportion of homozygous gene loci which has resulted from multiple generations of inbreeding where n is the number of persons along the path through common ancestor connecting the two parental gametes, and F_a is the inbreeding coefficient of that common ancestor).

This paper analyses the social correlates influencing the proportion of parental consanguinity in North India. The distribution and regulation of marriages between close biological relatives have been examined with reference to hereditary status groups with specific occupations. Among the study groups, the Syed and Sheikh are religious leaders, the Mughal and Rajput have dominated traditionally in political power, Pathan, Malik and Gujjar are mainly involved in agriculture, the Ansaris is a socially backward weaver group and the Qureshis are meat sellers (Badaruddoza and Afzal, 1992; Roychoudhury, 1976). The Muslims society of India is influenced by the neighbouring Hindus directly to adopt a caste (*Jati*) like stratification system. Therefore, there is an opportunity to examine how the social/occupational variability and the trends of consanguineous marriage may interact in the Muslim community.

MATERIALS AND METHODS

A total of 3799 families in six different localities in the province of Uttar Pradesh were studied. The survey was conducted between

1988 and 1993. The data from the six localities, namely Aligarh (Civil lines), Jamalpur, Kala Mahal, Naya Basti, Upper Court and Sarai Rahman, were collected by household survey (Table 1). On the basis of pilot survey, it was found that there were only six localities in which the nine groups lived. The selection of

Table 1 : Number of marriages studied, by locality

Locality	Source	No. studied
Aligarh (Civil Lines)	Household survey	505
Jamalpur	Household survey	569
Kala Mahal	Household survey	683
Naya Basti	Household survey	617
Upper Court	Household survey	803
Sarai Rahman	Household survey	622
Total		3799

the nine groups from different socio-economic levels and region was made because this might have a differential impact on both the frequency and pattern of consanguineous marriages. All information was recorded on consanguinity of marriages and past reproductive performance with the help of female social workers in their own language using the retrospective method. The subjects absent at the first visit were revisited, thus the response rate was 100%. Cross checking was done by the supervisory personnel. There was practically no difference in the interview-reinterview information, specially on the first cousin and first cousin once-removed matings, or on non-consanguineous marriages, while negligible variations were noticed in information on second cousin matings. The consanguinity classes recorded were first cousin (coefficient of inbreeding, $F=0.0625$), first cousin once removed ($F = 0.0313$), second cousin ($F = 0.0156$), double first cousin ($F = 0.125$) and non-consanguineous ($F = 0$). When husband's father is brother of wife's mother, and husband's mother is sister of wife's father, then the husband and wife are said to be double first cousin.

The overall percentage distribution of inbreeding and average coefficient of inbreeding

($F = \sum P_i F_i$) were calculated for each group. The difference in the pattern of consanguinity in each group were evaluated through one way analysis of variance (Sokal and Rohlf, 1981).

RESULTS

In the Uttar Pradesh Muslim Population 38.18% of marriages were consanguineous (Table 2) resulting in an average coefficient of inbreeding ($F = \sum P_i F_i$) of 0.0417. The highest frequency of consanguineous marriage was between first cousins 53.83% with 13.19% between first cousins once removed, 12.93% between second cousins, and 1.5% between double first cousins (Table 3). The nine groups were identified in the six region, which comprise the survey population. Among these

Table 2 : Percentage inbreeding and coefficient of inbreeding for different groups

Groups	Inbreeding %	Coefficient of inbreeding (F)
Ansari	44.62	0.0417
Sheikh	28.91	0.0404
Syed	41.16	0.0465
Qureshi	38.72	0.0430
Pathan	42.25	0.0350
Mughal	48.72	0.0406
Malik	31.36	0.0408
Rajput	35.17	0.0424
Gujjar	32.71	0.0392
Total	38.18	0.0417

Table 3 : Number of marriages with degree of consanguinity among different groups

Groups	1C	1C1	2C	D1C	NC	Total
Ansari	385	125	71	10	137	728
Sheikh	305	135	78	5	99	622
Syed	317	51	65	15	75	523
Qureshi	419	71	102	3	111	706
Pathan	129	48	61	2	68	308
Mughal	137	23	41	7	58	266
Malik	84	19	25	5	35	168
Rajput	193	13	21	3	81	311
Gujjar	76	16	27	7	41	167
Total	2045	501	491	57	705	3799

1C, first cousin ($F = 0.0625$); 1C1, first cousin once removed ($F = 0.0313$); 2C, second cousin ($F = 0.0156$); D1C, double first cousin ($F = 0.125$); NC, non-consanguineous ($F = 0$).

groups the prominent ones were : the Sheikh, believed to have originated from forced converts to Islam; the Syed, direct descendants of the son-in-law of Prophet Mohammad, who therefore, hold a high status in the Muslim society in North India; the Pathans, hill, tribes especially from the North-West Frontier; the Mughals, descended from members of the North Indian dynasty established by Babur in AD 1526; and the Ansari and Qureshi, traditional religious leaders with variations in the distribution pattern of occupations and consanguinity.

A one-way analysis of variance (Table 4) on the patterns of consanguineous marriages in each group indicated that the differences were significant at $P < 0.001$ ($F = 14.92$; $V_1 = 4$, $V_2 = 40$).

economic status (Badaruddoza and Afzal, 1995; Donnam, 1988; Shami et al., 1994). As the study also indicated that the individuals marry within their groups and also a large proportion of marriage contract to close biological relatives, where as the only 18.56% of all unions in present survey were to non-relatives.

Thus, in conclusion, while the inter group comparisons among the nine groups of the present study indicate that the practice of marriage to a close biological relative goes beyond traditional and contemporary social and to some extent, occupational boundaries. However, the interaction between the groups and degree of consanguinity, which effect the fertility and mortality could be due to high intensity of social selection.

Table 4 : One-way analysis of variance for different patterns of consanguinity among different groups

Source of variation	Amount of variation	d.f	Estimated variance	Observed F-ratio	Significance level
Among patterns of consanguinity	254211.20	4	63552.80	14.92	P<0.001
Within groups	170387.78	40	4259.70		
Total	424598.98	44			

DISCUSSION

The Indian Muslims, especially North Indian Muslims have a heirarchical sub-division comparable with the Hindu caste (*Jati*) system which restricts the social interactions and are characterised by traditional occupational specialisations and endogamy (Hutton, 1946).

The highest rates of consanguinity among Muslims in India are found in Uttar Pradesh (Badaruddoza and Afzal, 1992; Basu, 1975). The Syed and Sheikh are occupying the preeminent social positions with traditional lineage with *Zamindars* (Land owners).

However, the present studey (Table 2 and 3) indicates beyond the traditional relationship between the groups and occupation, the groups now principally serve simply as a social identity and not directly reflect occupational and

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