

A Study on Fertility Among The Mao Nagas of Senapati District, Manipur

Lorho Mary Maheo and A.K. Kalla

Department of Anthropology, University of Delhi, Delhi 110 007, India

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ABSTRACT The present investigation aims at finding out the fertility status and also the various socio-demographic characteristics influencing fertility among the Mao Naga tribe of Manipur. The mean age at menarche and menopause is found to be respectively higher than that of most of the so far reported regional tribal groups. However, mean age at marriage of both men and women is found to be quite similar to that of the other communities of the region. The stepwise multivariate regression analysis showed that the current age of the mother, experience of infant mortality and desire for sons are significantly influencing fertility in this population.

INTRODUCTION

Of the three components of population change namely, fertility, mortality and migration, study of human fertility occupies a central position and it is the most vigorously studied field as it measures the rate at which population adds to itself (in the absence of immigration). It is also a complex study because of the large number of factors that may be included to describe and analyse its variations.

In the present paper an attempt has been made to study the fertility of Mao women. Fertility levels by various socio-economic and demographic factors have also been studied. Besides these, a multivariate stepwise regression analysis is carried out in order to examine the collective influence of various independent variables, such as the age at effective marriage age at first conception, educational level of the women, experience of infant mortality, desired number of children, etc, on fertility.

Of the 29 recognised scheduled tribes of the state of Manipur, the Mao Naga tribe is one of the major tribes concentrated mainly in the Senapati district of Manipur. Though Senapati district is the smallest hill district in terms of its size, population wise it has the largest population. According to 1991 Census, the district had a population of 2,08,406 as against 1,55,421 in

1981 (Census) and 1,04,176 in 1971 (Census). The district is also inhabited by other tribes such as Maram, Thadou, Zeliang, Tangkhul, Kom, Maring, etc. and some non-tribals like the Nepalis. However, the Maos are the most preponderant population of the district. The present study is an attempt to study at the micro-level, the fertility of the Mao community and the factors influencing it.

METHODS AND MATERIALS

Three villages namely, Chowainu, Punanamei and Makhel were selected randomly from the 21 Western Mao villages. All the ever married women in the above mentioned villages were considered for the study. The present study is based on data from 536 ever married Mao women ranging from 18 to 85 years. Information were collected through interview with the help of the pre-tested interview schedule formulated as per the requirement. Data on age at menarche and age at menopause was obtained from the respondents (by retrospective method) depending on recall. A few women who could not recollect the month or year of menarche or menopause were excluded from the respective analysis. Standard statistical techniques were employed to evaluate the data.

RESULTS AND DISCUSSION

Age at Menarche: Menarche is the marker of onset of puberty and is generally associated with the physical growth of a girl, influenced by environmental factor. A woman becomes biologically fecund i.e. capable of bearing a child with the onset of menstruation. The mean age at menarche for the Mao women is found to be 14.59 years (S.D. $\pm$ 1.035). This is found to be higher than that of the Tangkhul Naga (13.93, Chakravarti 1986) and Tarao Naga (13.46 years; Singh 1989) of Manipur and Zemi Naga (14.13; cited from Chakravarti 1986, p.40) of Nagaland but lower than that of the

Kabui Naga (15.15 years; Chakravarti 1986).

Age at Marriage: The official minimum age at marriage was stipulated to be 18 years for girls and 21 years for boys by the Indian parliament in 1970. In the present study only 2.2% women were married below the stipulated legal age at marriage. The average age at marriage of the Mao women and men is respectively found to be 22.7 and 25.6 years. Age at marriage of the presently studied women is found to be similar to that of the populations of the neighbouring states, viz. Nagaland, and Mizoram, with mean age at marriage being 22.7 and 22.9 yrs. respectively. The mean age at marriage of the Mao males is found to be similar to the mean age at marriage among the Tarao and Kuki tribal males of Manipur (25.84 yrs; Mukherjee 1990).

Table 1: Distribution of age at marriage of Mao women and men among the Mao

Age at marriage	No. of women	%	No. of men	%
<15	1	0.2	-	-
15-19	81	15.1	17	3.9
20-24	278	51.9	155	35.5
25-29	144	26.9	172	39.3
30-34	28	5.2	76	17.4
≥35	4	0.7	17	3.9
Total	536	100.0	437	100.0
Mean	22.7		25.6	

Age at Menopause: The mean age at menopause is found to be 48.69 yrs. (S.D. ±2.129). This is found to be much higher than that of the Tangkhul Naga (45.56 years, Chakravarti, 1986); Tarao Naga (46.44 yrs. Singh, 1989) and Ahoms of Assam 46.32 yrs (Sengupta and Rajkhowa, 1996) for whom the relevant data is available. But it is found to be quite similar to that of the Kabui Naga of Manipur (48.86 yrs. Chakravarti, 1986).

Measures of Fertility: Distribution of different rates and ratios of fertility is set out in table 2. Child-woman ratio (CWR) for the present population is found to be 545.45 which is a higher than that of the Senapati district population (CWR = 344.2) and the Manipur state rural population (CWR=448.5) (Census, 1991). The crude birth rate (CBR) for the Mao population (12.1) is found to be lower than that for total Indian rural population (21.4). General fertility rate (GFR) is again found to be much lower than respectively that of the all India population

(144.0), Manipur state population (116) and Senapati district population (103). Age specific marital fertility rate (ASMFR) set out in table 3 shows that fertility among the Mao did not continue upto the supposed end of the reproductive life i.e. upto 49 years. The peak of reproduction is observed in the age cohort (25-29 yrs). Total fertility rate (TFR) for the present population is found to be 4.97 per 1000 women. This is found to be respectively higher than that of the population of Senapati district (4.06) of Manipur state (3.95) of rural India as a whole (3.8).

Table 2: Distribution of different rates and ratios of fertility

Name of the population group	CWR	CBR	GFR	TFR
Mao (present study (1995-96))	545.45	12.07	65.3	4.97
Senapati district (1991)	344.2	21.6	103	4.06
Manipur State rural population (1991)	448.5	21.4	116	3.8
Total Indian rural population (1991)	547.89	30.0	144	38

Table 3: Distribution of age specific marital fertility among the Mao

Age interval (yrs)	No. of live births	No. of women	ASMFR
15-19	1	5	200.00
20-24	5	28	178.57
25-29	12	54	222.22
30-34	14	69	202.89
35-39	9	89	101.12
40-44	5	56	89.28
45-49	-	7.0	-

Age at Marriage and Fertility: The reproductive performance in a community where knowledge of birth control measures is not popular or where birth control devices are hardly adopted, age at marriage becomes an important social factor which is likely to affect demographic parameters.

As expected women whose age at marriage was < 25 years had higher fertility than those whose age at marriage was > 25 years. Further, there is a drastic decline in average number of live birth if the age at marriage was raised beyond 29 years. Thus, an inverse relationship seems to exist between age at marriage and fertility in the presently studied population. This is in agreement with a number of earlier studies (Lapham, 1970; Tien,

Table 4: Average fertility vis-a-vis women's age at marriage among the Mao

Age at marriage	No. of women	No. of live births	Average Fertility
<15	1	3	3.0
15-19	81	472	5.83
20-24	279	1448	5.2
25-29	144	539	3.7
30-34	27	52	1.9
>35	4	1	0.25
Total	536	2515	4.69

1970) which reported that earlier age at marriage leads to higher fertility influencing the duration of the reproductive period.

Women's Education and Fertility: It is observed from table 5 that average fertility is lower among the literates than among the illiterates. Further, duration of schooling also seems to be influencing fertility. Education may be said to be affecting fertility not directly but through various indirect channels, such as higher age at marriage, greater knowledge pertaining to fertility regulations, child care practices thereby reducing infant and child mortality. Gulati (1988) has also rightly pointed out that educational attainments of persons open up avenues for them to raise their social status, encourage them in non-familial activities and expose them to various communication media.

Economic Status and Fertility: The general observation made on fertility vis-a-vis income is that fertility decreases with an increase in per capita income (PCI). But in the present study no specific trend in the variation of fertility vis-a-vis economic status is observed. Average fertility is found to be lowest (2.92) among the women of the highest income group having Rs. 12001 and more as annual PCI while highest average fertility (5.4) is found among women in the Rs. 6001-9000 annual PCI group.

Infant Mortality and Fertility: It is observed from table 7 that mothers who experienced in-

Table 5: Average fertility vis-a-vis educational status of women among the Mao

Educational Status	No. of women	No. of live birth *	Average Fertility
Illiterate	410	2105	5.13
Upto 10 yrs of schooling	98	351	3.58
> 10 yrs of schooling	28	59	2.10

Table 6: Average fertility vis-a-vis economic status of women among the Mao

Income	No. of women	No. of live birth	Average Fertility
< 3000	208	1095	5.3
3001-6000	189	876	4.6
6001-9000	52	278	5.4
9001-1200	37	120	3.2
> 12000	50	146	2.9

fant deaths, had higher average fertility compared to those who had not experienced infant deaths. Further, the findings confirmed that higher incidence of infant mortality increased fertility. Thus infant mortality seems to influence fertility as a major pro-natalist force in this population. The finding is quite similar to that made by Mahadevan et al among the three cultural groups i.e. Muslims, Harijans and caste Hindus of Andhra Pradesh (Mahadevan et al, 1985).

Table 7: Average fertility vis-a-vis infant mortality among the Mao

Experience of infant death	No. of women	Live Birth	Average Fertility
0	349	1324	3.8
1	153	910	5.8
2	18	142	7.9
2+	16	139	8.7

Desire for Sons and Fertility: The desire for sons particularly in the Indian context is prevalent in almost all communities. Desire for a male child may influence the overall demand for children and hence the fertility level.

The present data revealed that the average fertility increased with the increased desire for sons. Average fertility was minimum (3.1) in women whose desire was for two sons while average fertility was maximum (6.8) in women who desired for more than 3 sons. Another group of respondents (7.3%) who did not have any specific desire for sons, maintained that they would willingly accept whatever God provided them and their average fertility was 5.9.

Factors Influencing Fertility - a Multivariate Analysis:

An attempt is made to determine the importance of different socio-economic factors in explaining fertility variance by excluding couples who have adopted or are adopting birth

Table 8: Average fertility vis-a-vis desired number of sons among the Mao

No. of sons desired	No. of women	Live birth Fertility	Average
2	259	812	3.1
3	186	4446	6.0
3+	52	354	6.8
any no. that God may provide	39	231	5.9

control measures. The dependent variables is the number of live born children. The independent variables considered are:

1. Current age of the mother.
2. Age at marriage.
3. Age at 1st conception.
4. Educational level of the mother.
5. Experience of infant mortality (Yes/No).
6. Annual per capita income.
7. Desired number of sons.
8. Ideal family size.

Upto 31% of variance of number of live born children is explained by the age of the ego and it is found to be statistically significant. 7% of the variance is explained each by experience of infant mortality and desired number of sons respectively and each is also found to be making significant contribution towards fertility. The remaining independent variables, namely, age at 1st conception, annual per capita income, educational level of the mother, age at effective marriage and ideal family size are not found to influence fertility significantly among the Mao. But the above eight variables explained only 53% of variance in fertility, while 47% of the variance still remained to be explained.

Table 9: Stepwise regression analysis of factors influencing fertility among the Mao

Step No.	Variable selected as per order of importance	R ² (% of variance explained)	Significance of contribution of the factor (P value)
1.	Current age of the mother	31%	<. 0000
2.	Experience of infant mortality (Y/N)	38%	<. 0006
3.	Desire no. of sons	45%	<.0262
4.	Age at 1 st conception	49%	<.0609
5.	Annual per capita income	51%	<. 0648
6.	Educational level of mother	52%	<.0792
7.	Age at marriage	53%	<. 1292
8.	Ideal family size	53%	<.1692

CONCLUSION

The present study shows that desire for more sons and infant mortality have led to significant increase in fertility. Quicker developmental changes at the micro-level in this population can be brought about if the population planners and family welfare workers take a note of the above obtained results and modify their programmes accordingly. It seems that they have to provide for better education to the girls, better child health care system and educate the population to raise the status of women in order to curb the desire for sons. However, the future researchers have yet to reveal other factors which may explain the remaining 47% fertility variance of the Mao.

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