Achieved and Preferred Fertility Levels in Manipur State

Donati *Serena*[1], Sharma *Nabakanta*[2], Medda *Emanuela*[1], Grandolfo *Michele*[1]

[1]Department of Epidemiology and Biostatistics, Istituto Superiore di Sanità, Viale Regina Elena and [2] JN Hospital Imphal, Manipur

OBJECTIVE – To provide information on achieved and preferred fertility levels among childbearing women resident in the study area of Kakching, Manipur State. **METHODS** – Three samples randomly selected from electoral rolls of Kakching town (n 196) and Sora (n=108) and Irengband (n=102) villages were interviewed at home by trained personnel. Statistical analysis was performed using STATA software. **RESULTS** – Median age at marriage was 22 years in Kakching, 19 years in Irengband and 17 years in Sora. Median number of children suggested to a friend, as indicator for ideal family size, was 3 in Kakching and 4 in Irengband and in Sora. Ideal family size of 4 or more children was associated with a low educational level (OR = 2.45, CI 95% 1.09-5.47), husband's wish to have four or more children (OR – 12.17 CI 95% 6.50-22.80) and Muslim religion (OR=3.68,CI95% 1.57-8.63). **CONCLUSION** – Communities within the same district have fairly large fertility differentials mostly due to residence (urban / rural), woman's literacy and religion.

Key words : fertility, early marriage, KAP survey, India

Introduction

The medium term objective of the new National Population Policy adopted by the Indian Government in 2000 is to bring the total fertility rate down to replacement level by the year 2010[1].

State level and national-level information on fertility and family planning trends have been provided by India's first and second National Family Health Survey (NFHS) in 1992-93[2] and 1998-99[3] respectively. The total fertility rate (TFR) in India has declined from 5.2 children per woman in the year 1970-72 to 3.4 in 1992-93 and 2.9 in 1996-98. Contraceptive prevalence was, on average, 41% in 1992-93 and 48% in 1998-99, with huge variations among states that are still in different stages of demographic transition and among communities according to religion, literacy and utilization of health facilities[2,3]. The State of Manipur is one of the smallest in India (22, 327-Squared km) with a total population of over 1,800,000 and an annual er capita income of around Rs18000 - (US $400). The TFR estimate based upon NFHS-2 is 3.04 children per woman[4]. The study area was Kakching, a subdivision of Thoubal district, with a resident population of around 100,000 people (85% Hindus and 15% Muslims).

The first objective of this study was to provide information on fertility preferences, ideal and actual number of children, age at marriage and age at first birth among three representative samples of women in childbearing age living in a Hindu town (Kakching), in a Hindu village (Irengband) and in a Muslim village (Sora) of Kakching district. The second objective was to appreciate the role of place of residence (urban vs rural) and of religion (Hindu vs Muslim) on fertility.

Methods

Women were randomly selected from municipality registers of Kakching town (n=196), Irengband village (n=102) and Sora village (n=108).

The questionnaire, designed according to KAP methodology, was discussed in Kakching with local experts and community members and was pre-tested in the field.

Questions were closed and precoded and average time for administration was 20-30 minutes. The District Authority issued a formal authorization for fieldwork and data collection. A fieldwork plan was prepared with the collaboration of the Department of Family Welfare of the Government of Manipur, the Medical Officer of Post Partum Kakching Centre (PPKC) and the local Medical College.

A total of eight field workers and two supervisors were locally appointed. They attended a two days training course on home visits and questionnaire administration procedures and received a written interviewer's manual. After the administration of the questionnaire, the field workers informed the women about family planning and about available health facilities in the district.

Data collection was performed during the month o February 2001.

Questionnaires were locally coded and data were entered using EPI INFO 6.0.

Data analysis was performed in the Epidemiologial Unit of the National Health Institute in Rome Italy using STATA software.

Results

Of the 407 women of reproductive age selected for the survey, 406 (99.8%) were interviewed. Table I shows the socio-demographic characteristics of the sample according to the three areas under study. One hundred ninety six women (48.3%) were interviewed in Kakching town, 102 (25.1%) in Irengband village and 108 (26.6%) in Sora village. Muslim women were younger and less educated than the Hindu women.

Figure 1 shows family size for both the respondents and their mothers, by study area. It also shows how many children the women interviewed said, they would suggest as an appropriate number to a friend (as indicator of fertility preferences), and the number of children they said their husbands wished to have. Around 90% of the respondents' mothers in the three study areas had more than three children, and respectively 43% in Kakching and 70% in Irengband and in Sora had had more than five children. Very few women (<2%) would suggest a friend to have more than five children and 22% in Kakching, 53% in Irengband and 64% in Sora suggested more than three children.

Husbands were said to wish to have more than three children in 33% in Kakching and 71% in both Irengland and Sora Table II. The median number of children suggested to a friend, as indicator for ideal family size, was three in Kakching and four in both Irengband and Sora, irrespective of religious groups. The median ideal number of children suggested to a friend in the villages ranged from 3, among women with at least a high school education to four among less educated women. In Kakching, median value for ideal family size (three children) did not vary as per mother's education.

Six percent of women in Kakching, 30% in Irengband and 51% in Sora married before the age of 18 years and none, 9% and 24% respectively delivered their first baby in the same age group. Median age at marriage was 22 years in Kakching, 19 years in Irengband and 17 years in Sora. It increased with women's and husband's education (Table III). Muslim women had a six time higher possibility of getting married before the age of 18 years compared to Hindu women (OR = 5.94, CI 95% 3.39-10.44).

The median age at first birth by place of residence, was shifted forward by two years compared to median age at marriage. In Kakching and Sora, it was higher among women with secondary education compared to illiterate ones (Table III).

Table I : Socio-demographic Characteristics by Study Area

Number Religion	Kakching n=196 (48.3%) Hindu	Irengband n=102 (25.1%) Hindu	Sora n=108 (26.6%) Muslim
Age			
< 25 years	33 (16.8%)	18 (17.6%)	29 (26.9%)
26-30 years	33 (16.8%)	21 (20.6%)	31 (28.7%)
31-35 years	39 (19.9%)	20 (19.6%)	18 (16.6%)
36-40 years	42 (21.4%)	28 (27.5%)	11 (10.2%)
> 40 years	49 (25.0%)	15 (14.7%)	19 (17.6%)
Women's education			
None	54 (27.6%)	58 (56.9%)	74 (68.5%)
Primary	36 (18.4%)	34 (33.3%)	28 (25.9%)
Secondary / university	106 (54.1%)	10 (9.8%)	6 (5.5%)
Marital Status			
Single	37 (18.8%)	13 (12.7%)	10 (9.2%)
Married	155 (79.1%)	87 (85.3%)	85 (78.7%)
Divorced / widowed	4 (2.0%)	2 (1.9%)	13 (12.0%)
Husband's education			
None	19 (12.2%)	36 (41.8%)	22 (24.7%)
Primary	37 (23.7%)	36 (41.8%)	50 (56.2%)
Secondary	50 (32.0%)	9 (10.5%)	9 (10.1%)
University	50 (32.0%)	5 (5.8%)	8 (9.0%)

Table II – Number of Children Among Respondents' Mothers and Number of Children Suggested to a Friend, and Wanted by Respondents' Husbands, by Study Area

	Number of children among respondents' Mothers			Number of children suggested to a friend			Number of children desired by husbands		
	>3	>5	median	>3	>5	median	>3	>5	median
Kakching	90%	43%	5	22%	1%	3	33%	3%	3
Irengband	93%	70%	7	53%	0%	4	71%	6%	4
Sora	90%	71%	6	64%	2%	4	71%	14%	4

Table III – Median Age at Marriage and at First Birth Among Women by Residence and Selected Background Characteristics.

Background Characteristics	Median age at marriage			Median age at first child		
	Kakching	Irengband	Sora	Kakching	Irengband	Sora
Mother's age						
<25 year	21	19	16	20	20	18
26-30 years	21	19	18	21.5	20.5	20
31-35 years	23	18.5	17.5	25	20.5	19
36-40 years	24	19	18	26	21	20
>40 years	20	20	17	22	21	18
Mother's education						
None	21	19	17	22	21	19
Primary (< 8 years)	21	19	17.5	22	20	20
Secondary (>8 years)	24	20	20.5	25	21	22
Husband's education						
None	21	18.5	16.5	25	21	18
Primary (< 8 years)	20	19	19	22	20	20
Secondary (> 8 years)	23	19	18	25	21	19
Religion						
Hindu	22	19	—	24	21	—
Muslim	—	—	17	—	—	19

Table IV : Knowledge About Fertility Period in the Menstrual Cycle

	Kakching	Irengband	Sora	Total
During the period	4%	3%	0%	2%
Immediately before the period	2%	3%	6%	3%
Immediately after the period	69%	71%	78%	72%
Around midcycle	25%	23%	17%	22%

Tab. V Factors Associated With a Suggested Family Size of Four or More Children (logistic regression model)

Variables	OR	CI 95%
Age		
≤ 25 years	1	-
26-35 years	1.11	0.33-3.76
≥ 36 years	0.73	0.21-2.47
Education		
Secondary or higher	1	—
None / primary	2.45	1.09-5.47
Number of children wished by the husband		
≤ 3	1	—
≥ 4	12.17	6.50-22.80
Age at first marriage		
>18 years	1	—
<17 years	1.02	0.49-2.13
Ever use of contraception		
Yes	1	—
No	0.55	0.26-1.15
Religion		
Hindu	1	—
Muslim	3.69	1.57-8.63

The majority of the women believed that immediately after the period was the easiest time during the cycle to get pregnant. Of the women 25%, 23% and 17% in Kakching Irengband and Sora respectively knew the fecund period of the cycle which is a good indicator of the knowledge of reproductive physiology Table IV. Correct knowledge was lower among Muslims and among youngest women (≤ 25 years).

Table V presents the results of a logistic regression (performed on the three samples together) related to the factors associated with a suggested family size of four or more children. Low educational level (OR =2.45, CI 95% 1.09-5.47), being married to a man who wishes to have four or more children (OR =12.17 CI 95% 6.50-22.80) and being Muslim (OR=3.68, CI 95% 1.57-8.63) were associated with the suggestion of a large family size (≥ 4 children). Out of those interviewed, 25% already had more children than the number suggested to a friend as optimal family size.

Discussion

Socio-demographic characteristics were found similar to data reported in NFHS – 2 survey in Manipur[4] supporting the validity of the sampling procedures of this study. The high response rate reflects the quality of the fieldwork.

Although the desired family size of the women interviewed was in most cases, not completed because the youngest are still adding to their families, compared to their mothers' family size, a consistent reduction is evident among the new generation in the three study areas. The smaller family size suggested to a friend by all interviewed adds evidence to this.

Husbands wanted a higher number of children compared to that wanted by their wives, especially in rural areas and their attitude strongly influences decisions regarding reproduction (Table V) as is also reported in the literature[5,6].

High educational levels were associated with small family sizes, and with preferences for 1-3 children, supporting the hypothesis that women's education has a strong inverse relationship with fertility. Fertilty

preferences vary by place of residence and mostly by religion with large family preferences among rural areas and among Muslims as is also reported by other studies [3,7,8].

Even though early marriage and early childbearing is considered a factor leading to increased risk of complications of pregnancy and childbirth[9], few women in Kakching, but one fourth to one half in Irengband and Sora married before the age of 18 years. According to NFSH-2 median age at first birth among women aged 20-49 years in India was 20 years[3]. In our study, it was higher in urban than in rural areas and for women who had completed at least high school education than for illiterate women. The rather still low age at marriage and at first birth suggest that the decline in fertility that has occurred in India has resulted mostly from family limitation within marriage rather than from an increase in age at marriage. Fertility levels achieved and preferred were lower in Kakching than in Irengband and Sora. This is to be expected because of women's and their husbands' higher educational levels in Kakching and because family planning services tend to start in urban areas and spread later on to rural areas. According to our unpublished data total unmet need for family planning was 14.3% in Kakching town, 24.5% in Irengband village and 27.8% in Sora village.

The low percentage of women (25% or less in the three samples) that knew the fecund period of the cycle shows poor knowledge of reproductive physiology, especially among younger and less educated women.

Our findings on the frequency of early marriage, the poor knowledge of reproductive physiology, the stated fertility preferences and the achieved fertility levels show constraints on free reproductive choice. Remarkable differences among the three study areas, mostly due to place of residence, women's literacy and religion, confirmed that not only India as a whole, but also communities within the same district, have fairly large fertility differentials.

References

1. Ministry of Health and Family Welfare (MOHFW). 2000. National Population Policy, New Delhi. *Department of Family Welfare, MOHFW, 2000.*

2. National Family Health Survey. A Final Report of the National Family Health Survey, 1992-93 Bombay, India. *International Institute for Population Sciences, 1995.*

3. National Family Health Survey. A Final Report of the National Family Health Survey, 1998-99 Bombay, India. *International Institute for Population Sciences, 2000. www.nfhsindia.org*

4. National Family Health Survey, 1998-99. Manipur Preliminary Report. TNS MODE Private Limited, *New Delhi and International Institute for Population Sciences, Mumbai, June 2000. www.nfhsindia.org*

5. Ramesh BM, Gulati SC, Retherford RD. Contraceptive use in India. National Family Health Survey Bulletin No 2. Mumbai. *International Institute for Population Sciences ; Honolulu: East-West Center, 1996.*

6. Donati S, Hamam R, Medda E. Family planning KAP survey in Gaza. *Social Science and Medicine* 2000;50:841-9.

7. Moulasha K, Rama Rao. Religion-specific differentials in fertility and family planning. *Economic and Political Weekly* 1999;34(42 and 43):3047-51.

8. Retherford RD, BM Ramesh. Fertility and contraceptive use in Tamil Nadu, Andhra Pradesh and Uttar Pradesh. National Family Health Survey Bulletin No. 3. Mumbai. *International Institute for Population Sciences: Honolulu:East-West Center, 1996.*

9. UNFPA The State of World Population. The right to choose. *Reproductive rights and reproductive health, 1997.*