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## **Differential Fertility in a Rural Area : An Analysis of Current Fertility Based on Survey Data**

**T**HIS paper attempts to study the fertility differentials among different socio-economic groups in the rural areas based on a current demographic survey. The first half of this paper will discuss present fertility, mortality and family planning acceptance rate in our project area in Miraj Taluka of Maharashtra while the second half will deal with fertility differentials.

### **Material and Methods**

The requisite data were collected by the Integrated Multipurpose Health Workers through a questionnaire from a random sample of 10 percent (3606) households from the 52 villages of the Miraj Taluka of Maharashtra State in the first quarter of 1974. Interviewers were trained in interview technique and supervised by the Health Supervisors during data collection. Schedules were scrutinized and were transferred to the code sheets and were processed by computer.

### **Study Population and its Characteristics**

The sample households covered 20,839 population with 10,907 males and 9,932 females giving an average household size of 5.8 members and a sex

ratio of 910 females per 1,000 of males. The female population included 5,435 ever married women, of which 3,418 women were currently married and were between 15-44 years of age. The average age of marriage is 13.9 years whereas the age at consummation was 15.2 years; women started their married life on the average about 1.3 years after formal marriage. The average age at widowhood was 31.4 years for those who were widowed. More than 90 percent of women were engaged in 'household duties', 8 percent in 'agriculture' and the remaining 2 percent were engaged in 'other services'. Two-thirds of the women (65.1 percent) were illiterate, 33.2 percent were literate but non-matric, and only about 1.7 percent were matriculates or college graduates.

### Fertility, Mortality and Family Planning Acceptance Rate

Table 1 presents a comparative data on some of the fertility and mortality

TABLE 1—FERTILITY, MORTALITY AND FAMILY PLANNING INDICES OF THE STUDY VILLAGES AND OF RURAL MAHARASHTRA

	<i>Study villages</i>	<i>Rural Maharashtra 1969-72</i>	<i>Difference</i>
	(1)	(2)	(2)-(1)
a. Crude Birth Rate	26.3	32.9	6.6
b. General Fertility Rate	151.9	153.9	2.0
c. Total Fertility Rate	3.4	4.6	1.2
d. Crude Death Rate	9.8	14.5	4.7
e. Infant Mortality Rate	67.6	107.1	39.5
f. Percent of Couples Protected	32.3	19.2*	14.1 (—ve)

NOTES: 1. Age, sex adjusted birth rate=27.9.

2. Standardized birth rate=28.3.

3. Standardization was done by direct standardization using all India rural population as standard.

4. Census of India, Series—1, All India Census Tables (Estimated from one percent sample data) C-II, Age and marital status 1971, pp. 118-120.

5. Registrar General, India, SRS Analytical series No. ?, 1972, p. 47.

6. Registrar General, India, SRS Bulletin Vol. VIII, No. 1, April 1974.

7. SRS Bulletin Vol. VII, No. 1, (Jan.-March 1973).

8. Misra, B. D. 'The Indian Family Planning Programme and Differential Family Planning Performance of Indian States.' *The Journal of Family Welfare*, Vol. XX, No. 1, Sept. 1973, pp. 26-39.

\*Both rural and urban Maharashtra combined.

indices of the study villages in comparison with rural Maharashtra. It shows that all the fertility and mortality indices were lower in the study villages and performance of family planning in terms of couples protected is much higher in the study villages than in rural Maharashtra. Of 32.3 percent protected couples, 30.2 percent were sterilized and the remaining 2.1 percent were using conventional contraceptives. Only 17 (0.5 percent) of the remaining couples, not using contraception at the time of survey had used some method in the past and the rest 67.2 percent of the couples had never used any method. The chief reason for not using conventional contraceptives was the non-availability of contraceptives in the villages (more than 90 percent of the respondents). Religion and health problems etc. accounted for only about 10 percent of the respondents.

### Health Facilities, Place and Assistance at Delivery

The health facilities in rural India are very inadequate in terms of doctor-population ratio, beds per 1,000 population, storage facility and the availability of necessary drugs etc. The transportation facilities are equally inadequate, particularly during the rainy season, when most of the villages are completely cut off from the big villages and also from the district town.

But our study<sup>1</sup> related to health facilities in the project area shows that in these villages there were three Primary Health Centres with two allopathic doctors each, 5 Ayurvedic dispensaries with one doctor each and an Allopathic clinic with one allopathic doctor. Two hundred and fifteen dais were available of which 58(27 percent) were trained and were attached to either Primary Health Centre or Allopathic clinic or to a private clinic, while 157 (73 percent) were untrained. There were 38 maternity beds and 18 general beds. Out of the 38 maternity beds 26 were in two out of three Primary Health Centres, while the other one was not provided with beds yet; and 12 beds were attached to 2 Ayurvedic and one Allopathic Zilla Parishad dispensaries. The 18 general beds were run by 3 private doctors. In addition to this, there were 79 private clinics that were run by resident and non-resident doctors.

In the study are 547 births, took place in the reference period of one year preceding the survey. 23.4 percent of these births took place in a hospital or primary health centre and 76.6 percent, in homes. 28.1 percent of the deliveries

1. Ram, Eric R. and Datta, U.K., 1975, Health manpower in the rural areas of the Miraj Taluka and its utilization in the Integrated Health Project, *The Manpower Journal*, XI(2).

were attended by the trained personnel like doctor/ANM/NM and the remaining 71.9 percent were attended by untrained personnel like untrained dais and relatives. Out of 154 deliveries which were attended by the trained personnel only about 17 percent were attended at homes and 83 percent in a hospital and a primary health centre (Table 2).

TABLE 2—BIRTHS BY PLACE AND ATTENDENT AT DELIVERY

<i>Place of Delivery</i>	<i>Attendant at Delivery</i>			<i>Total</i>
	<i>Trained Daij</i>	<i>Doctor : Untrained Dai</i>	<i>Relatives</i>	
Home	26	387	6	419 (76.60)
Hospital/Primary Health Centres	128	—	—	128 (23.40)
Total	154 (28.15)	387 (70.75)	6 (1.10)	547 (100.00)

### **Fertility Differentials : Age and Parity**

The distribution of mothers who have given births in the reference period of 12 months (Diwali 1972 to Diwali 1973) by their age at delivery and parity shows that 16.1 percent were of first parity, 32.2 percent were of second parity and more than half (5.7 percent) were of third or higher parity (Table 3). Again 18.5 percent of the mothers were under 20 years of age, 65.3 percent were between 20-29 years and 16.2 percent were 30 years or more at the time of their last delivery prior to survey. The computed age specific-marital fertility rates show an increase from 239 for mothers aged 15-19 years to 290 for mothers of 20-29 years of age and a decrease thereafter. The lower age specific marital fertility rate for the mothers aged 30 years and over might be due to the fact that higher proportion of them were using family planning methods.

### **Type of Family and Fertility**

The households in the study villages were grouped into two, viz., 1. Nuclear: a Family of husband, wife and their unmarried children and 2. Joint Family, which includes all other types of family. Here we find higher fertility (165.4) among mothers living in the nuclear families than that of joint families (156.8). Also, a higher proportion, of 33.7 percent, of the couples in the joint families were protected as against 29.9 percent of the couples in the nuclear families

TABLE 3—DISTRIBUTION OF MOTHERS WHO HAVE GIVEN BIRTH IN THE PAST 12 MONTHS BY AGE AT DELIVERY AND PARITY

<i>Age</i>	<i>Parity</i>					<i>Total</i>	<i>Average Parity</i>	<i>ASMFR</i>
	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5+</i>			
15-19	79	21	1	—	—	101	1.2	239.34
						(18.46)		
20-24	9	137	59	—	—	205	2.2	289.96
						(37.48)		
25-29	—	18	75	59	—	152	3.3	206.24
						(27.79)		
30-34	—	—	8	11	39	58	5.3	98.14
						(10.60)		
35-39	—	—	—	—	23	23	6.6	45.01
						(4.20)		
40-44	—	—	—	—	8	8	6.9	17.78
						(1.47)		
Total	88	176	143	70	70	547	2.9	
	(16.09)	(32.17)	(26.14)	(12.80)	(12.80)	(100.00)		

(Table 4). It might be true that the family planning methods which are difficult to use in a crowded home, like the conventional contraceptives, are not much used by the rural couples. The sterilization which is a surgical operation and is done outside home might be comparatively more preferred by the couples from the joint families than that of nuclear families, when the desired family size is achieved.

TABLE 4—FERTILITY AND TYPE OF FAMILY

<i>Type of family</i>	<i>General Marital Fertility Rate</i>	<i>Percent of eligible couples protected</i>
Nuclear	165.37	29.95
Joint	156.83	33.66

## Fertility and Religioti

The fertility by religion shows that the Buddhists have the highest fertility rate (307.7) followed by the Muslims (216.7) and the lowest fertility is found among the Jains (138.5) and Christians (142.9) whereas Hindus have lower fertility (159.2) than the Muslims but higher than the Christians. Again Buddhists have the lowest average age at marriage (13.09) with also lowest proportion of protected couples. Jains show the average age at marriage to be 14.51 but the proportion of protected couples among them is much higher. The Hindus and Muslims have about the same protection rate of 31.5 percent (Table 5).

TABLE 5—FERTILITY AND RELIGION

<i>Religion</i>	<i>Average age at marriage</i>	<i>General Marital Fertility Rate</i>	<i>Percent of couples protected</i>
Hindu	13.73	159.19	31.44
Muslim	14.53	216.75	31.58
Jain	14.51	138.49	37.91
Christian	14.92	142.86	51.11
Buddhist	13.09	307.69	8.11

## Fertility and Caste

The caste classification of Hindus, shows that Harijans have the highest fertility rate (184.1) followed by Lingayat (164.9) and Maratha( 149.1) respectively and the Brahmins have the lowest fertility rate (120.7) with highest average age at marriage and highest proportion of their eligible couples protected for family planning. In other caste groups there is not much variation both in average age at marriage as well as in family planning acceptance (Table 6).

TABLE 6—FERTILITY AND CASTE

<i>Castes</i>	<i>Average age at marriage</i>	<i>General Marital Fertility rate</i>	<i>Percent of couples protected</i>
Brahmin	17.24	120.69	66.67
Maratha	13.73	149.15	31.98
Harijan	13.50	184.15	33.94
Lingayat	13.66	164.95	29.69
Others	13.51	163.99	27.84

## Fertility and Education

Here we studied the fertility rate which respect to the educational level of the husbands as the literacy rate among the wives is very low. We find a trend of lower fertility with higher educational level of husbands and so as the average age at marriage and family planning practice. Hence education is one of the most important variables, which is responsible for fertility differences (Table 7).

TBALE 7—FERTILITY AND EDUCATION OF HUSBAND

<i>Education</i>	<i>Average age at marriage</i>	<i>General Marital Fertility rate</i>	<i>Percent of couples protected</i>
Illiterate	13.57	163.63	30.99
Literate but up to non-matric	15.04	153.39	32.82
Matric and above	18.43	144.23	34.12

## Fertility and Occupation

The fertility differences by the occupational status of the husband, are significant. The general marital fertility varies from 146.3 for the women with husbands in services to 204.3 for women with husbands working as agricultural labourers. This is expected as services are related to higher education, which eventually delayed marriage, scope of better contact with the outside people and broader outlook. In case of other occupational categories there is not much variation in the fertility levels (Table 8).

TABLE 8—FERTILITY AND OCCUPATION OF HUSBAND

<i>Occupation marriage</i>	<i>Average age at</i>	<i>General Marital Fertility rate</i>	<i>Percent of couples protected</i>
Cultivator	13.22	177.02	33.08
Agricultural labourer	13.27	204.31	32.51
Household Industry	13.46	181.82	27.04
Transport, storage and communication	13.00	191.33	19.70
Services	18.51	146.34	34.33

## Fertility and Income

The average household income of the people living in this area is Rs. 206 per month for a family of average 5.8 members. Here we find that the fertility rate is lowest (151.7) for those whose monthly household income is Rs. 100 or less and highest (168.9) for the people having income of Rs. 101-300 (Table 9); this may be due to higher rate of sterilization among the couples in the lowest income level as compared to those enjoying higher income levels. And also the incentive money in the sterilization camps draws more from the lower income level than from the higher income levels.

TABLE 9—FERTILITY AND HOUSEHOLD INCOME

<i>Income</i>	<i>General Marital Fertility Rate</i>	<i>Percent of couples protected</i>
Upto Rs. 100	151.71	30.19
Rs. 101 - 300	168.91	36.44
Rs. 301 +	157.19	25.81

NOTES : The average monthly household income is Rs. 206. Average household size is 5.8.

## Conclusion

In the rural population Miraj Taluka, fertility differences exist between different socio-economic segments based on religion, caste, education, occupation, income and family type. This area is experiencing lower fertility and mortality levels and higher acceptance of family planning, as compared to other rural areas of Maharashtra. This may be due to a number of factors such as the availability of better facilities and services in this area. Many of the villages are quite near and well connected by State Bus services with the District town Sangli, or sub-division town Miraj, where well-equipped hospitals and nursing homes are available, particularly the Mission Hospital of Miraj, which is a pilgrim place for medical and health services for the rural people of this area for the past 80 years, with or without money, and a great promoter of family planning activities. In addition to this, Sangli District was selected as the best district in Maharashtra for its family planning performance six

times in the past few years. The people of rural areas of this Taluka are coming forward in large numbers to participate in different health programmes, particularly, family planning and immunizations.

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