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Female Literacy and Fertility

THE persistence of high fertility in developing countries has baffled many demographers, social scientists, politicians and others. Numerous explanations have been offered to reduce fertility. On the one extreme, there are those who assert "development" is the best pill to reduce fertility. On the other extreme, there are those who assert that reduction in fertility is a prerequisite to bring about development. The truth lies probably somewhere between the two extremes. Among the factors often said to be associated with fertility are per capita income, participation of women in labour force and educational attainment of population, especially of women.

Demographers have gathered plenty of data with regard to relationship between fertility and educational attainment. These data, with a few exceptions, indicate that the female education and fertility are related inversely. Despite all this, not much is known about the causal relationship. With the female educational attainment, other important variables are associated, i.e., postponement of marriage, female labour force participation, effective contraceptive practice and a higher level of spinsterhood, all of which tend to reduce the force of fertility.

II. Objectives

This paper attempts to examine the possible impact of the educational attainment of females on their fertility behaviour in India, with special reference to

India population project districts, namely, Bangalore, Tumkur, Kolar, Chitradurga and Shimoga Districts.

III. Data

For India, data have been classified on the basis of general literacy rate among females and crude birth rate for the year 1971. Eighteen states and four union territories have been included here; for the remaining states and territories, the data are not available. The scope of the study is limited to 1971 census data; it has not been possible to get reliable data on birth rate for the census years 1951 and 1961.

The data for Karnataka districts are based on the Longitudinal Survey conducted by the Population Centre, with a sample of about 5000 households. The sample consisted of both rural and urban areas. The data are used for deriving crude birth rates and age-specific fertility rates. With regard to educational level of women, they have been classified into two groups namely, literates and illiterates in respect of both rural and urban.

Table-1 presents rural, urban and combined literacy rates for females and crude birth rates in different states in 1971. The rural female literacy rate varies from 3.85 in Rajasthan to more than 50 in Kerala. The corresponding urban rates range from 22.42 in Assam to more than 60 in Kerala.

Inter-state variation in rural crude birth rate ranges from 31.3 per 1000 population per year in Kerala to 46.3 in Uttar Pradesh. The urban crude birth rates too reflect similar interstate variation. Rather surprisingly, the urban crude birth rate for Jammu and Kashmir, with a preponderance of Muslims in its population, is as low as 21.6 per 1000 population per year. The highest crude birth rate is reported for urban areas in Gujarat.

Female literacy rate and crude birth rate are inversely related. For the rural areas, the correlation coefficient (r) between the two rates is 0.53 which is significant. However, the corresponding correlation coefficient for urban areas is —0.32, which is not significant. This would imply that in urban areas factors other than literacy among females play an important role in the determination of crude birth rate. When we disregard the rural-urban differences, the correlation coefficient is —0.56 which is significant. However, in some of the states like Kerala, the fertility levels are not so low as to be commensurate with the

TABLE 1—LITERACY RATE IN INDIA AMONG FEMALES, ESTIMATED ANNUAL LIVE BIRTH RATE IN INDIA 1971 (RATES BASED ON SRS DATA OF CONTINUOUS ENUMERATION AND SIX MONTHLY CROSS CHECK SURVEY)

Sl. No.	State/Union Territories	Literacy rate among females			Crude Birth rate per 1000 population 1971		
		Rural	Urban	Combined	Rural	Urban	Combined
	States						
1.	Andhra Pradesh	10.88	35.86	15.65	35.6	31.3	34.8
2.	Assam including Meghalaya	7.86	22.42	9.12	39.3	31.0	38.5
3.	Bihar	6.16	31.62	8.49	33.2	27.9	32.8
4.	Gujarat	17.07	44.33	24.56	41.5	35.8	40.0
5.	Haryana	9.00	41.43	14.68	44.2	32.4	42.1
6.	Himachal Pradesh	17.93	52.25	20.04	38.2	23.9	37.3
7.	Jammu and Kashmir	4.74	28.99	9.10	36.0	21.6	32.9
8.	Karnataka	14.37	41.32	20.76	34.6	25.3	31.7
9.	Kerala	52.63	60.52	53.90	31.3	29.6	31.1
10.	Madhya Pradesh	6.00	37.08	10.84	40.0	34.5	39.1
11.	Maharashtra	17.49	46.58	25.97	33.7	29.0	32.2
12.	Manipur	16.05	39.95	19.22	34.0	26.4	33.3
13.	Orissa	11.94	35.75	13.75	34.7	33.0	34.6
14.	Panjab	19.78	44.11	25.75	35.0	31.4	34.6
15.	Rajasthan	3.85	29.40	8.26	44.4	33.4	42.4
16.	Tamilnadu	18.87	45.55	26.83	32.9	27.8	31.4
17.	Tripura	17.43	57.56	20.55	37.2	23.1	35.8
18.	Uttar Pradesh	6.59	33.27	10.18	46.3	34.7	44.9
	Union Territories						
1.	Andaman and Nicobar Islands	25.57	51.48	30.96	33.8	21.8	31.9
2.	Goa, Daman and Diu	30.25	47.20	34.48	28.5	20.2	26.3
3.	Pondicherry	23.49	43.76	32.04	29.2	28.0	29.0

SOURCE : (1) *Sample Registration Bulletin Vol. IX, No. 4, October 1975.*
(2) Census of India 1971 : Provisional Population Totals Paper 1 of 1971—Supplement.

high literacy rates among women. This may be due to differences in age-sex-marital status composition of the population. But the correlation between female literacy and crude birth rate in general is negative and significant.

Table 2 presents the data on age-specific fertility by literacy status of women in the Karnataka districts. The general fertility rate is 215.0 for illiterate women and 184.3 for literate women. The difference in the rural general fertility rate between these two groups is about 31 points. The standardized fertility rate is 216.2 for illiterate women and 165.2 for literate women in the rural areas, showing the difference to be of the same direction but much larger. Notably, the difference between the general and standardized rates for the illiterate group is large for the urban areas.

TABLE 2—AGE-SPECIFIC FERTILITY RATE BY LITERACY OF WOMEN IN INDIA POPULATION PROJECT AREA OF KARNATAKA

Age	*Rural*		*Urban*	
	Illiterate Group-I	*Literate Group-II*	*Illiterate Group-I*	*Literate Group-II*
15-19	202.2	234.5	289.6	235.2
20-24	265.8	291.0	265.9	298.4
25-29	261.9	187.8	274.7	245.6
30-34	177.4	92.2	138.6	88.6
35-39	122.7	52.3	97.3	49.2
40-44	35.4	0.0	29.0	0.0
45-49	17.9	0.0	0.0	0.0
General fertility rate	215.0	184.3	176.9	179.5
Standardised fertility rate	216.2	165.2	181.3	169.6

As for age-specific fertility rates, literate women above 25 years of age have lower fertility than their illiterate sisters in rural areas. However, literate women in the age group 15-24 years have higher fertility rate than their illiterate counterparts. One of the reasons could be that the literate women are more aware of the facts that they can enhance their own status in their husband's homes by becoming pregnant women and lactating mothers in the early stages of marital duration.

In the urban areas the general fertility rate is about the same *tor* both illiterate and literate women. The same is true of standardized fertility rate. This shows that literacy is of little or no importance in determining fertility in the urban areas. As for age-specific fertility rates, they are lower for the literate than for illiterate women, except for those in the age group 20-24 years. This could be due to the difference between the two groups in the proportion of women working outside the *home. It* may be true that out of necessity illiterate women work outside the home in a larger proportion as compared to literate women, who may belong to middle and upper classes.

IV. Policy Implications

Literacy is thus, by and large inversely related to fertility levels of women in the rural as well as in the urban areas of the given Districts of Karnataka.

Government programmes aimed at reducing fertility through the provision of services in respect of both temporary and permanent methods of family planning would not be of much help as long as literacy rate, especially among women, are low. Therefore, every effort should be made to promote literacy among females. But the efforts of the government so far to promote literacy among women are not very encouraging. In spite of the fact that a constitutional obligation exists to enrol all the children up to the age of 14 years in primary and middle schools within the l0 years of the commencement of the Constitution, i.e., by 1961, a good proportion of the children are still outside the school. The enrolment of boys aged 6-11 years was almost hundred percent by 1973-74, but the enrolment of girls of the same age was about 75 percent. Thus the constitutional obligation is yet to be fulfilled in the case of girls. The differences in the enrolment of boys and girls in the age group ll-14years are wider still- In 1974, for boys the enrolment was less than 50 percent and for girls, less than 25 percent. It is, therefore, important that every effort should be made to promote literacy among girls without much delay.

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