A Study on Fertility and its Socio-Demographic Determinants Among Rural Population of West Godavari District, Andhra Pradesh

G.R. Varma[1], B.V. Babu[2] and A. Rohini[3]

1. Department of Social Work, Andhra University, Visakhapatnam 530 003, Andhra Pradesh, India
2. Regional Medical Research Centre (ICMR), Bhubaneswar 751 016, Orissa, India
3. School of Distant Education, Andhra University, Visakhapatnam 530 003, Andhra Pradesh, India

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ABSTRACT The present paper reports the degree of fertility and its socio-demographic correlates among rural inhabitants of West Godavari district, Andhra Pradesh. Majority of respondents is having 2 or 3 children. The association of various social and demographic characteristics of the respondents with fertility' was studied. The analysis reveals a positive and significant association between number of children and age of the respondent. Age at marriage has significant inverse association with fertility. Though other variables such as education, income, age at first child, caste, occupation, etc. showed association with fertility, they are not significant. The results are discussed along with other fertility studies from India.

INTRODUCTION

India is the second most populous country in the world, next only to China, and seventh in land area. With only 2.4 per cent of the world's land area, India is supporting 15 per cent of the world's population. India's population has grown from 238 million in 1901 to 843 million in 1991. Family size is an important parameter in demographic studies, which in common parlance, refers to the total number of persons in a family. In demography, family size means the total number of children a women has borne at a point in time. The family size depends upon numerous factors, viz., duration of marriage, socio-economic characteristics of the couple, the number of live births and living children, preference of male children, desired family size, etc. It is well recognized that fertility is culturally oriented. Several studied have confirmed differential fertility across different cultural groups in

India (UN, 1961; Driver, 1963; Mahadevan, 1979, 1986, among others). However, negligible efforts have been made to identify various determinants of fertility behaviour. Certain differential socio-economic factors were partially attributed to existing fertility differences, but several deep-rooted cultural and social factors have not been explored. The present paper aimed to report the fertility levels in terms of total number of surviving children and its association with other socio-demographic characteristics among rural people of West Godavari District, Andhra Pradesh.

MATERIAL AND METHODS

The sample for the present study includes 174 male respondents and 40 female respondents drawn from 3 villages of West Godavari District, Andhra Pradesh. The respondent (whether male or female) represents a family. The information pertaining to number of children and; demographic and socio-economic characteristics of respondents was collected through personal interviews and by filling the interview schedule. The characteristics of the respondents include age, caste, occupation, education, annual income, age at marriage and age at first child. They were also enquired regarding number of surviving children. The data were entered into a personal computer by using dBase III Plus and analysis was done through Statistical Package for Social Sciences (SPSS). The correlation matrix was used to examine the association between number of children and other quantitative variables. The one way analysis of variance (ANOVA) was employed to determine the effect of qualitative variables on fertility. The Tukey

Address all correspondence to: Dr. B.V. Babu

tests were used to make all the pair wise comparisons between groups.

RESULTS

The results on number of children by various socio-demographic factors are presented in table 1. The number of children per each respondent varies from 1 to 9. Majorities of male respondents (27.6%) possess three children followed by two children among 23.6%. Substantially higher proportion of men (30.5%) possesses two children followed by three children among 17.5%; and 37.5% of women conceived four or more than four children. Relatively higher proportion of men and women possess either one child or no children, however, majorities of these respondents are in potentially reproductive age. It is evidenced from the table that the respondents with higher number of children are in higher age groups. Regarding the association between caste and number of children, relatively higher proportion of Scheduled Caste men (28.7%) possess four or more than four children than

Table 1: Distribution of respondents according to number of children by their socio-demographic characteristics

Characteristics	Men										Women									
	No Children		1		2		3		>4		No Children		1		2		3		>4	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Age Group																				
≤ 30	3	1.7	9	5.2	3	1.7	2	1.1	1	0.6	-	-		5.0	3	7.5	2	5.0	3	7.5
31 - 40	1	0.6	8	4.6	22	12.6	20	11.5	11	6.3	-	-	-	-	7	17.5	-	-	2	5.0
41 - 50	2	1.1	3	1.7	11	6.3	24	13.8	20	11.5	-	-	2	5.0	-	-	3	7.5	8	20.0
51 - 60	1	0.6	4	2.3	3	1.7	2	1.1	17	9.8	3	7.5	-	-	1	2.5	2	5.0	2	5.0
≥ 61	1	0.6	-	-	2	1.1	-	-	4	2.3	-									
Caste																				
S.C.	8	4.6	21	12.1	33	19.0	42	24.1	50	28.7	3	8.5	4	10.0	11	27.5	7	17.5	14	35.0
Non S.C.	-	-	3	1.7	8	4.6	6	3.4	3	1.7	-	-	-	-	-	-	-	-	1	2.5
Occupation																				
Agriculture labourer	5	2.9	17	9.8	27	15.5	30	17.2	33	19.0	2	5.0	4	10.0	7	17.5	6	15.0	13	32.5
Small farmer	-	-	4	2.3	8	4.6	11	6.3	8	4.6	-	-	-	-	-	-	-	-	-	-
Employee	3	1.7	2	1.1	3	1.7	5	2.9	11	6.3	-	-	-	-	1	2.5	-	-	1	2.5
House wife	-	-	-	-	-	-	-	-	-	-	1	2.5	-	-	3	7.5	1	2.5	1	2.5
Others	-	-	1	0.6	3	1.7	2	1.1	1	0.6	-	-	-	-	-	-	-	-	-	-
Education																				
Illiterate	3	1.7	7	4.0	12	6.9	13	7.5	17	9.8	2	5.0	1	2.5	2	5.0	3	7.5	8	20.0
Primary Edu.	-	-	7	4.0	16	9.2	8	4.6	19	10.9	-	-	2	5.0	5	12.5	1	2.5	3	7.5
Secondary Edu.	3	1.7	8	4.6	9	5.2	19	10.9	13	7.5	1	2.5	1	2.5	2	5.0	2	5.0	3	7.5
Higher Sec.Edu.	2	1.1	2	1.1	4	2.3	8	4.6	4	2.3	-	-	-	-	2	5.0	1	2.5	1	2.5
Annual Income																				
≤ 6000	4	2.3	5	2.9	6	3.4	6	3.4	7	4.0	-	-	2	5.0	4	10.0	3	7.5	1	2.5
6001 - 8000	1	0.6	10	5.7	16	9.2	20	11.5	9	5.2	-	-	2	5.0	3	7.5	3	7.5	3	7.5
8001 - 10000	-	-	5	2.9	9	5.2	5	2.9	13	7.5	-	-	-	-	1	2.5	-	-	5	12.5
10001 - 20000	2	1.1	2	1.1	9	5.2	10	5.7	16	9.2	-	-	-	-	-	-	-	-	5	12.5
≥ 20001	1	0.6	2	1.1	1	0.6	7	4.0	8	4.6	1	2.5	-	-	3	7.5	1	2.5	-	-
Age at Marriage																				
≤ 15 years	-	-	-	-	-	-	-	-	-	-	1	2.5	1	2.5	2	5.0	3	7.5	2	5.0
16 - 20 years	4	2.3	8	4.6	17	9.8	23	13.2	40	23.0	2	5.0	2	5.0	7	17.5	4	10.0	13	32.5
21 - 25 years	3	1.7	14	18.0	21	12.1	22	12.6	12	6.9	-	-	1	2.5	2	5.0	-	-	-	-
≥ 26 years	1	0.6	2	1.1	3	1.7	3	1.7	1	0.6	-	-	-	-	-	-	-	-	-	-
Age at First Child																				
No children	7	4.0	-	-	-	-	-	-	-	-	3	7.5	-	-	-	-	-	-	-	-
≤ 15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2.5	1	2.5	2	5.0
16 - 20	1	0.6	5	2.9	3	1.7	10	5.7	21	12.1	-	-	3	7.5	6	15.0	5	12.5	13	32.5
21 - 25	-	-	13	7.5	29	16.7	30	17.2	29	16.7	-	-	1	2.5	3	7.5	1	2.5	-	-
≥ 26	-	-	6	3.4	9	5.2	8	4.6	3	1.7	-	-	-	-	1	2.5	-	-	-	-
Total	8	4.6	24	13.8	41	23.6	48	27.6	53	30.5	3	7.5	4	10.0	10	27.5	7	17.5	15	37.5

non-Scheduled Caste group (1.72%). The same trend is noticed among women also. Similarly the respondents with higher number of children are mostly from agricultural labourers and small farmers. Relatively higher proportion of illiterates possesses three or more than three children compared to literates. Similar disparity is noticed between low income and high-income groups. Regarding age at marriage, the respondents recorded the age at marriage between 16 and 20 years possess higher number of children. The women respondents with age at marriage below 20 years possess the children vary from 1 to 6. Similarly the men who possessed their first child during 16 to 20 years of age possessed higher number of children. Same trend is recorded among women also.

Further, it is attempted to analyse the association of number of children with above quantitative and qualitative variables by correlation matrix and analysis of variance (ANOVA). Corresponding correlation coefficients and F-values are given in table 2. The correlation coefficients indicate that the number of children is positively associated with age of the respondent. The age at marriage is associated inversely and significantly with fertility. The association with education is also negative but not significant. The ANOVA reveals no significant association of number of children with sex, caste and occupation. The Tukey tests are non-significant for difference between any two sets of any variable.

DISCUSSION

According to National Family Health Survey (NFHS, 1992), the total fertility rate of 2.6 children is observed for women in the age groups 15-44 years as well as in the group of 15-49 years, because there were no births to women in the age groups 45-49 during the last three years of the survey. The mean number of children in the present study respondents is 2.9. The total fertility rate for rural area (2.7) is slightly higher than of urban area (2.4). The number of children a women has ever borne is a cohort measure of fertility because it reflects fertility in the past. Women (of all marital status) of age 15-49 in Andhra Pradesh have had an average of 2.3 children and currently

Table 2: Details of association of some socio-demographic variable with number of children

Person's correlations		Analysis of variance	
Variable	Correlation coefficient	Variable	F - value
Age	0.355^*	Sex	0.927^{NS}
Education (years)	-0.029^{NS}	Caste	0.543^{NS}
Income	0.070^{NS}	Occupation	0.654^{NS}
Age at marriage	-0.201^*		
Age at first child	-0.052^{NS}		

* $P<0.01$; ^{NS} Not significant

married women have had an average of 2.8 children. The average number of children ever born increases steadily with age among all women as well as among currently married women, reaching a high of around 4 children per women at age 45-49. Currently early child bearing is not uncommon in Andhra Pradesh. One-quarter of all women in the 15-19 age group have of ever had a child, and one-half of currently married women age 15-19 have ever had a child. Current fertility in Andhra Pradesh varies substantially by place of residence, education, religion and caste/tribe. A rural woman in the state would have, on an average, 0.3 of a child more (13 per cent more children) during the child-bearing years than an urban woman. Fertility differentials by education are more pronounced, with mean number of children ever born declining appreciably with increase in educational level. Women with at least a high school education have a total fertility rate (TFR) of 1.8; where as illiterate women have a TFR of 3.0, which are over 60 per cent higher. While the TFR for Hindu and Muslim Women do not differ much, the TFR for Christians is about one-third lesser than the values for the other two religious groups. Scheduled Tribe women have, on an average, one child more than either Scheduled Caste women or non-Scheduled Caste-Scheduled Tribe women. In fact, Scheduled Tribe women have the highest fertility of any group. Mahadevan (1986) opined that landless or poor people with less ethnocentrism on culture like the Harijans (Scheduled Caste communities), change their fertility rapidly to a very low level with the advancement of education and other modernisation as compared to a land-owning or rich and culturally complex peasant community like Muslims and caste Hindus.

The present study reports the association between age at marriage and fertility levels in terms of number of children. The Mysore Study (UN, 1961) showed that rural females who married between 14 and 17 years of age had 5.9 children, while those who married between 18 and 21 had only 4.7 children. Mukherjee's (1961) Calcutta study, Balakrishna's (1971) study on Madras and Agarwal's (1967) survey of the villages near Delhi and Lucknow reveal that females marrying after age of 19 years have their fertility reduced by about 0.5 to 1 child on an average. Fertility differentials by caste have been dealt with in depth by Davis (1951) and in the Khanna Study (Wyon and Gordon, 1971). Thus the fertility differentials by various socio-demographic variables are in the expected direction.

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