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Determinants of Female Age at Marriage in Rural Andhra Pradesh : Multivariate Analysis

Introduction

F'EMALE age at marriage occupies a prominent role in deciding the level of fertility, especially in the rural areas of developing countries where the use of contraception is low. Therefore, a greater attention has been paid to find out the factors that are influencing female age at marriage, so as to manipulate them to raise the female age at marriage and thereby to control fertility and population growth. In India a large number of researchers (for citations up to 1986 see Karkal and Audinarayana 1987;
Goyal 1988; Vemuri 1989) have estimated the trends and differentials in female age at marriage either for individual states or for India as a whole, based on the Indian Census data (at macro-level). Till recently, majority of the empirical (field-based surveys) studies in India dealt with female age at marriage and its socio-economic differentials, mostly as a part of fertility studies (for citations up to 1986 see Karkal and Audinarayana 1987; Jayasree 1989; Mahadevan 1989; Singh 1989) though special attention is devoted in the following two studies (Zachariah 1984; Rao *et al.* 1986).

Interestingly, very recently a few studies (PRC, Waltair 1986; Richard and Rao 1988; Senthilnayaki 1988; Audinarayana 1990) have focused exclusively on the determinants of female age at marriage, but mostly based on cross-tabular analysis (except Richard and Rao (1988) and Audinarayana (1990) with limited variables). Further, though a variety of socio-cultural, economic and familial factors have been identified in relation to age at marriage, the role of age at menarche, consanguinity and parents' educational and economic status has not been clearly brought out through multiple linear regression analysis.

Age at menarche is the most crucial factor in deciding the timing of marriage for females. Most of the marriages, in rural India, used to take place preferably soon after menarche, since it is an important pre-requisite for biological and physiological readiness for pregnancy and intercourse. It is true that it is not of interest for social scientists for its own sake, and it may not be easy to manipulate age at menarche in order to raise the female age at marriage. Instead, the gap between menarche and marriage would play a crucial role in deciding ultimately the age at marriage of females. Therefore, in this paper an attempt is made to see the influence of some selected variables on age at marriage and also on the gap between menarche and marriage (excluding the age at menarche).'

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Theoretical and Empirical Background

In this section, a brief review about the relevant literature on the determinants (selected) of female age at marriage is made.

Caste, Educational Status and Work Status of Women

It is a well known fact that in rural India, almost all the marriages are primarily governed by endogamous restrictions and other conventions imposed by caste. Therefore, one can expect significant differences in age at marriage on the basis of caste lines. Besides caste, education of women plays a vital and positive role in influencing their age at marriage for a variety of reasons, viz.. direct lime spent in school/college for higher education, time spent in labour market for career opportunities with higher education, waiting time for getting alliance with an educated husband, more voice (say) in spouse selection and also due to the awareness about the proper age to enter in a marital union. Similarly, women who work before marriage are likely to get married later than those who do not work. This may be because of the linkages between educational status and occupational status. Further, in rural setting parents may postpone their daughters'marriage as along as they are getting income and also for raising dowry through their (daughters') income.

Several studies in India have conclusively shown that women will get married much earlier if they belong to Scheduled Castes as compared to others, if they are illiterate or less educated than the more educated and if they do not work before marriage as against those working before marriage (Karkal and Audinarayana 1987: PRC. Waltair 1986: Koteswar 1986: Richard and Rao 1988: Jayasree 1989: Singh 1989: Singh and Richard 1989; Audinarayana and Senthilnayaki 1989: 1990).

Age at Menarche, Consanguinity and Parents' Educational and Economic Status

As already stated, age at menarche has an important bearing on the timing of marriage. This may be due to the fear of pre-marital sex after puberty or sometimes difficulty in getting a suitable match in some societies. Further, in rural India marriages with close relatives (consanguineous marriages) are common which may be performed at comparatively younger ages for various reasons like obligation to marry these mates, no need for searching and waiting for suitable mates, no apprehension about sending young girls off to alien households and also matters related to dowry and other arrangement can be agreed upon easily. Besides these, marriages in the rural areas, even now-a-days, are initiated based on the socio-economic status of the father or even sometimes of the forefathers also. Therefore, we can expect that higher educational and economic status of the parents may motivate them to postpone their daughters' marriage age by providing higher education, arranging their marriages with a groom of a higher status or by providing alternatives to traditional roles. However, negligible efforts have been made in India to examine the influences of these factors on age at marriage (Audinarayana 1981: 1990: Caldwell *et al.* 1983: Richard and Rao
1988; Singh and Richard 1989; Audinarayana and Senthilnayaki 1989; 1990).

Data, Methodology and Variables

Data' used for this paper were collected from 600 eligible couples during 1984. The eligible couples were selected by adopting stratified proportionate random sampling (based on religion/caste) technique from seven randomly selected villages of two Community Development Blocks in Chittoor district of Andhra Pradesh.

Keeping the major aims in mind (as discussed in the Introduction), multiple linear regression analysis is carried out to find out the influence of the following explanatory variables on the female age at marriage Only those explanatory variables which are found to be of theoretical importance, have been included in the regression model.

Explained I *'ariables*

AGE MAR : Age at marriage of females (in years)
GAP ME-MA : Gap between menarche and marriage (in years)

Explanatory Variables

AGE MEN : Age at menarche (in years)
CASTE : If Scheduled Castes coded as '0' (otherwise 1)
CONSAN : Consanguinity of marriage: if yes. coded as '0'. otherwise *'1'*
EDU W : Educational status of the wife: coded as illiterate = 0.Primary = 1. Middle = 2. and High School and above = 3.
WORK W : Work status of the wife: Coded as '0' if not worked before marriage, and '1' if worked before marriage
EDU F : Educational status of the father: Coded as in the case of EDU W
ECO F : Economic status of the father: based on a composite index coded as Lower = 0. Middle = I and Higher = 2

The means and standard deviations of all the explanatory and explained variables are presented in Table I.

TABLE 1: MEAN AND STANDARD DEVIATION OF THE SELECTED EXPLAINED AND EXPLANATORY VARIABLES

Explained/Explanatory Variables	*Mean*	*Standard Deviation*
Explained Variables		
AGE MAR (in years)	14.83	2.61
GAP ME-MA (in years)	1.37	1.99
Explanatory Variables		
AGE MEN (in years)	13.46	1.25
CASTE	0.30	0.46
CON SAN	0.51	0.50
EDI' W	0.62	0.88
WORK W	0.34	0.47
EDU' F	0.53	0.87
ECO F	0.82	0.79

'These data were collected as a part of author's Ph.D. work.

Results and Discussion

On the whole, the female age at marriage of the sample women is 14.83 years (Table 1), which is quite low. It may be noted that the study was conducted in rural areas of Andhra Pradesh and also most of the marriages took place during 1950-1978. This figure is also in agreement with the rural median age at marriage of 14.85 in Andhra Pradesh, during 1972 (R.G. India 1976).

From Table 2, it is evident that all the zero-order correlation co-efficients between the explanatory variables and age at marriage (AGE MAR) are statistically highly significant (at 1 per cent level) and also in the expected direction. Looking at the individual regression co-efficients (Regression Equation I) it is clear that all the explanatory variables (except consanguinity, which is significant at 5 per cent level) have exhibited highly significant (at 1 per cent level) effects on age at marriage and together explain as high as 61 per cent of the total variance. But the standardized co-efficients highlight that the age at menarche (AGE MEN) is the most powerful factor in hastening the female age at marriage, closely followed by the educational status (EDU W) and work status of wife (WORK W). While consanguinity ranks in the last position, the other three variables are in between these two extremes in explaining the variation in female age at marriage.

TABLE 2 : RESULTS OF REGRESSION ANALYSIS

Explanatory Variables	*DEP. VAR: AGE MAR*		*DEP, VAR: GAP ME-MA*			
	Reg. Equation 1		*Reg. Equation II*		*Reg. Equation III*	
	Metric Coeff.	*Standard Coeff.*	*Metric Coeff.*	*Standard Coeff.*	*Metric Coeff.*	*Standard Coeff.*
Intercept	1.671		13.070		0.141	
AGE MEN	0.882***	0.422		-		-
	(13.732)					
CASTE -	-0.294**	—0.644**	—0.113	—1.266**	—0.223 -	-0.188**	—0.561**	—0.129
		(—3.898)		(-6.944)			(-3.521)	
COSAN	0.218**	0.268	0.052	0.438**	0.085	0.172**	0.245	0.062
		(1.964)		(2.807)			(1.801)	
EDUW	0.589**	0.815**	0.275	1.207**	0.407	0.488**	0.763**	0.336
		(8.263)		(11.142)			(8.059)	
WORK W	0.117**	1.039**	0.189	1.466**	0.267	0.123**	0.982**	0.234
		(6.834)		(8.585)			(6.583)	
EDU F	0.431**	0.354**	0.118	0.439**	0.146	0.374**	0.343**	0.149
		(3.858)		(4.177)			(3.735)	
ECO F	0.434**	0.364	0.111	0.525**	0.160	0.356**	0.342**	0.136
		(3.670)		(4.654)			(3.468)	
R^1			0.6109		0.4870			0.3319

Note: * and ** indicate that the metric regression coefficient is significant at 5% and 1% levels respectively, and

— implies that the variable is not included in the regression equation.

Results from the second regression equation (Table 2) suggest that the total variance explained by all (excluding age at menarche) variables is around 49 per cent. which is less by around 12 percentage points than the first equation. But all the six variables are highly correlated with age at marriage (based on zero-order and regression co-efficients). Interestingly, in this equation, education of the wife (EDU W) turned out to be the most crucial factor in influencing age at marriage closely followed by the work status of wife (WORK W) and caste background.

From the last part of Table 2, it is clear that the zero-order correlation co-efficients between the six explanatory variables and the gap between menarche and marriage (AGE ME-MA) are found to be highly significant (at 1 per cent level). The regression co-efficients (Regression Equation III) indicate that except the consanguinity of marriage, all the other five variables have showed significant (at 1 per cent level) influence on the gap between menarche and marriage. The total variance explained by all the six variables is 32.2 per cent. Further, the coefficients indicate that the education of the wife closely followed by their work status (WORK W) are the most powerful factors in explaining maximum variance in the gap between menarche and marriage. For example, an increase of one level of education here contributes to postponement of the marriage by about three fourths a year after menarche. Similarly, if the women are working before marriage they are likely to postpone their marriage by about 1 year than those women who do not work before marriage. This shows clearly that though age at menarche is an important factor in deciding the age at marriage of women, their education and work status before marriage may tend to play a greater role ultimately upon the timing of their marriage after menarche.

Conclusions and Implications

From the foregoing analysis and discussion, it is evident that age at menarche. educational status and work status of women make the maximum contribution in determining their age at marriage in rural areas of Andhra Pradesh. On the other hand. the educational status and work status of women have played greater role in influencing the gap between age at menarache and age at marriage. Of course, the remaining explanatory variables do have some effect on both the explained variables, but to a lesser degree.

In view of these findings, it may be suggested that special programmes have to be formulated and implemented to improve the literacy and educational status of rural females in general and that of Scheduled Castes in particular. Similarly, rural women are encouraged to participate in economically productive activities, viz., tailoring, knitting, embroidery, weaving wire bags, mats and baskets, printing, dyeing and the like, which will also generate high income and thereby postpone their age at marriage. Through social education and adult education parents and unmarried adult females are also to be educated about the advantages of the need for non-consanguineous marriages and about late marriage for females, which will motivate them to arrange their children's (daughter's) marriage lately.

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