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Socio-Economic and Demographic Correlates of Age at Marriage

Introduction

A significant feature of developing countries is low level of age at marriage of females
and that is mainly responsible for higher growth of population. The increase in age at marriage can be achieved by manipulating the factors influencing the low age at marriage. Hence the level of age at marriage and also the factors (socio-economic and demographic) acting on age at marriage, are studied and results are presented in this paper.

Objectives

The main objectives of present research are:

(i) to estimate the mean age at marriage by gender in rural and urban areas during 1981-88,

(ii) to determine the association of age at marriage with specific socio-economic and demographic factors.

Material and Methods

The data for this study were collected from both rural and urban areas of North Arcot District of Tamilnadu State. The sample population covered by this study in rural area (K.V. Kuppam Block) was 52,146 and in the urban area (Vellore Town) under study was 41,083. Both samples are typical of the urban and rural section of Tamilnadu State, India (Richard and Rao 1988).

At the beginning, a pilot study was conducted, the questionnaires and schedules were developed, tested and finalised. The collection of data from rural and urban areas was started in December 1985 and continued till March 1988. The household schedules were administered to all households in those areas. Having got information about marriages from household surveys, a marriage proforma was filled up with details of bride and bridegroom for every marriage conducted in their households during past five years. After one year of the study, again a second round was made to fill up the marriage proforma for all marriages that happened during these twelve months. Similarly after two years a third round was made to cover the marriages that happened during last twelve months. Thus a follow up for three

years was completed. There were 3566 marriages in rural area and 1365 marriages in urban area, happened during 1981-88. The data based on these marriages were used in this research.

Statistical Techniques Used

The analysis of variance (ANOVA) and m ultiple linear regression were applied by taking age at marriage as dependent variable. The variables considered were: (i) Age at marriage, (ii) Occupation, (iii) Education, (iv) Religion, (v) Community for Hindu, and (vi) Type of consanguinity.

To examine the significant difference in mean age at marriage between various categories of independent variables, ANOVA was used. In order to study the linear relationship between age at marriage and the set of independent variables while taking into account, the interdependency among independent variables, a multiple linear regression analysis was applied and it is explained below:

Let y be explained variable (age at marriage) and X be a vector of explanatory variables (such as occupation, education, religion, etc.). Then the multiple linear regression model (for set of n observations and m independent variables) will be of form:

$$Y = A + BX \qquad (1)$$

A least square estimate of B is

$$b = (X'X)^{-1}XY$$

which is also a minimum variance unbiased estimator (MVUE) of B. The test hypothesis for m regression coefficients, say, $B_1, B_2, ..., B_m$ is

In order to test H_0 and to get the estimates of regression coefficients, the variable selection is necessary using R (square of multiple correlation) given below:

$$R^2 = \frac{\text{Variation in } Y \text{ explained by combined linear influence of explanatory variables}}{\text{Total variation in y}}$$

After selection of variables explaining significant (P) variation in dependent variable, a fit for model (1) is thus obtained as:

$$y = a + bX$$

The statistic BETA is also calculated which gives same information as b but in standardised form which is more useful for comparison specially when the variables are measured in different units.

Results

The mean (S.D) age at marriage of husband and wife in rural area were 26 (3.7) years and 18.6 (2.8) years respectively and in urban area 26.5 (3.9) years and 19.8 (3.4) years respectively, during 1981-88.

With reference to National Classification of occupations (1981), the occupation is classified here into five groups namely A, B, C, D and E. Occupation class A is highest level occupation and the level goes down as letters of alphabet goes further away from A (Richard 1981). For wife's occupation a-new occupation class named 'housewife' is introduced. The mean age at marriage by occupation is shown in Table 1. In rural area the mean age at marriage of husband was highest for class A representing occupations which are considered socially prestigious and economically well paying, and lowest for class E representing occupations that do not expose the person to even primary aspects of modern medicine/health care. Similar results were obtained for wife belonging to rural area. In urban area, the mean age at marriage of husband was highest for class B representing occupations that provides either power or money to buy medicine/health services, and lowest for class E. Similar results were found in mean age at marriage for wife in urban area. A significant (P) difference in mean age at marriage was observed between occupation classes for husband and wife in both rural and urban areas.

TABLE 1 : MEAN AGE AT MARRIAGE BY OCCUPATION

Occupation	*Husband*				*Wife*			
	Rural		*Urban*		*Rural*		*Urban*	
	No.	*Mean (SD)*	*No.*	*Mean (SD)*	*No.*	*Mean (SD)*	*No.*	*Mean (SD)*
A	153	27.3 (4.2)	191	26.2(3.6)	26	23.4 (4.5)	25	24.7 (4.6)
B	755	26.4(3.8)	340	27.4 (4.6)	36	21.6(3.5)	45	25.9 (3.7)
C	116	27.4 (4.0)	80	26.8 (3.8)	15	21.9 (3.4)	4	21.3 (4.4)
D	888	25.8 (3.4)	344	25.9 (3.4)	41	18.9(2.8)	9	21.3 (18)
E	1524	25.6(3.7)	341	25.5 (3.8)	730	18.5 (2.9)	77	18.1 (17)
Housewife	-	-	-	-	2672	18.5(2.9)	1181	19.4(3.1)
Total	3436	25.9 (3.7)	1296	26.4(3.9)	3520	18.6(2.8)	1341	19.6(3.4)
Significance	F= 16..2	P< 0.001	F=12.0	*P*< 0.001	F=28.9	*P*< 0.001	F = 48.7	P<0.01

In rural area, the mean (S.D) age at marriage of husband, was highest with 27.7(3.5) years for those with a degree and lowest for primary schooling with 25.3(3.6) years, among education categories. Similarly, the mean (S.D) age at marriage in rural area for wife was found to be highest for those with degree with 22.9 (3.9) years, and lowest for illiterate with 18.4(3.1) years. In urban area, the mean (S.D) age at marriage of husband was highest for degree holders with 27.8(3.3) years and lowest for the illiterate with 24.9(3.8) years. Similarly, for wife in urban area, the mean age at marriage was highest for Degree and above with 24.1(3.6) years and lowest for illiterates with 18.5 (3.8) years. A significant (P) difference in mean age at marriage by education categories was observed for both husband and wife in rural and urban areas.

The inference about age at marriage by religion was made by considering only Hindu, Muslim and Christian. Among these, most of them were Hindu (97.2% in rural and 67.1% in urban areas). Because the majority is Hindu, the Hindu communities were also analysed. The mean age at marriage was highest for Christians and lowest for Muslims. In rural area, the highest mean (S.D.) age at marriage for both husband and wife belonging to Christian religion were 27.1 (4.7) years and 21.1 (5.1) years respectively, and that in urban area they were 28.5 (3.7) years and 23.8 (4.9) years respectively. In rural area, the lowest mean (S.D.) age at marriage for both husband and wife were in Muslims 25.3 (4.7) years and 17.9(2.8) years respectively and that in urban area, they were 25.9 (4.2) years and 18.4 (2.8) years. The differences in mean age at marriage among religious groups were significant *(P)* for husband and wife in urban area and for wife in rural area.

An analysis of age at marriage by Hindu community showed a non-significant difference in mean age at marriage of husbands belonging to rural area among Hindu communities. The difference in mean age at marriage was significant ($P < 0.01$)) for wife in rural area with highest mean (S.D.) age at marriage of 19.9 (3.8) years for forward caste and lowest of 18.5 (2.7) years for backward caste. In urban area the difference in mean age at marriage was significant ($P < 0.001$) among Hindu communities for both husband and wife. In urban area, the mean (S.D.) age at marriage of husband was highest for forward caste with 28.38 (3.71) years and lowest for backward caste with 26.5 (3.6) years and that for wife the highest and lowest mean (S.D.) age at marriage were 22.4 (3.7) year, for forward caste, and 19.7 (4.0) year for scheduled caste, respectively.

Table 2 shows the results of age at marriage by type of consanguinity. The age at marriage of wife and husband for non-consanguineous marriages were higher than that of consanguineous marriage in both areas. The difference was significant ($P < 0.001$).

Multiple Regression Analysis

Now let us denote the selected variables (in regression equation using stepwise regression method) for convenience as:

X1 = Husband's age at marriage
X2 = Wife's age at marriage .

X3 = Husband's occupation
X4 = Wife's occupation
X5 = Husband's education
X6 = Wife's education
X7 = Consanguinity

(Remark: Occupation codes used are: A = Occupations considered socially prestigious and economically well paying (coded 1); B= Occupations providing either power or money to buy modern medicine/health services (coded 2); C= Occupations belonging to modern sector of economic activity but not included in the other categories (coded 3); D= Skilled workers (coded 4); E= Occupations that do not expose the person to even primary aspects of modern medicine/health care (coded 5); housewife coded as (6))

TABLE 2 : MEAN AGE AT MARRIAGE BY CONSANGUINITY

ConsanguinitY	*Husband*				*Wife*			
	Rural		*Urban*		*Rural*		*Urban*	
	No,	*Mean (SD)*	*No.*	*Mean (SD)*	*No.*	*Mean (SD)*	*No.*	*Mean (SD)*
Uncle/niece	329	26.0 (3.8)	60	26.0 (3.7)	331	17.9 (15)	60	18.1 (17)
First Cousin	707	25.7 (3.3)	212	25.4 (3.3)	707	18.1 (15)	212	18.6 (18)
First Cousin once Removed	119	25.6 (3.6)	40	26.2 (3.8)	119	18.1 (18)	40	18.6(18)
Second Cousin	55	25.8 (19)	27	25.5 (3.6)	55	18.3 (19)	27	18.9 (3.4)
Beyond Second Cousin	6	25.3 (3.9)	1	21.0(0.0)	6	17.7 (1.2)	1	17.0(0.0)
Non-cons.	2377	26.8 (4.0)	984	26.8 (4.0)	2331	18.9 (19)	9S4	20.1 (3-6)
Total	3543	26.5 (3.9)	1324	26.5(3.9)	3549	18.6(18)	1324	19.7(3.5)
Significance	t = 9.98	P < .001	t = 5.02	P < .001	t = 8.75	P < .001	t = 7.16	P<.001

NOTE : *t*-test is based on total of consanguineous marriage and non-consanguineous marriages.

The results of multiple linear regression are shown in Table 3 for rural area and Table 4 for urban area.

Rural Area

The variables which have contributed significant R square change were listed in Table 3 in the order in which they were entered into regression equation. The total variation in

TABLE 3 : RESULTS OF MULTIPLE REGRESSION OF INDEPENDENT VARIABLES ON AGE AT MARRIAGE FOR RURAL AREA

Dependent variable	*Independent variable in equation*	*Regression Coefficients*		
		R^2	*b*	*Beta*
Age at Marriage of Husband	Wife's education	0.0174	0.2164	0.0728
	Consanguinity	0.0267	0.7433	0.0943
	Husband's Occupation	0.0340	-0.2330	-0.0821
	Wife's Occupation	0.0379	-0.3193	-0.0635
	Husband's Education	0.0403	0.1650*	0.0597
				Constant = 26.83 R^2 adj = 0.039
Age at Marriage of	Wife's Occupation	0.026	-0.5990 *	-9.491*
	Wife's education	0.047	0.2870 *	7.381
	Consanguinity	0.065	0.7819 *	7.897
	Husband's Occupation	0.066	-0.0837**	-2.249
				Constant = 20.689 R^2adj = .065

TABLE 4 : RESULTS OF MULTIPLE REGRESSION OF INDEPENDENT VARIABLES ON AGE AT MARRIAGE FOR URBAN AREA

Dependent variable	*Independent variable in equation*	*Regression Coefficients*		
		K^2	*b*	*Beta*
Age at Marriage of Husband	Husband's Education	0.054	0.416 *	0.173
	Consanguinity	0.067	0.944 *	0.105
	Wife's Occupation	0.075	-0.349 *	-8.090
	Husband's Occupation	0.078	-0.189**	-0.069
				Constant = 26.298 R^2adj = 0.075
Age at Marriage of Wife	Wife's education	0.183	0.573 *	0.281
	Wife's Occupation	0.239	-0.788 *	-0.239
	Consanguinity	0.258	1.039 *	0.136
	Husband's Education	0.263	0.204**	0.100
				Constant = 20.612 R^2adj =0.261

NOTE: For Table 3 and Table 4: * : Significant at $p < 0.001$; ** : Significant at $p < 0.005$

husband's age at marriage *(X_1)* explained by variables X_6, X_7, X_3, X_4, and X_5 (in order) included in regression equation is given by *R* square (= 0.04). The consanguinity got highest Beta of 0.09 and husband's occupation was the next but in opposite direction, which shows as occupation standard comes down, the age at marriage of husband also decreases. The total variation in age at marriage of wife X_2) explained by all the variables X_4, X_6, X_7, and X_3 included in (order) regression equation, amounts to only 6.6 per cent variation. The *XA* has highest Beta of -9.491 and X_7 was next highest to it.

Urban Area

A significant (P) amount of variation (R square = 7.8 per cent) in mean age at marriage of husband (X1) was explained by the independent variables X5, X7, X4 and x3, (in order) and the Beta was highest (0.173) for husband's education (X5). The variable X5 was first to enter in regression equation amounting for 5.4 per cent of variation in X1 alone. The rest of the variables together add only 2.4 per cent of total variation in x1

The independent variables X6, X4, X7 and X5 (in order) explained 26.3 per cent variation in wife's age at marriage. The variables wife's education (X6) and wife's occupation (X4) taken together accounted for nearly 24 per cent variation in X2. Wife's education X6 also has highest Beta of 0.281.

Discussion on findings

Multhus was first to find out the effect of age at marriage which is a cause and consequence of population explosion (Bhatia 1983). A considerable margin of change in age at marriage in India has taken place in case of both male and female during 1901 to 1981. A significant amount of increase in age at marriage was seen in Tamilnadu compared to other states of India (Kadi 1987). From our study, an increase in age at marriage of husband and wife in Tamiinadu during the period 1981-88 was observed. The high proportion of marriages observed in age group 20-29 years for husband and 15-24 years for wife in rural area were 82 per cent and 92 per cent respectively and that for urban area were 79 per cent and 87.5 per cent respectively.

The data from various surveys has revealed that age at marriage is definitely higher for those in better occupations as compared to those in inferior occupations. This fact was also found in our study. Daring period 1971-81 (in India), the mean age at marriage of rural illiterate women was 16.51 years, whereas for urban women it was 17.63 years (Kadi 1987). In our also study the age at marriage of women having no education was low (18.41 years in rural and 18.46 years in urban areas). The urban-rural differences in age at marriage of husband and wife during 1981-88 in our study were negligible.

Important differences in nuptiality by religion has also been observed in India. Marriages are largely governed by tradition and customs drawn from religion. According to 1981 census of India, Hindu, Muslim and Christian formed 82 per cent, 11 per cent and 2.4 per cent respectively of total population (Kadi 1987). But among Hindu and Muslim, the child marriage is virtually universal, however, among Christians, marriages are generally characterised by late marriage (Dixon 1971). In this study age at marriage for Christians in both rural and urban areas was much higher than that for Hindu and Muslim. Among Hindu communities, the forward caste showed higher mean age at marriage than other Hindu communities. Goyal (1981) also observed that the differences in age at marriage exist between broad caste groups in India.

In westernised world, the frequency of occurrence of consanguineous marriages is low, and anthropological studies of Hindu society done in North India, had ruled out consanguinity. In most of the communities in South India, however, consanguineous marriage is still preferred for various reasons (Rao, *et al.* 1971). A study result also showed that in both

rural and urban areas the proportion of consanguineous marriages among Hindus is higher than the proportion among Muslims or Christians (Rao, *et al.* 1972). From present study we see that the age at marriage was a little higher in non-consanguineous marriages. The number of first cousin marriages was much higher than the other type of consanguineous marriages in both areas.

Wife's occupation and consanguinity showed significant amount of contribution to age at marriage of husband and wife in both areas. The highest proportion in age at marriage of husband belonging to rural and urban areas was explained by wife's education and husband's education respectively, whereas wife's occupation and wife's education respectively explained highest amount of variation in wife's age at marriage. So to increase the age at marriage of females action programs to increase women's education and to provide jobs for women should be done.

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