



## Socio-economic Differentials of Female Age at First Marriage: A study of Chuadanga District, Bangladesh

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**Abstract.** This paper aims to investigate the main socio-economic determinants of female age at first marriage in Chuadanga district, Bangladesh, over the year 2005, and attempts to find some explanations for the differences in the age at marriage among socio-economic characteristics. The findings of the multiple classification analysis (MCA) suggest that among all the variables analyzed in the study, education levels have a positive association with age at marriage. Age at marriage is increased with the level of husband's and wife's education. The MCA also indicates that female education has the strongest influence on age at marriage while husband's education is the second strongest determinant. The analysis reveals that the mean age at marriage of women is 16.77 years: 16.05 in rural areas and 18.22 in urban areas. It also shows that respondent's occupation and religion have an important significant contribution to female age at first marriage.

**Keywords.** cross tabulation; multiple classification analysis (MCA).

### 1 Introduction

Marriage refers to that stage in the life of a man and a woman when they are socially/legally permitted to live together. It also refers to legally recognized unions. A consensual union is one in which the man and woman are in a stable

sexual union, but have not gone through any formal legal marriage ceremony (Grebenik and Hill, 1974). There has been a substantial rise in the age at marriage. The mean age at first marriage for women in Bangladesh increased from 15.9 years in 1974 to 18.1 years in 1991; it increased from 20.4 in 2001 to 20.6 years in 2002 (BBS 1998, 2004; Population Census, 1974). A review of some Asian countries displays considerable variations in marriage pattern. Pakistan experienced an even greater jump, from 13.3 to 19.7 years during the period 1921-1981. In Sri Lanka, female age at marriage, increased from 18.1 years in 1901 to 24.2 years in 1981 and 25.5 in 1993 (De Silva, 1997).

In Bangladesh, where marriage is nearly universal, age at first marriage has a strong influence on a variety of demographic and social phenomena. In developing countries, where early marriages, particularly of females, are still very common, age at first marriage occupies a prominent place in demography as one of the approximate determinants of fertility (Audinarayana, 1985). Fertility performance is affected by the practice of females early age at first marriage (Luc et al., 1993; Varea, 1993).

In 1984, through a government order, the legislative age at marriage in Bangladesh was fixed at 18 years for females and 21 for males. A large proportion of marriages still take place before the legal age (BDHS, 2004). However, in the countryside, such requirements are hardly known and among those who do know about them, they have little impact on behavior (Islam et al., 1995). Despite several legislative efforts to check the practice of early marriage, child marriages are still prevalent in many parts of Bangladesh. The effectiveness of legislative age at first marriage depends largely on prevailing social customs, religion, literacy rate, economic conditions, and employment opportunities as well as enforcement machinery (Pathak, 1980).

Therefore, greater attention has to be paid to find out the factors that are influencing female age at first marriage, so as to manipulate to raise the female age at first marriage and thereby to control fertility and population growth. In view of changing socio-economic conditions, it is necessary to find the latest level of early ages at first marriage and their correlates. The analysis will be confined to first marriage only because they have more relevance for public policy to their precise impact on fertility compared with subsequent marriages.

The main objectives of the study are to study the differentials of age at first marriage of women of Chuadanga district and also to investigate the intensity of the influences of various factors on age at first marriage.

## 2 Data and Methodology

The data of this study was collected under the four-year project of student strengthening at the Department of Population Science and Human Resource

Development of Rajshahi University, Bangladesh. These data were collected from rural and urban areas of Chuadanga district, Bangladesh-2005. The district has four Thana. We purposively selected two Thana out of four Thana for collecting primary data. In this project 300 ever married women were interviewed. Among these total 300 respondents 100 are from urban areas and 200 are from rural areas of Chuadanga district.

The two-way classified data show the differentials of age at first marriage. Again the cross-tabulation of different ages at marriage (dependent variables) against some selected independent variables such as place of residence, mother's and father's education, mother's and father's occupation, and household condition show the correlates of it. The multiple classification analysis (MCA) examines the relationships between several predictor variables on a single dependent variable. It also provides information about the bivariate and multivariate relationships between the predictors and the dependent variables. In order to know the influences of various factors, a well-known technique of multiple classification analysis is used. In statistical terms, the MCA model specifies as in the following.

$$Y_{ijk} = \bar{Y} + a_i + b_j + c_k + e_{ijk},$$

where

$Y_{ijk}$  = the score on the dependent variable of individual  $k$  who falls in the category  $i$  of predictor A, category  $j$  of predictor B, etc.;

$\bar{Y}$  = grand mean of the dependent variable;

$a_i$  = the effect of the membership in the  $i$ th category of predictor A;

$b_j$  = the effect of the membership in the  $j$ th category of predictor B;

$c_k$  = the effect of the membership in the  $k$ th category of predictor C;

$e_{ijk}$  = the error term for these individuals.

### 3 Results and Discussion

#### 3.1 Socio-economic Differentials of Age at Marriage

Before reporting the results of the analysis on age at marriage differentials, it may be worthwhile to present a few characteristic features of marriage practices in Bangladesh. Bangladesh women enter marriage within a very narrow age range and at very early age also. Although the legally sanctioned age of marriage is 18 years, only about 12% single women remain to be married beyond this age. Table 1 provides the mean age at first marriage and percentage distribution of ever married women by selected socio-economic characteristics along with the current age of ever-married women for comparison purposes.

**Table 1.** Socio-economic differentials of age at first marriage in Chuadanga district, Bangladesh

Characteristics	Mean age at first marriage (years)				Percentage
	<20	20-30	30+	Total	
<b>Place of residence</b>					
Rural	14.73	16.25	16.81	16.05	66.7
Urban	16.29	18.39	18.33	18.22	33.3
<b>Respondent's education</b>					
Illiterate	13.33	14.86	15.30	14.88	21.7
Primary	14.13	15.17	15.67	15.08	22.0
Secondary	15.72	17.17	17.54	16.91	40.3
Higher	—	20.42	23.33	21.33	16.0
<b>Husband's education</b>					
Illiterate	13.75	14.25	15.25	14.73	18.3
Primary	13.56	14.76	15.67	14.82	15.0
Secondary	15.67	16.89	15.90	16.46	33.3
Higher	16.08	19.00	20.26	19.09	33.3
<b>Religion</b>					
Muslim	14.72	16.86	17.29	16.61	90.0
Non-Muslim	17.50	17.82	19.22	18.20	10.0
<b>Respondent's Occupation</b>					
Housewife	14.88	16.59	16.62	16.28	90.0
Service	18.00	21.69	22.67	22.00	8.7
Others	14.94	14.67	20.00	16.00	1.3
<b>Husband's occupation</b>					
Agriculture	14.33	15.06	16.27	15.06	20.7
Service	16.50	18.66	19.42	18.79	32.7
Others	15.00	16.43	16.33	16.12	46.7

The results indicate that, among the total number of ever-married women, 66.7 percent of respondents live in rural areas, with the remaining 33.3 percent living in urban areas. Differences exist in terms of place of residence at various age groups. Urban females marry, on the average, at 18.22 years, while their rural counterparts marry at 16.05 years. Part of this rural-urban difference in age at marriage may be explained by difference in the level of education achieved by women living in the two different areas. It is evident, therefore, that teenage marriage is more prevalent in the rural rather than urban areas of Bangladesh.

From Table 1, we observe that 21.7 percent of respondents are illiterate and 22.0 percent have received primary education, whereas only 16.0 percent have higher education. This table indicates that the mean age at first marriage

for women with no education or illiterate, primary education, secondary and higher education is 14.88, 15.08, 16.91 and 21.33 years respectively. Although differences in age at marriage among the different education categories exist at all ages, they are more pronounced in the younger age groups than in the older ages. It is evident that respondents with no education marry earlier and those with higher education marry later.

The husband's education appears to make less of an impact on age at marriage than the wife's education. Table 1 shows that husband's level of education as illiterate, primary, secondary, and higher education are 18.3%, 15.0% 33.3% and 33.3% respectively. This table also indicates that the mean age at first marriage of the respondents whose husbands are illiterate, or with primary, secondary, and higher education are 14.73, 14.82, 16.46, and 19.09 years respectively. Age at marriage of the wife is lowest if both husband and wife have no education.

Table 1 shows the disparity in the marriage pattern between Muslims and non-Muslims. The percentage of Muslim and non-Muslim respondents in the study areas is 90.0% and 10.0% respectively. The table indicates that the mean age at first marriage for Muslim and non-Muslim ever-married women were 16.61 and 18.20 years respectively. The relatively late age at first marriage of non-Muslim women is reflected in their higher mean age at marriage for the age groups <20, 20-30, and 30+ than their counterparts.

Table 1 shows that women who are engaged in services have higher (22.0 years) mean age at first marriage than housewives (16.28 years). It appears from the table that women whose husbands are engaged in services have highest age at marriage. The main difference in age at marriage seems to be between services and those belonging to the agricultural sector, with the latter showing a lower age at marriage.

### 3.2 Determinants of Age at Marriage: Multiple Classification Analysis

The multiple classification analysis is undertaken first to evaluate the contribution of socio-economic factors to age at first marriage. The dependent variable here is the age at marriage; the independent variables include socio-economic factors such as place of residence, respondent's education, her occupation, husband's education, his occupation and religion. The results of the MCA are presented in Table 2 and the zero order correlation coefficients are presented in Table 3.

Socio-economic variables have a large explanatory power ( $R^2 = 0.465$ ) on age at marriage. They explain 46.5% variation of age at marriage. The grand mean is 16.77 years, i.e. female mean age at first marriage is 16.77 years on

**Table 2.** Mean female age at marriage by selected socio-economic variables  
(Multiple Classification Analysis)

Explanatory Variables	Predictor mean		Correlation ratio	
	Unadjusted	Adjusted	$\eta^2$	$\beta^2$
<u>Place of residence</u>				
Rural	16.05	16.85		
Urban	18.22	16.62	0.301	0.032
<u>Respondent's education</u>				
No education	14.88	15.94		
Primary	15.08	15.55		
Secondary	16.91	16.64		
Higher	21.33	19.91	0.640	0.422
<u>Husband's education</u>				
No education	14.73	15.87		
Primary	14.82	15.98		
Secondary	16.46	17.02		
Higher	19.09	17.39	0.522	0.184
<u>Religion</u>				
Muslim	16.61	16.65		
Non-Muslim	18.20	17.90	0.140	0.111
<u>Respondent's Occupation</u>				
Housewife	16.28	16.57		
Service	22.00	18.76		
Others	16.00	17.50	0.473	0.183
<u>Husband's occupation</u>				
Agriculture	15.06	16.63		
Service	18.79	17.01		
Others	16.12	16.67	0.428	0.048
Grand mean = 16.77				
Multiple $R^2$ = 0.465				

the average in Chuadanga district.

Female education makes a significant contribution to age at marriage, producing a positive association. Of all the included variables female education has the strongest influence on the variation of age at marriage. The proportion of variance of age at marriage explained by female education is the highest (unadjusted value of  $\eta^2 = 0.640$  and adjusted value of  $\beta^2 = 0.422$ ) among all other variables. Female education has a direct effect on age at marriage and also has an indirect effect through place of residence, occupation and religion. The indirect effect of education through occupation status on age at marriage is 0.047, through place of residence is 0.018, through religion is 0.018, and

**Table 3.** Zero order correlation coefficients of socio-economic differentials of female age at marriage, Chuadanga district, Bangladesh, 2005

	<i>Y</i>	<i>X</i> <sub>1</sub>	<i>X</i> <sub>2</sub>	<i>X</i> <sub>3</sub>	<i>X</i> <sub>4</sub>	<i>X</i> <sub>5</sub>	<i>X</i> <sub>6</sub>
<i>Y</i>	1.000	.301**	0.565**	.490**	.140*	.018	.356**
<i>X</i> <sub>1</sub>		1.000	.468**	.425**	.377**	.182**	.073
<i>X</i> <sub>2</sub>			1.000	.740**	.164**	.028	.259**
<i>X</i> <sub>3</sub>				1.000	.097	.096	.174**
<i>X</i> <sub>4</sub>					1.000	.188**	-.012
<i>X</i> <sub>5</sub>						1.000	-.010
<i>X</i> <sub>6</sub>							1.000

\* Correlation is significant at the 0.05 level,

\*\* Correlation is significant at the 0.01 level.

*Y* = Age at first marriage

*X*<sub>1</sub> = Place of residence

*X*<sub>2</sub> = Respondent's education

*X*<sub>3</sub> = Husband's education

*X*<sub>4</sub> = Religion

*X*<sub>5</sub> = Husband's occupation

*X*<sub>6</sub> = Respondent's occupation

through husband's education is 0.136. Thus, we conclude that increasing the level of female education could rise age at marriage in the study area.

The analysis shows that husband's education has created a significant contribution to age at marriage. It has a positive association with age at marriage. Husband's education has the second strongest influence on age at marriage. The proportion of variance of age at marriage explained by husband's education is  $\eta_2 = 0.522$  unadjusted and  $\beta_2 = 0.184$  adjusted. Husband's education indirectly affects age at marriage through his occupation and this indirect effect is 0.005.

Place of residence has a significant contribution to age at marriage. The proportion of variance explained by the place of residence is  $\eta_2 = 0.301$  unadjusted and  $\beta_2 = 0.032$  adjusted. Religion is the fourth strongest determinant of age at marriage based on adjusted value. Religion also affects age at marriage through education.

Female's occupation has also shown a positive association with age at first marriage and has a significant effect on the variation of age at first marriage. The strength of explaining variability is  $\eta_2 = 0.473$  unadjusted and  $\beta_2 = 0.183$  adjusted. Among the included variables, it is observed that the effect of occupational differentials are the third strongest influence for explaining the variations of age at first marriage. Respondent's occupation affects age at marriage through education. The indirect effect of female occupation status through

education is 0.109.

#### 4 Conclusion and Policy Implications

The survey data indicate that the mean age at first marriage of women is 16.77 years. Although it shows some increase over the past years, it is still well below the minimum legal age for the marriage of females, i.e. 18 years, established by the government of Bangladesh in 1976. Legislation on age of marriage, therefore, seems to be still ineffective in delaying childhood marriage in Chuadanga district as well as in Bangladesh. Women who live in rural areas have lower (16.05) mean age at marriage than those who live in urban areas (18.22 years). It is found that Muslim women get married at earlier ages than their non-Muslim counterparts. Female education is one of the most viable means for enhancing the status of women vis-à-vis rising the age at marriage. The MCA result indicates that women's education has strongest significant contribution to the variation of age at marriage among all the included variables. Women with no education have lower (14.88 years) mean age at marriage than women with higher education (21.33 years). The result reveals that husband's education is the second strongest significant factor influencing age at marriage. Age at marriage increases with the level of education of both husband and wife. This finding attests to the fact that the effect of female education on age at marriage is stronger than the effect of male education. In conclusion, analyzing the total effects and the differentials of the variables, it appears that both husband's and wife's education, occupation, and religion are the strongest socio-economic variables for explaining the variability of age at marriage. The study findings lead to the following policy implications as

- i) To enhance the level of education for both husband and wife;
- ii) Awareness must be created through the public media as well as through the community leaders so that age at marriage for females does not come below the legal age (i.e. 18 years);
- iii) To expand girls social participation, schooling and economic opportunities, understanding that these are basic entitlements.

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