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Socio-demographic Factors Associated with Fertility Differentials in Relation to the Status of Women in Bangladesh: Evidence from a Micro Survey Study

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Keywords

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Abstract

The aim of this study is to investigatethe interrelationship among status of women, socio-demographic factors and fertility.The study found that total fertility rates (TFR) were 3.61, 3.07 and 2.08 for low, medium and high-status groups, respectively. The mean number of children born (CEB) per woman in the low status group was higher than medium and high-status groups in terms of socio-demographic factors. The ordinary least square regression showed that, in both low, medium, and high-status group, women with higher age at marriage, had primary or higher educational level, and women whose children were not dead, have significantly fewer children compared to their counterparts. than those who lack education. In both medium and high-status groups, we found a significantly negative relationship between number of living children and current contraceptive practice. Furthermore, in the low status group women who were economically active had fewer births

Introduction

The term 'Status' refers to the relative position or positions a person or group of persons holds in social hierarchies (Linton, 1936). A range of socio-demographic factors such as age, gender, education, income and earning ability, occupation, reputation of the family, political position, character of the individual and religious piety can be associated with status. Status of women is an important variable in the analysis of demographic and social behaviour. The status enjoyed by women in any society is an index of the standard of its social organization. Traditionally, women performed the role of housewives who were not employed outside the home but had the main responsibility of managing the household and raising children. However, this traditional role of women changed with the sexual revolution of the 1960s;the role of the housewife has now been extended beyond the home into various professions such as education and politics. The term 'status of women' then denotes not only the conjunction of rights and duties but also the hierarchical relationship between husband and wife, education, economic status, role in decision making in family affairs, and self-perceived social status in the home and in the community. Most researchers define 'status of women' as a multidimensional concept that arises from the complex interactions of different factors (Chin, et al., 1979, Blumberg, 1984, Egidi et al., 1994).

Women's status is an important determinant of fertility (Balk, 1994), and all of its dimensions can play a crucial role in influencing a woman's fertility (Audinarayana, 1997). It also significantly influences factors such as contraceptive practice and child mortality (Oppong &Wery, 1994). The relationship between women's status and fertility has received considerable attention both in developed and developing countries. Bangladeshi women have a subordinate position in the family and in society, primarily because of their seclusion from the labour market and social activities due to the patriarchal system and religious proscription. It is generally believed that the lower status of women, which is due to a combination of factors such as lower level of education, income and role in decision making, has also led to high fertility rates in Bangladesh.

In Nepal, a mother's education is the main factor affecting the average number of children (Adhikari, 2010). Larsen and Hollos (2003) have reported that declining fertility in Tanzania is associated with factors that are related to the status of women, including their education. Sathar et al. (1988), who studied the factors affecting women's fertility in Pakistan, claim that education is the most important factor which influences fertility rate. In Pakistan, a negative relationship between education and fertility rate has been observed, although the greatest effects have been observed among women with post-primary education (United Nations, 2002). The differences in fertility rate in Pakistan are mainly attributed to a variation in marriage patterns influenced by education. Michelle (2000)reported that Zimbabwean women's employment is strongly associated with contraceptive practice. The author also revealed that the status of women and socio-demographic factors could play an important role in influencing fertility rate. The association between women's status and socio-demographic factors with number of living children has not been thoroughly studied and is poorly understood in Bangladesh. As such, this study was undertaken to assess certain hypotheses concerning the relationships between women's status and fertility rate. The hypotheses considered are:

H_1: lower status of women is associated with higher fertility rate;

H_2: higher status of women is associated with lower fertility rate;

Furthermore, the relationship between women's status and socio-demographic factors, and fertility rate has been the subject of numerous studies, and it is still of considerable interest to researchers around the world (Bhargawa and Saxena, 1987; Yadava, 1999). As such, another hypothesis (H_3) is considered in the study of this relationship.

H_3: the lower the status of women, the smaller the contribution of the selected socio-demographic variables in influencing the number of children ever born (CEB; a simple measure of fertility). Conversely, for medium and high-status women, the selected socio-demographic factors contribute more to influencing the mean number of CEB.

Therefore, the objectives of this paper are: (i) to estimate the fertility rate by an indirect technique based on the status of women (ii) to investigate the variation in the mean number of CEB based on the status of women combined with socio-demographic factors, and (iii) to analyse the effects of the status of women together with socio-demographic factors on fertility rate.

Methodology

Study design and population

This cross-sectional study was conducted in Rajshahi metropolitan city of Rajshahi district in Bangladesh. Out of 30 wards of Rajshahi metropolitan city, ward no. 26, was selected at random. In this ward, two Mohallas namely Talimari and Raninagar, were selected. From these Mohallas, 612 households were randomly selected from 1020 households. In the selection process, an effort was made to include households from all economic ranks to avoid any bias due to economic differences. A total of 640 women who were married or who had been married and were in the reproductive-age group of 15 to 49 years were interviewed

Data collection

Data was collected in the period from May to July 2017. The questionnaires were drafted in English and then translated into Bangla, the national language of Bangladesh. The translation was reviewed by experts and volunteers, and a pilot study was conducted to validate the questionnaire. Trained and experienced field researchers conducted all household visits. Since the sample was only women, we therefore recruited the female interviewers. Survey team was trained to interview the mother. Field researchers' performances were strictly monitored. They were accompanied by a project supervisor during initial household visits to ensure correct administration of survey questionnaires. Routine validation and spot checks were conducted on at least 10% of questionnaires to ensure quality

Outcome

Fertility of women was the outcome of interest in this study and measured by counting the total number of children ever born (CEB) by women.

Exposure

To evaluate women's status, an index was developed to measure the degree of status enjoyed by respondents within the family. This was based on the response given by respondents to nine structured statements corresponding to nine variables: (i) consultation with husband while making important decisions (ii) freedom in voting (iii) freedom of birth control measures (iv) possession of property or land (in respondent's name) (v) possession of bank account (vi) maintenance of the household by the respondent (vii) responsibility to keep cash for daily expenditure (viii) no restriction imposed by father- or mother-in-law and (ix) freedom to argue with husband in case of differences in opinion. The statements had three alternative responses namely, 'No', 'Sometimes' and 'Yes' with a scoring of 1, 2 and 3, respectively.

The respondents were asked to indicate their opinion by choosing the appropriate response to each statement. Thus, the minimum score for status of women was 9 and the maximum score was 27. The total score of the respondents for status of women was the sum of the scores for the responses given to each of the nine statements. Based onthis score, women's status was categorized as low (9-14), medium (15-20), or high (21-27).

Co-variates

Socio-demographic information was collected through a structured questionnaire followed by the United Nations Children Fund (UNICEF) Multiple Indicator Cluster Survey (MICS) (BBS, 2014), and Demography and Health Survey (DHS)(NIPORT, 2014) Respondent's educational level was defined in terms of the formal education system of Bangladesh: no education (0 years), primary (1-5 years), secondary or above (6 years or more).We classified maternal age into seven important groups (15-19 years), (20-24 years), (25-29 years), (30-34 years), (35-39 years), (40-44 years), and (45-49 years). Age at first marriage was treated as continuous variable. Family types was categorized as nuclear versus joint. Economic status was categorized as inactive versus active. Current use of contraception was classified according to whether the woman was currently using any contraceptives or not. A binary variable was also created to define whether the women had one or more child dead versus none.

Statistical analysis

To investigate hypotheses H_1 and H_2, an indirect technique known as the Brass method was applied to estimate fertility rate. One-way Analysis of Variance (ANOVA)was used to test the hypotheses relating the status of women to fertility level. To see the significant effect, the Dunnett test was then performed to determine which of the statuses were significantly different from each other. However, the increase in fertility could also be attributed to multiple factors ranging from socio-economic to demographic ones. For such cases, to investigate how the average number

of children ever born (CEB) per women appears according to status and socio-demographic factors, a cross-tabular analysis was used. In addition, to examining the relationships (degree) between status of women and selected socio-demographic factors and fertility, a multivariate analysis using the Multiple Classification Analysis (MCA) technique was performed. The net effect of each predictor variable on the dependent variable was also measured by the Ordinary Least-Squares (OLS) method. Socio-demographic variables were treated as independent variables (predictor variables) while CEB was taken as the continuous dependent variable. All data analyses were performed using the Statistical Package for the Social Sciences (SPSS version 22.0) and Microsoft Office Excel (2016).

Computational procedure for estimation of fertility rate

The fertility rate was estimated using the Brass method. The following steps were carried out:

Step 1. Calculation of reported average parities.

The reported average parity $P(i)$ per woman in age group i was obtained using the formula

$$P(i) = \frac{CEB\ (i)}{W\ (i)}$$

where CEB (i) is the number of children ever born to women in age group i and W (i) is the total number of women in that age group

.

Step 2. Calculation of a preliminary fertility schedule from information on births in the past year.

The following formula was used to calculate the preliminary fertility schedule $f\ (i)$

$$f(i) = \frac{B(i)}{W(i)}$$

Where $B(i)$ is the number of births for women in age group i during the year preceding the interview (survey).

Step 3. Calculation of cumulative fertility schedule for a period.

The cumulated fertility schedule ¤ (i), for a period was obtained by

$$¤\ (i) = 5[\sum_{j=o}^{i} f(j)\ ]$$

Step 4. Estimation of average parity equivalents for a period.

Average parity equivalents, $F\ (i)$, was estimated by interpolation using the preliminary fertility rate $f\ (i)$ and the cumulated fertility values ¤ (i). Several procedures have been proposed for this interpolation. The most accurate procedure was proposed by Coale and Trussel (1978) where the interpolation equation for $F\ (i)$ is calculated as

$$F\ (i) = ¤\ (i\text{-}1) + a(i)\ f\ (i) + b(i)\ f\ (i+1) + c(i)\ ¤\ (7)$$

The values of the parameters *a*, *b* and *c* were estimated using the Coale-Trussell fertility model table, using least-squares regression.

Step 5. Estimation of a fertility schedule for conventional five-year age groups

A fertility schedule for conventional five-year age groups of mothers, $f^{+}(i)$, was estimated by

$$f^{+}\ (i) = [1\text{-}w\ (i\text{-}1)]\ f\ (i) + w\ (i)\ f\ (i+1) \text{ for } i=1, 2, \ldots\ldots 6$$

where $f\ (i)$ and $f^{+}\ (i)$ are the unadjusted and adjusted age-specific fertility schedules (rates), respectively, and $w\ (i)$ is the weighting factor which is calculated by

$$w\ (i) = x(i) + \frac{y(i)\ f\ (i)}{¤(7)} + \frac{z(i)\ f\ (i+1)}{¤(7)}$$

The values of $x(i)$, $y(i)$ and $z(i)$ were obtained from the Coale-Trussell table for successive age groups. For example, for $i = 7$, $f^{+}(i)$ is calculated as

$$f^{+}(7) = [1\text{-}w\ (6)]\ f\ (7)$$

Step 6. Adjustment of period fertility schedule

The adjustment of period fertility schedule was calculated as

$$f^{*}(i) = k.\ f^{+}(i)$$

where $f^{*}(i)$ is the adjustment fertility rates, $f^{+}(i)$ denotes fertility rates for conventional age group i and k is the adjustment factor estimated by the averages ofthe three ratio values of $P(i)/F(i)$.

Step 7. Calculation of the total fertility rate (TFR)

The total fertility rate (TFR) was estimated by

$$TFR=5\times\sum_{i=1}^{7} f^{*}(i)$$

Ethical considerations

This study was approved by the review board of the Department of Population Science and Human Resource Development, University of Rajshahi, Bangladesh. Prior to the collection of data informed consent was obtained from the respondents.

Results

Table 1 shows the estimated value of fertility in the different status groups. The study found that total fertility rates (TFR) were 3.61, 3.07 and 2.08 for low, medium and high-status groups, respectively. These values imply that women in the high-status group tend to have smaller sized families either by way of birth control or birth spacing, a trend indicating a possible transition toward modernization. Therefore, our first and second hypotheses (H1 & H2) are supported by the actual results obtained. The trend for P/F ratios for different status groups with respect to age group of mothers is presented in Figure 1. P/F ratios for all status groups decrease up to the ages of 20-24. Then they start to increase up to the age of 30. This increase is relatively large for the low status group, moderate for the medium status group and small for the high-status group. After the age of 30, the trend is irregular. The trend for the low status group decreases suddenly while for the high-status group it accelerates upwards for all subsequent age groups. The trend for adjusted fertility rates for the different status groups is presented in Figure 2 The trend declines regularly in the case of women from the high-status group. There is a small irregularity in the case of women from the medium status group, as high fertility is observed at the age of 25. On the other hand, a dramatic increase in fertility rate for women from the low status group can be observed between the ages of 25 and 34, which then decreases sharply.

Table 2 represents the mean number of children ever born (CEB) per woman in terms of socio-demographic factors, comparing the different statuses of women. In all status groups, the mean number of CEB increases with the age of the mother. Age at marriage is classified into four different groups- under 15, 15-19, 20-24 and over 25 years old. In the low status group, with age at marriage being less than 15 years old, the mean number of CEB per woman is 3.70. This is greater than the mean number of CEB in the remaining status groups. The mean number of CEB increases sharply as the level of education decreases. For the low status group, the mean number of CEB per woman is 3.54 for those with no schooling (i.e. are illiterate), which is greater than those for the medium and high-status groups.

According to cumulative fertility among women from different status groups who have a history of child death, the highest mean number of CEB for women who have experienced one or more child deaths is 4.50 for the low status group. Similarly, the results for current contraceptive practice and level of fertility among the various status groups show that the highest mean number of CEB is observed in non-contraceptive users in the low status group. The cumulated fertility per women is 2.94. Economic status has a strong influence on fertility rate. We categorized economic status into two groups: economically active and economically inactive (unemployed).The mean CEB is higher in all status groups (low, medium and high) for those with inactive economic status compared to those who are economically active.

The family is the smallest unit of society. Family structures and dynamics have changed considerably in recent years. The two main types of family structure are joint family and nuclear family. The mean number of CEB is 2.69 and 2.55 for nuclear and joint families, respectively, the highest number of CEB being seen in the low status group as compared to the medium and high-status groups.

Using Analysis of Variance (ANOVA), we tested whether the mean number of CEB in different status groups was equal (i.e. whether women's status had a significant effect or not on the average number of CEB). The results of this test suggested that there was a significant difference in the average number of CEB among the various categories of women's status (Table 3). This study also found that the mean differences with M (medium status) and H (high status) were 0.55 and 0.58, respectively by controlling for L (low status) (Table 3). Both of the differencesare positive and significant (P=0.001).

Table 1. Estimation of total fertility rate (TFR) by status of women

Age group	i	W(i)	CEB (i)	B(i)	P(i)	f(i)	¤ (i)	F (i)	P(i)/F(i)	w (i)	f^{+}(i)	f^{*}(i)	TFR
Women of low status													
15-19	1	12	7	3	0.5833	0.2500	1.2500	0.6046	0.9648	0.1011	0.2762	0.1173	
20-24	2	27	31	7	1.1481	0.2593	2.5465	2.1042	0.5457	0.0930	0.2510	0.1066	
25-29	3	52	103	10	1.9808	0.1923	3.5080	2.7613	0.7174	0.0237	0.1947	0.0827	
30-34	4	35	90	3	2.5714	0.8571	7.7935	6.3950	0.4021	0.2060	0.8690	0.3690	
35-39	5	32	97	5	3.0313	0.1563	8.5750	8.3485	0.3631	0.1937	0.1241	0.0527	3.6140
40-44	6	25	109	0	4.3600	0	8.5750	8.5742	0.5085	0.2700	0	0	
45-49	7	17	88	0	5.1764	0	8.5750	8.5733	0.6038	0	0	0	
Total		200										0.7282	
Women of medium status													
15-19	1	13	7	4	0.5385	0.3076	1.5385	0.7554	0.7128	0.1692	0.3415	0.2071	
20-24	2	30	21	6	0.7000	0.2000	2.5385	1.4757	0.4744	0.0949	0.1899	0.1152	
25-29	3	56	94	14	1.6786	0.2500	3.7884	2.6843	0.6253	0.1128	0.2500	0.1517	
30-34	4	38	91	8	2.3947	0.2106	4.8411	3.6777	0.6511	0.1413	0.1985	0.1204	
35-39	5	36	84	3	2.3333	0.0833	5.2578	4.2932	0.5435	0.3069	0.0716	0.0434	
40-44	6	21	68	0	3.2381	0	5.2578	5.0000	0.6476	0.2700	0	0	
45-49	7	18	67	0	3.7222	0	5.2578	6.0000	0.6204	0	0	0	3.0684
Total		212										0.4168	
Women of high status													
15-19	1	5	3	2	0.6000	0.4000	2.000	0.9722	0.6172	0.1895	0.4550	0.1585	
20-24	2	31	32	9	1.0323	0.2903	3.4515	2.8754	0.3590	0.1069	0.2615	0.0911	
25-29	3	53	70	13	1.3208	0.2453	4.6780	4.2112	0.3136	0.1128	0.2421	0.0843	
30-34	4	49	98	10	2.0000	0.2041	5.6985	5.3660	0.3727	0.1444	0.1893	0.0660	
35-39	5	53	123	3	2.3208	0.0566	5.9815	5.9012	0.3933	0.1785	0.0484	0.0169	
40-44	6	26	80	0	3.0769	0	5.9815	5.9809	0.5145	0.3027	0	0	2.0840
45-49	7	11	55	0	5.0000	0	5.9815	5.9803	0.8361	0	0	0	
Total		228										0.4168	

Note: Adjustment factors are k = 0.4246, 0.6067 and 0.3484 for low, medium and high status of women, respectively.

Table 2.Mean number of children ever born by status of women and socio-demographic factors.

Socio-demographic factors	Status of women		
	Low	Medium	High
Age group of women			
15-19	1.00(9)	0.54(13)	1.00(5)
20-24	1.25(28)	0.77(30)	1.23(31)
25-29	1.90(51)	1.68(56)	1.45(53)
30-34	2.22(36)	2.39(38)	1.94(49)
35-39	2.46(35)	2.33(36)	2.25(53)
40-44	2.77(27)	3.24(21)	2.58(26)
45-49	2.92(14)	3.78(18)	2.55(11)
Age at first marriage			
<15	3.70(27)	3.00(1)	3.35(8)
15-19	2.66(124)	2.28(145)	2.14(115)
20-24	1.84(45)	1.56(48)	1.48(62)
25+	2.00(4)	1.44(18)	1.44(43)
Respondent education			
No schooling	3.54(68)	3.33(15)	3.36(2)
Primary	2.83(54)	2.65(66)	2.00(16)
Secondary and above	1.63(78)	1.60(131)	1.90(210)
Child death			
None	2.16(162)	1.83(182)	1.76(203)
One and more	4.50(38)	3.40(30)	4.16(25)
Current contraceptive practice			
Yes	2.40(129)	1.86(145)	1.79(169)
No	2.94(71)	2.46(67)	2.68(59)
Economic status			
Active	2.41(45)	1.99(62)	1.93(84)
Inactive	3.29(155)	2.24(150)	2.18(144)
Family status			
Nuclear	2.69(125)	2.58(165)	2.15(195)
Joint	2.55(75)	2.25(47)	2.02(33)

Note: Figure in parenthesis indicate the number of cases

Table 3. Results of Analysis of Variance (ANOVA) with Dunnett T3 (Post Hoc test) statistics considering dependent variable CEB

ANOVA					Post Hoc test				
Source of variation	SS	DF	MSS	F	Status (I)	Status (J)	MD (I-J)	SE	P- value
Between groups	0.94	2	0.47	0.32 (insig.)	L	M H	0.55* 0.58*	0.155 0.160	0.001 0.001
Within groups	947.67	637	1.48		M	L H	0.03 -0.55*	0.129 0.155	0.994 0.001
Total	948.62	639			H	L M	-0.03 -0.58*	0.129 0.160	0.994 0.001

Note: SS: Sum of squares, DF: Degrees of freedom, MSS: Mean sum of squares, MD: Mean difference, SE: Standard error; *significant at less than 1%.

Table 4 presents the degree of association between status group and selected socio-demographic factors and fertility. The results indicate that the proportion of variance generated (Multiple R^2) using MCA is 0.54 in the low status group but is relatively higher in the medium (R^2=0.69) and high status group (R^2=0.57). Of all the variables, the age group of mothers, their education levels, child death and age at first marriage appear to be the most important determinants of CEB for all different status groups. On the other hand, only current contraceptive practice plays a relatively more important role in CEB in medium (η^2= 0.222, β^2= 0.034) and high (η^2= 0.246, β^2= 0.016) status groups. Hence, our third hypothesis (H_3) is also confirmed by the results obtained in this study.

Table 4.Results of multiple classification analysis (MCA)

Socio-demographic factors	Status of women					
	Low		Medium		High	
	η^2	β^2	η^2	β^2	η^2	β^2
Age group of women	0.645	0.564	0.727	0.663	0.656	0.584
Age at first marriage	0.280	0.237	0.282	0.250	0.222	0.215
Respondent education	0.452	0.144	0.471	0.134	0.421	0.156
Child death	0.400	0.225	0.434	0.204	0.418	0.267
Current contraceptive practice	0.096	0.040	0.222	0.034	0.246	0.016
Economic status	0.097	0.068	0.092	0.016	0.052	0.007
Family status	0.032	0.027	0.041	0.038	0.015	0.015
Multiple R^2	0.54*		0.69*		0.57*	

Note: η^2& β^2indicates the unadjusted & adjusted correlation ratio respectively;* p <0.05

Table 5 shows the ordinary least square regression coefficients (standardized) of the number of living children for different status groups by selected factors. Among the control variables, age is significantly associated. Age at first marriage is significantly negatively associated i.e. a higher age at marriage is characterized by fewer living children. The table shows that women with a primary or higher education level have significantly fewer children than those who lack education. The relationship between number of living children and number of children who have died is also statistically significant. Women who had not lost a child had fewer children than those who had lost one or more children. In both medium and high statusgroups, we found a significantly negative relationship between number of living children and current contraceptive practice. This indicates that women who did not practise contraception had significantly fewer children than those in the reference category. However, this pattern is reversed in the low status group. Furthermore, in the low status group women who were economically active had fewer births, with a significant coefficient of -0.167 compared to the reference category.

Table 5.Ordinary least square regression of number of children ever born with selected characteristics for different status of women

Socio-demographic factors	Status of women		
	Low	Medium	High
Age group of women			
(25-29)	---	---	---
15-19	-0.091**	-0.096**	-0.115*
20-24	-0.144**	-0.153**	-0.147*
30-34	0.108*	0.196*	0.135*
35-39	0.201*	0.174**	0.223*
40-44	0.427*	0.383*	0.387*
45-49	0.513*	0.519*	0.491*
Age at first marriage	-0.154**	-0.221*	-0.254*
Respondent education			
(No schooling)	---	---	---
Primary	-0.281**	-0.183**	-0.185**
Secondary and above	-0.484*	-0.397*	-0.412*
Child death			
(One and more)	---	---	---
None	-0.328*	-0.129**	-0.308*
Current contraceptive practice			
(Yes)	---	---	---
No	0.204**	-0.359*	-0.284*
Economic status			
(Inactive)	---	---	---
Active	-0.167**	-0.025	-0.075
Family status			
(Nuclear)	---	---	---
Joint	0.004	0.071	0.125

Note: Figures in parenthesis indicate the reference category. * p<0.01; ** p<0.05.

Discussion

This study found that there was a difference of approximately two births in the total fertility rate between the low status and high-status groups of women. A similar finding was also reported in relation to three villages in India (Yadava, 1999). Yadava stated that the low rate of fertility might be due to the higher prevalence of conventional contraceptive methods used by females inthe high status group. According to selected socio-demographic factors, considerable variations in mean number of CEB were found in our study. We found that older women from different status groups have a higher number of CEB. Due to the number of childrenexpected, the mean number of CEB will increase as a woman's age increases. This is confirmed by other studies (Kamnuansilpa & Chamratrithirong, 1985; Adhikari, 2010). In the same way, we assumed that those women who married early were likely to have a significantly higher number of CEB than those who did not. An increase in age at first marriage has an adverse effect on the level of fertility. Several studies, conducted in different parts of the world including Bangladesh, have established that older age at first marriage plays an important role in reduction in fertility (Sibanda et al., 2003; Serbessa, 2003). Consistent with these studies, an inverse relationship between older age at first marriage and fertility for all statuses of women was also found in our study.

It is well-documented that education is a key determinant of fertility, and several studies suggest that education has a strong inverse effect on women's cumulative fertility (Caldwell, 1992; Pradhan, 1993; Tesching, 2012). Ourstudy hypothesized that illiterate women (those who lack education) would be more likely to have a higher mean number of CEB than those who had a primary or higher level of education. Our results also showed that illiterate women have a higher mean number of CEB than do literate women. A possible explanation is that education may influence fertility decisions through increased knowledge about the use of contraceptive methods, which makes a woman more likely to be employed outside her home environment and to prefer fewer but healthier children (Rosenzweig and Schultz, 1989; Martin, 1995).

A major relationship between fertility and the child loss experience can easily be demonstrated in our results. Women who have lost one or more children through death have a higher fertility than those who have not. In several studies, higher child mortality has been followed by higher fertility in individuals (Syamala, 2001; Alene et al., 2008). It could be that no married woman wants to be childless, so if she faces child loss through death she could be living in fear of becoming so. Thus, she could give birth to comparatively more children. Contraceptive practice is another proximate factor that could affect fertility. We found that women who used contraception had a lower number of CEB than those who did not. It could be that an increase in the contraceptive prevalence rate is consistent with an increase in the proportion of woman who need to avoid pregnancy, which then leads to a decrease in fertility (Feyisetan, 2000).

Several studies have examined the relationship between income and fertility in both developed and developing countries and have found that there exists a strong inverse relationship between income and fertility (Cain, 1982; Robinson, 1997). We hypothesized that economically inactive women would have higher fertility than economically active women. The relation of income to fertility can be clearly seen in the study. Two reasons could be that (i) economically inactive or poor people may perceive children as a source of income, thus motivating them to have more children and (ii) the poorest people have less access to education and family planning methods (Karki, 1982). In addition, the present study shows that joint families have higher fertility than nuclear families. Our results are similar to those of many other studies (Yadava, 1999; Velteti, 2001). The possibility of higher fertility in a joint family could be due to the congenial environment as well as the economic cost; the burden of rearing the children is shared with the other members of the family. Whereas, in nuclear families, there is greater privacy and no traditional taboos regarding sex education which are enforced in a joint family due to the presence of the elders.

Using the analysis of variance method, this study also shows that fertility decreases as women's status increases. A similar relationship has been reported by Mahmoudian (2005). A possible explanation could be that an increase in the educational level of females results in overall social change and the active participation of women in decision making. As expected, both women's education and age at first marriage are found to be universally related to fertility. Education seems to have a greater effect on fertility than age at first marriage as obtained from the MCA analysis. Interestingly, this finding contradicts the finding of Saxena &Habbouba (1997). Moreover, with respect to the effect of socio-demographic factors on fertility differentials according to status, the current study has revealed that the selected socio-demographic factors namely age group of mother, age at first marriage, mother's education, child death and contraceptive practice are strongly associated with fertility in the low, medium and high status groups. The analysis and findings as described in this study confirm that these variables associated with status of women do influence fertility.

Conclusion and Recommendations

This study highlighted the interrelationship among status of women, socio-demographic variables and fertility. The total fertility rate for the low-status group is higher than for the medium and high-status groups as observed in this study. Thus, more attention should be given to women from the low-status group. These women are deprived of education. Limited or no knowledge about family planning, early marriage and early motherhood, and an increased number of child deaths are some of the attributes that characterize the low-status group. In addition, according to the results of this analysis, not all socio-demographic factors are significant determinants of fertility for all status groups. However, age group of mothers, age at first marriage, mother's education, child death and contraceptive practice have been found to be factors that affect fertility behaviour and eventually fertility rate. Despite the legal restrictions against marrying at a young age, early marriage is common in Bangladesh.

Hence, programs should be conducted to raise awareness of the marriage laws and of the disadvantages of early marriage and large family size. Since education, economic status, age at marriage have a negative effect on fertility, it is suggested that by increasing these aforesaid factors, fertility could be reduced for all status groups. In the same way, attention should be focused on the need for providing education facilities among women in the low-status group in order to decrease the level of fertility. The impact of education in reducing fertility levels may be demonstrated in various ways. These include delayed age at first marriage, an increase in woman's individuality and aspirations for the quality of her children, increased opportunities for personal and professional development, social awareness and, most importantly, a desire for a reduced number of children and greater exposure to knowledge about the means of fertility control (Caldwell, 1981; Mahmood, 1992; Mahmood and Khan, 1985 and Sathar et al.,1988).Finally, the major policy implications of this study concern the importance of education and employment opportunities to improve women's status, which will ultimately have an impact on fertility preferences and behaviour. The findings of this study support the importance of education as well as economic access and power in elevating the status of women.

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