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Determinants of Contraceptive Use Among the Rural Ever-Married Women: A Micro-Survey Study

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Abstract

Lower rate of contraceptive use is a nascent matter across the world and remains widespread problem particularly in developing countries including Bangladesh. In this study, an attempt was made to analyze the association of different socio-economic and demographic variables with the status of contraceptive use as well as to identify the most effective factors influencing the status of contraceptive use among the women in rural areas in Bangladesh. The intention of this study has tried to raise awareness of the situation and, where necessary, to stimulate action. Findings need to be given due attention and need to be scientifically utilized in developing suitable programs addressing the case of contraceptive use particularly in rural areas and country as a whole.

Keywords: Contraceptive; Family planning; Ever-married; Association; Logistic regression analysis; Bangladesh.

1. Introduction

Bangladesh is still one of the most densely populated countries in the world. Despite several initiatives, the fertility remains high and the rate of population growth remains almost stable. However, Bangladesh has made a satisfactory progress in achieving health related millennium development goals (MDGs) targets especially in the area of maternal and child health, maternal and child mortality along with pregnancy related mortality are still concerning matter. Use of contraception pays a pivotal role in reducing those mortalities and a determining factor for reducing fertility (Manortey and Lotsu, 2017). It is evident that contraceptive use has other benefits including reducing pregnancy-related health risks and maternal mortality, reducing adverse perinatal outcomes of infants and infant mortality, empowering people and enhancing education (Ahmed *et al.*, 2012; Chola *et al.*, 2015; Cleland *et al.*, 2016; Kost *et al.*, 1991; Stover and Ross, 2010). One possible approach to reduce child and maternal mortality is to increase use of contraception among married women of reproductive age (El Arifeen *et al.*, 2014; Razzaque *et al.*, 2007; Saha and Van Soest, 2013).

Bangladesh has made a substantial progress in contraceptive use that increased from 8 percent in 1975 to 62 percent in 2014 among married women of reproductive age (National Institute of Population Research and Training (NIPORT), 2016). However, progress has not been the same in terms of geographical areas as well as socio-economic status of the people. Although, Bangladesh was able to meet most of millennium development goal targets, the country still needs to do more to meet the targets of sustainable development goals (SDGs). In order to achieve the sustainable development goals (SDGs) particularly in health sector, utilization of contraception should increase. Use of contraceptive remains prominent in demographic and health sectors because of its numerous health benefits such as preventing unintended pregnancies, promoting healthy birth spacing, reducing lifetime risk of maternal deaths, and enhancing attainment of development goals (Ahmed *et al.*, 2012; Cates, 2010; Stover and Ross, 2010).

The use of contraception in developing countries is associated with socioeconomic status and other relevant factors (Sulthana *et al.*, 2015). The low use of modern methods of contraception was caused by the lack of knowledge of supply sources, low education, low levels of employment outside the home, unavailability of supplies and cultures (Ntozi and Kabera, 1991). Like many other developing countries, In Bangladesh, similar perception persists. Under these circumstances, an effort is made in this study to find out the more influential factors affecting the use of contraception among the ever-married rural women.

2. Methods and Material

The study was carried out in rural area of Naogaon district, Bangladesh. A union namely "9 Number Tintulia Union Parishad" of Manda thana under Naogaon district was selected for this study by using purposive sampling. Before that, a pilot survey has been made to identify the ever-married women. Then 210 ever-married women are selected and data were collected from those women through in depth interviews with structured questionnaire. Due to incompleteness, 10 data were removed from the total 210 data. Thus, there is 200 ever-married-women's information for this study. All the respondents were interviewing during November 6 to December 5, 2018. The data were edited, compiled, processed and analyzed by using SPSS 16.0 programme.

Three approaches were used in the analysis. Descriptive univariate analyses were performed to inspect the frequency distributions of the variables. Bivariate analysis was employed to examine the relationships of the independent variables and contraceptive use. Chi-square tests of independence were conducted for categorical

variables. Lastly logistic regression was used to examine the impact of social and economic factors on contraceptive use of the respondents.

3. Results and Discussion

3.1. Socio-Economic and Demographic Characteristics of the Respondents

Investigation of socio-economic analysis of the respondents is very important for representing the overall status of a particular society, community or state as a whole. It is found that majority of the respondents are in the age group of 20-24 years (41 percent) followed by 32 percent in the age group 25-29 years, 16.5 percent are in the age group 30 years and above and only 10.5 percent are in the age group of 15-19 years. About 95 percent respondents are literate among them highest percent (35.5 percent) have completed their secondary education. Only 4.5 percent are illiterate. In case of the education status of respondent's husband, 92 percent are literate while 8 percent are illiterate. Among the literate husbands, majority have completed primary and secondary education that consists 28 percent and 25 percent respectively. Also, 22 percent respondent's husbands have completed higher level of education.

However the legal age at marriage for the female population in Bangladesh is 18 years, most of the study respondents (74.5 percent) are married under that age. Also, 24 percent are married between their age 18-24 years and 1.5 percent married at 25 years and above. Additionally, it also found that 65 percent respondents are living only with their husband i.e. the number of their family member is 2 while the number of family member is 3-4 for 28.5 percent respondents. The percentage of the respondents have larger family member i.e. 5 and above remains low (Table 1). However, all the respondents have the knowledge of contraception but 33 percent respondents are not using any methods of contraception while 67 percent respondents currently used contraceptives.

It is also found that about 9 of every ten respondents are housewife. Only 6.5 percent are engaged in job and 1.5 percent engaged in other types of work (domestic work and day labour). Table 1 also shows that, 47.5 percent husbands are engaged in job while 27 percent have their business, 15 percent are farmer and 10.5 percent are day labour. Additionally it is also found that, 47.5 percent respondents have their family's monthly income between BDT 11000 and BDT 20000 while 38 percent have less than BDT 10000 while 6.5 percent have their family's monthly income BDT 30000 and above. Majority of the respondents (46 percent) have their family's monthly expenditure less than BDT 10000 followed by 41 percent, 8.5 percent and 4.5 percent whose family's monthly expenditure was BDT 10000-20000, BDT 21000-29000 and BDT 30000 and over respectively.

Table-1. Selected socio-economic and demographic characteristics of the respondents

Characteristics	Frequency (200)	Percent (100)
Age of the Respondents (in years)		
15-19	21	10.5
20-24	82	41.0
25-29	64	32.0
30+	33	16.5
Educational Status of the Respondents		
Illiterate	9	4.5
Primary Completed	69	34.5
Secondary Completed	71	35.5
Higher Secondary Completed	27	13.5
Higher	24	12.0
Educational Status of the Husbands		
Illiterate	16	8.0
Primary Completed	56	28.0
Secondary Completed	50	25.0
Higher Secondary Completed	34	17.0
Higher	44	22.0
Age at Marriage (in years)		
<18	149	74.5
18-24	48	24.0
25+	3	1.5
Number of Family Members		
1-2	130	65.0
3-4	57	28.5
5-7	8	4.0
8+	5	2.5
Knowledge about Contraception		
No	0	0.0
Yes	200	100
Current Status of the Use of Contraception		
No	66	33.0

Yes	134	66.0
Occupational Status of the Respondents		
Housewife	184	92.0
Job	13	6.5
Others	3	1.5
Occupational Status of the Husbands		
Farmer	30	15.0
Day Labour	21	10.5
Business	54	27.0
Job	95	47.5
Family's Monthly Income (in BDT)		
≤ 10000	76	38.0
11000-20000	95	47.5
21000-29000	16	8.0
30000+	13	6.5
Family's Monthly Expenditure (in BDT)		
≤ 10000	92	46.0
11000-20000	82	41.0
21000-29000	17	8.5
30000+	9	4.5

Note: BDT= Bangladesh Currency- that is, Taka

3.2. Association of Different Socio-Economic and Demographic Variables with the Current Status of Contraceptive Use

Socio-economic and demographic variables have close association with the status of contraceptive use. Women's age was a significant variable to contribute positively to contraceptive use (Shahid and Chakraborty, 1993). It is found that, the percentage of the respondents do not use contraceptives is higher at their lower age while this percentage is lower at their higher age and the difference is statistically significant (p = 0.023). Educational status of respondents is significantly associated with contraceptive use (p = 0.000). Analysis shows that, 91.7 percent higher educated women use contraceptive while majority of the illiterate women (66.7 percent) do not use contraceptive (Table 2). The finding of this study that educated women are more likely to use contraceptives is supported by other studies (Gereltuya *et al.*, 2007; Goni and Rahman, 2012; Jacobsen and Lund, 1990; Kamal and Islam, 2010).

Husband's education of the respondents also exerts the significant effects on the contraceptive use (p = 0.001). The percentage of the respondents use contraceptive is increased with the increase of their husband's educational status. That means that higher educated husbands are well aware in using contraceptives. Occupational status of the respondents also has a significant association with the status of contraceptive use (p = 0.014). All the respondents who are engaged in job or other works rather than housewives use contraceptive. Majority of the respondents (74.7 percent) whose husbands are engaged in job use contraceptive while half of the respondents whose husbands are farmers are not use contraceptive.

All the respondents having their family members 8 and above are use contraceptive than their counterparts and the difference is significant (p = 0.019). A significant association is found in case of respondent's monthly family income (p = 0.003). The incidence of contraceptive use is higher among the respondents as their family's monthly income is higher. Respondents with lower family's monthly income have a tendency of not to use the contraceptive (Table 2).

Table-2. Association of Different Socio-Economic and Demographic Variables with the Current Status of Contraceptive Use

Variables	Current Status of Contraceptive Use		Total
	No	Yes	
Age of the Respondents (in years)			
15-19	10 (47.7)	11 (52.4)	21 (100)
20-24	24 (29.3)	58 (70.7)	82 (100)
25-29	20 (31.2)	44 (68.8)	64 (100)
30 and above	12 (36.4)	21 (63.6)	33 (100)
χ^2 = 2.804; df = 3; p = 0.023			
Respondent's Education			
Illiterate	6 (66.7)	3 (33.3)	9 (100)
Primary	39 (56.5)	30 (43.5)	69 (100)
Secondary	14 (19.7)	57 (80.3)	71 (100)
Higher Secondary	5 (18.5)	22 (81.5)	27 (100)
Higher	2 (8.3)	22 (91.7)	24 (100)
χ^2 = 36.710; df = 4; p = 0.000			
Education of Respondent's Husbands			
Illiterate	9 (56.2)	7 (43.8)	16 (100)

Primary	28 (50.0)	28 (50.0)	56 (100)
Secondary	14 (28.0)	36 (72.0)	50 (100)
Higher Secondary	9 (26.5)	25 (73.5)	34 (100)
Higher	6 (13.6)	38 (86.4)	44 (100)
χ^2 = 19.914; df = 4; p = 0.001			
Respondent's Occupation			
Housewife	66 (35.9)	118 (64.1)	184 (100)
Job	0 (0.0)	13 (100)	13 (100)
Others	0 (0.0)	3 (100)	3 (100)
χ^2 = 8.566; df = 2; p = 0.014			
Husband's Occupation			
Farmer	15 (50.0)	15 (50.0)	30 (100)
Day Labour	10 (47.6)	11 (52.4)	21 (100)
Business	17 (31.5)	37 (68.5)	54 (100)
Job	24 (25.3)	71 (74.7)	95 (100)
χ^2 = 8.579; df = 3; p = 0.003			
No. of Family Members			
1-2	43 (33.1)	87 (66.9)	130 (100)
3-4	19 (33.3)	38 (66.7)	57 (100)
5-7	4 (50.0)	4 (50.0)	8 (100)
8+	0 (0.0)	5 (100)	5 (100)
χ^2 = 3.512; df = 3; p = 0.019			
Family's Monthly Income (in BDT)			
≤ 10000	34 (44.7)	42 (55.5)	76 (100)
11000-20000	27 (28.4)	68 (71.6)	95 (100)
21000-29000	3 (18.8)	13 (81.2)	16 (100)
30000+	2 (15.4)	11 (84.6)	13 (100)
χ^2 = 8.930; df = 3; p = 0.003			

Notes: Figures in parentheses indicates percentage; BDT = Bangladesh currency –that is, Taka

3.3. Results of Logistic Regression Analysis on Contraceptive Use of the Respondents

We apply logistic regression technique to estimate the effects of selected independent variables among the respondents on their current status of contraceptive use. Here, respondents' current status of contraceptive use is considered as the dependent variable which is dichotomized by assessing '1' if the respondents use contraceptive and '0' for not. The explanatory variables considered in the model are as follows: respondent's age, their level of education, husband's educational status, respondents and their husband's occupational status and monthly income of respondent's family. The logistic regression technique can be used not only to identify the risk factors but also predict the probability of success. This technique expresses a qualitative dependent variable as a function of several independent variables, both qualitative and quantitative.

It is found that, respondents with higher ages are significantly and less likely not to use contraceptive than the reference category. This indicates that as the respondent's age increases the likelihood of not using the contraceptives is also increasing. Education status of the respondents has a significant effect on contraceptive use. Respondents with primary, secondary, higher secondary and higher education are 0.12 times, 0.10 times, 0.51 times and 0.48 times less likely not to use contraceptive than the reference category respectively. Respondents whose husbands are completed primary, secondary and higher education is 24 percent, 20 percent and 13 percent less likely about not using contraceptive respectively than the reference category, while whose husbands are completed higher secondary education are 1.05 times more willingly not to use contraceptive than their illiterate counterparts.

All the jobholder respondents are less preferable in not using contraceptive while it is 6 percent for those engaged in other job category than their housewife counterparts. Respondents, whose husbands are engaged in business, are 48 percent more likely not to use contraceptive On the other hand, respondents with other occupational categories (day labour and jobholders) are less likely not to use contraceptive (Table 3). Family's monthly income also exerts the significant effect on contraceptive use. Respondents with higher family's monthly income are more likely not to use contraceptive than their reference category (Table 3).

Table-3. Results of Logistic Regression Analysis on Contraceptive Use of the Respondents

Variables	**Current Status of Contraceptive Use**		
	ERC	**SE**	**OR**
Age of the Respondents (in years)			
15-19 years ®	-	-	1.00
20-24 years	**-0.91****	1.73	0.41
25-29 years	**-0.11***	1.16	0.95
30 + years	**-0.12***	0.80	0.92
Respondent's Education			
Illiterate ®	-	-	1.00

Primary	**-2.96****	1.33	0.12
Secondary	**-2.41****	1.05	0.10
Higher Secondary	**-0.67****	1.00	0.51
Higher	**-0.74****	1.09	0.48
Education of Respondent's Husbands			
Illiterate ®	-	-	1.00
Primary	**-0.27***	1.05	0.76
Secondary	**-0.23***	0.86	0.80
Higher Secondary	**0.05***	0.79	1.05
Higher	**-0.14***	0.79	0.87
Respondent's Occupation			
Housewife ®	-	-	1.00
Job	**-19.79***	2.28	0.00
Others	**-0.06***	2.53	0.94
Husband's Occupation			
Farmer ®	-	-	1.00
Day Labour	**-0.11***	0.61	0.93
Business	**0.42****	0.69	1.48
Job	**-0.12***	0.48	0.89
Family's Monthly Income (in BDT)			
≤ 10000 ®	-	-	1.00
11000-20000	**1.02*****	1.16	2.77
21000-29000	**0.87****	1.11	2.38
30000+	**0.77****	0.51	2.16
Constant	**41.11***	2.89	7.18

Notes: ERC = Estimated Regression Coefficient;
OR = Odds Ratios;
® = Reference Category;
Coefficient significant at least 10 percent level is shown in bold type; and
Level of significance: ***p<0.01; **p<0.05; *p<0.10
BDT = Bangladesh currency –that is, Taka.

4. Conclusions

In Bangladesh, like many other developing countries in the world, higher population and maternal and child mortality still a concerning matter. However, several policies and programmes are taken in prioritizing the above issues, the desired results remain far away. Effective family planning programmes will be the key in reducing population and ensuring maternal and child health. The most common form of such family planning programmes is the use of contraceptives. One possible approach to reduce child and maternal mortality is to increase use of contraception among married women of reproductive age (El Arifeen *et al.*, 2014; Razzaque *et al.*, 2007; Saha and Van Soest, 2013).

Despite some progresses, lots of work has to do. The study analyzed the various socio-economic and demographic factors of rural respondents and their effects on contraceptive use. Considerable differences in knowledge and use of contraception according to respondent's age, literacy and educational status of husbands, occupation status of both respondents and their husbands, monthly family's income were found in the study. Obviously, this finding is important as previous studies revealed that these factors have association with use of contraceptives (Dias and de Oliveira, 2015; Jacobsen and Lund, 1990; Kamal and Islam, 2010; Khan, 2003; Lethbridge, 1990).

In Bangladeshi society, especially in rural areas, conservative mind setup is still persisting. Hence, the people of that society or area need to be educated on the importance of contraceptive use. Early marriage should be controlled. Education and economic empowerment of women need to be ensured to enhance the incidence of contraceptive use. Improvement in socio-economic conditions will ensure sound maternal and child health. Government should attempt to provide more focus on family planning issues in order to encourage them to use contraceptive. Based upon the results of this study it is important to aware people by establishing the partnership between all tiers of government and non-governmental organizations. Without ensuring the sound family planning programmes (i.e. proper use of contraception), achievement of sustainable development goals remain distant dream.

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