INTER-SPOUSAL COMMUNICATION AND ITS EFFECT ON CONTRACEPTIVE USE PATTERN AMONG RURAL WOMEN IN BANGLADESH

Abstract:

This study explores the hypothesis that inter-spousal communication on family planning significantly influences the contraceptive use in rural Bangladesh using 2007 Bangladesh Demographic and Health Survey data. The findings are consistent with the hypothesis. The multivariate logistic regression models yielded significantly increased risk of any contraceptive use (OR=8.00, 95% CI=7.15-8.94), traditional (OR=8.77, 95% CI=7.22-10.64) and modern method (OR=7.89, 95% CI=7.03-8.85) use and intention of contraceptive use (OR=7.84, 95% CI=5.41-11.34) in future for husband-wife discussion on family planning. Females' age at marriage, living children, religion and visitations by family planning workers are also important determinants of contraceptive use, method choice and intention of contraceptive use in future. Programs should be undertaken on behalf of the government to involve men in family planning to increase the contraceptive prevalence rate at point that is needed to achieve the replacement level of fertility in Bangladesh.

Introduction:

The International Conference on Population and Development (ICPD) held in Cairo in 1994, the donors and policy makers emphasized to involve men in decision making on women's reproductive health, rights and preferences, although the recognition that communication between husband and wife plays an important role in determining reproductive preference dates back to the 1950s (Acharya and Sureender, 1996). A growing body of literature has shown that spousal communication regarding family planning (FP) is one of the factors associated with the approval of FP (DeRose et al., 2004; Islam et al., 2004) and couples who discuss FP are more likely to use a contraceptive method (Link, 2011; Ogunjuyigbe et al., 2009; Tesfayi and Mishra, 2007; Laguna et al, 2000). Thus, communication interventions have been developed and implemented in many countries to encourage couples to talk about the number of children to have, birth spacing and contraceptive use (Sharan and Valente, 2002).

Although demographic studies of fertility historically focused exclusively on women, researchers of fertility behavior are increasingly recognizing that decisions regarding childbearing do not lie solely with women, also with both spouses (Link, 2011). In fact, a husband's approval of FP is a powerful factor in explaining contraceptive use (Lasee and Becker, 1997). A husband's opposition may prevent his wife from using contraception, even when she wants to delay or stop childbearing (Casterline et al., 1997). Studies in sub-Saharan Africa indicate that inter-spousal communication is beneficial for issues that are intimate to both partners (Gebreselassie et al., 2007). As a result, spousal communication concerning fertility and FP has emerged as a topic of interest in developing countries, and in particular, where fertility rate is high and contraceptive use rate is relatively low.

In male dominated society like Bangladesh, men are the supreme authority in all decision making process including reproductive preference of women. In such a patriarchal setting the first step in a rational process of fertility decision making involves communication between spouses. Such communication should thus be among the most important precursors of lower desired family size and increased contraceptive use (Lasee and Becker, 1997). In societies where the male is the decision maker in the family, he would also make other vital decisions such as those relating to having or not having a child, using or not using contraception, or even about coital frequency. In such settings, an understanding of the husband-wife communication on FP and its effect on contraceptive use pattern is of utmost importance for the reducing of fertility.

Studies conducted on contraceptive use among women in Bangladesh are many. These studies are mainly concerted to examining socioeconomic factors affecting contraceptive use (Kamal and Islam, 2010; Laskar et al., 2006; Khan, 1996; Chowdhury AI and Phillips, 1989) and method choice (Kamal and Islam, 2010; Ullah MS and Chakraborty, 1994). Some studies have shown relationship between women's status (Kabir et al., 2005), sex preference (Bairagi, 2001; Khan and Khanam, 2000; Rahman et al., 1992), sex composition of surviving children (Chowdhury et al., 1993), child mortality and child survival (Rahman, 1998; Chowdhury, 1992), and contraceptive use. Some other studies are restricted only to examining inter-spousal communication on FP. Woman's perception of her husband's approval of FP on her current and future use of modern contraception has also been studied (Kamal, 2000). A few studies have attempted to examine the effect of husband-wife discussion on contraceptive adoption (Kamal, 2011; Kabir et al., 1988). Moreover, these

studies are based on micro level data or confined only to examining the relationship between spousal communication and use of any contraceptive method.

The fact that most contraceptive methods are designed for use by women makes women the focus of research on FP and the effect of inter-spousal communication on the contraceptive method choice and future intention of contraceptive method use is not adequately understood among women in Bangladesh. The success of contraceptive use depends on the agreement and cooperation of the husband. Fertility decisions occur within specific social contexts and social norms therefore restrict individual decisions on fertility and behaviors related to FP, such as spacing of births, stopping childbearing and using contraception (Gebresselassie et al., 2007). In this study it is our aim to examine the relationship between spousal communication and contraceptive use, method choice and future intention of contraceptive method use among women in Bangladesh using a nationally representative survey data.

The Bangladesh context

Bangladesh is predominantly a Muslim country and belongs to patriarchal social system. The country has a long tradition of early marriage and hence early childbearing, and that tradition is still continued. According to the latest 2007 Bangladesh Demographic and Health Survey 2007, the median age at first marriage for females was 15.3 years, which is one of the lowest in the world. Over the past decade, the median age at first marriage increased by only one year from 14.2 years in 1996-1997 to 15.3 years in 2007 (NIPORT et al., 2009). In Bangladesh, the legal minimum age at first marriage for females is 18 years, but a large proportion of marriages still take place before the legal age. The 2007 BDHS found that 66% of women age 20-24 were married before that age. In Bangladesh, marriage marks the onset of socially acceptable event of a woman's life and therefore illegitimate births are rare. Thus, age at first marriage has a major effect on childbearing because women who marry early have, on average, a longer period of exposure to the risk of conceive and a greater number of lifetime births.

Despite this, Bangladesh has made a remarkable progress in fertility reduction from a high level of 6.3 births per woman in the mid-1970s to a moderate level of 2.7 births per women in 2007. At the same time the contraceptive prevalence rate has increased from a low level of 7.7% to 55.8%. The prevalence of modern method use has increased from 5.0% in 1975 to 47.5% in 2007. The decline of fertility was steepest in the 1990s. This achievement in fertility reduction has been termed as a "success in a challenging environment" (Clealand et al., 1994). During the last four decades, Bangladesh has made significant progress in many areas including an increase in contraceptive prevalence rate, increase in life expectancy, increase in literacy rate, decline in infant and child mortality, poverty and unmet need for FP. Bangladesh has attained progressive gains in the broad sphere of reproductive health, FP, immunization and poverty reduction.

Patriarchy values men's dominance over women and Bangladeshi culture is not exception of it. It is well known fact that in Bangladesh and other patriarchal societies, if husband does not approve the use of contraceptive method of his wife, the likelihood of contraceptive adoption decreases significantly. In most cases, women's economic and social conditions impede them from raising their voices against men, which tend to translate into non-use of contraceptives. In contrast, women are the one who bear children and are also responsibility for rearing children; want to use contraceptives. Since men are the primary factors in determining

contraceptive use, men who do believe that women should have a say in the family are more likely to use contraceptives, as these men are more likely to share their power with women (Khatun and Cornwell, 2009). Power imbalance at the family level usually favors men, which may have implications for both men and women's contraceptive use (Sharan and Valente, 2002). Studies reveal that if a program targets men as potential clients of FP programs, it will achieve more success than if it targets women alone (Ezeh, 1993), as men have more power than women in many countries including Bangladesh.

Data and methods

Data used in this study have been taken from the Bangladesh Demographic and Health Survey (BDHS) 2007. The BDHS is a nationally representative survey of 10,996 ever married women age 15-49 and 3,771 men age 15-54 from 10,400 households covering 361 sample points (clusters) throughout Bangladesh, 134 in urban areas and 227 in the rural areas. The survey utilized a multistage cluster sampling based on the 2001 Bangladesh Census and was designed to produce separate estimates for key indicators for each of the six divisions of the country –Barisal, Chittagong, Dhaka, Khulna, Rajshahi and Sylhet. Data collection took place over a five-month period from 24 March to 11 August 2007. This survey included ever-married women age 10-49 and ever-married men age 15-54. However, the number of ever-married women age 10-14 was very low, and thus this group was excluded from the survey analysis.

The survey obtained detailed information on fertility levels, marriage, fertility preferences, awareness and use of FP methods, husband-wife communication on FP, breastfeeding practices, nutritional status of women and young children, childhood mortality, maternal and child health, and knowledge and attitudes regarding HIV/AIDS and other sexually transmitted infections (STIs). The 2007 BDHS was conducted under the authority of the National Institute for Population Research and Training (NIPORT) of the Ministry of Health and Family Welfare. It was implemented by Mitra and Associates, a Bangladeshi research firm located in Dhaka. Technical assistance was provided by Macro International Inc. through the MEASURE DHS program. Financial support for the survey was provided by the U.S. Agency for International Development (USAID/Bangladesh). However, the details of the survey have been provided in the report (NIPORT et al., 2009).

Sample

The BDHS gathered information from 10,192 currently married women of whom 7,909 were from rural and 2,283 from urban areas. Thus the sample size of women stood at 7,909 women for analyzing current use of any contraceptive method and method choice. Besides, the women who were not using any contraceptive method were taken into consideration for the study of future intention of contraceptive use. Of them, 84 women reported that they were not sure whether they would use any contraceptive method or not. Since, the inclusion of these women may bias the results; hence these women were excluded from analyses of future intention of contraceptive use. On this background the sample size stood at 2,283 for the study of future intention of contraceptive use.

Variables

The outcome variables of this study are three: current use of any contraceptive method, current use of contraceptive method by type and future intention of contraceptive use. All currently married women were asked which particular method they were using at the time of survey. The collected information was grouped into not using, using folkloric method, traditional method and modern method. Combining the latter three responses, the variable was made binary: "not currently using any method" and "currently using any method" for the first outcome variable. The second outcome variable was grouped into "not using any method", "using traditional method" and "using modern method". Further, the eligible women were asked, "What is your future intention of contraceptive use?" The women replied that they will use contraceptive method "in the next 12 month", "later", unsure about timing", "unsure about use" and "do not intend to use". The women who replied to the question that they would use contraceptive method "in the next 12 month", "later" and "unsure about timing", are assumed that they "intend to use any contraceptive method". Besides, the women who replied to the question either by "unsure about use" or "do not intend to use", are supposed that they were not willing to use any contraceptive method in future. In this way the variable "future intention of contraceptive use" was made a binary outcome variable.

A set of socio-demographic and, cultural and programmatic variables: current age, age at first marriage, number of living children, women's education, religion, working status, visitations by family planning worker (FPW) in the last six months prior to the survey date and wealth index were considered as independent variable. The main independent variable is "whether a woman talked to her husband about FP in the last three months prior to the survey date". The survey recorded three responses to this particular question: never, sometimes and always. The latter two responses were merged as "ever discussed". However, the definition and coding of the dependent and independent variables are provided in Table 1.

Statistical techniques

Both bivariate and multivariate statistical analyses have been employed in this study. The bivariate analysis namely chi-square tests have been applied to examine the associate between the dependent and independent variables. These were followed by multivariate analyses to examine the net effect of the independent variables on the outcome variables. The two outcome variables: current use of contraceptive use and future intention of contraceptive use are binary by nature. Binary logistic regression analyses were applied to these variables. Besides, we applied multinomial logistic regression analysis on contraceptive method choice due to polychotomous nature of the variable. The results of the multivariate analyses have been presented by odds ratios (OR) with 95% confidence interval (CI). The statistical analyses have been performed by the software SPSS v17.

Results

Profile of the respondents

Table 2 shows the frequency distribution of the rural women as obtained in the BDHS by their socio-economic and demographic background characteristics. The mean age of the respondents was 29.8±9.2 years. The mean age at first marriage and mean number of living children were 15.0±2.4 years and 2.5±1.7 respectively. More than half of the women had 0-2 living children, 31.3% had 3-4 living children and 12.6% had at least five children. Of the women, over one-third had no formal education, 31.0% had some primary education and

slightly over one-third completed at least secondary level of education. The vast majorities (90.6%) were Muslims and a slightly less than one-third were employed. Only 17.2% of the women were paid visitations by the FPWs. In terms of wealth index, 45.9% were poor, 23% were middle class and 31.1% were rich. As shown in the table more than half (54.0%) of the women ever discussed on FP with their husbands in the last three months prior to the survey.

Differentials of contraceptive use, method choice and future intention

Table 2 shows the differentials of current use of any contraceptive use, contraceptive method choice and future intention of contraceptive use by inter-spousal communication on FP and other socioeconomic and demographic factors among rural women of Bangladesh. Overall, 54.0% of the rural women were using any contraceptive method. The prevalence of traditional and modern method was 8.0% and 46.0% respectively. Of the women who were not using any contraceptive method at the time of survey, almost 72% reported that they would use FP method in future.

Current use of any contraceptive method

Spousal communication was significantly positively associated with current use of any contraceptive method. Age was significantly associated with contraceptive use. Women aged 30-39 reported highest rate of contraceptive use. Age at marriage was negatively associated with current use of contraceptive method, with the prevalence being lower among those who got married at age 18 or above than those who were married-off before age 18. The women with 3-4 living children were significantly more likely to be a current contraceptive user. The prevalence of current use of any contraceptive method was significantly higher among the Muslims, who were visited by FPWs and among the employed women. Women's education and wealth index were not found to be significantly associated with current use of any contraceptive method.

Contraceptive method choice

Both traditional and modern methods were significantly more prevalent among the women who ever discussed on FP with their husband than women who never discussed. The women aged 40-49 were more likely to report to be the user of traditional method, whereas the modern method use rate was higher in the women aged 30-39. The women who got marriage before age 18 was significantly more likely to report to use modern method than were those who got married at age 18 or above. The preference of modern method use was minimal between the Muslim and non-Muslim women, whereas use rate of traditional method was higher by 2.9% in the non-Muslim women than their Muslim counterparts. The current working status and FPWs visitations were significantly associated with contraceptive method choice. The prevalence of modern method was significantly higher in the working than non-working women as well as who were paid visits by the FPWs than those who were not visited. The difference of traditional method choice was found to be minimal when the rural women were differentiated by working status and FPWs visitation. Women's education and wealth index did not show to have association with contraceptive method choice among rural women.

Future intention of family planning method use

Inter-spousal communication was highly positively associated with future intention of contraceptive method use. The women who ever discussed on FP with their husbands were more tended to report to use any contraceptive method than women who never discussed on the issue with their husband. Current age of the women was negatively associated and age at marriage and women's education were positively associated with future intention of contraceptive method use. The Muslim women were more tended to report to use FP method in future than the non-Muslim women. Surprisingly, currently working women were less preferred to use contraception in future. As expected, the more women who were paid visitations by FPWs, reported to use family planning method in future. Wealth index was not found to be associated with future intention of contraceptive use.

Multivariate analyses

Table 4 shows the results of the multivariate analyses on current use of any contraceptive method, method choice and future intention of contraceptive method use. In the first and third models the outcome variable was whether a woman was using any contraceptive method and future intention of contraceptive use. The effect of spousal communication on these two outcome variables was investigated through binary logistic regression analysis. In Model II, the outcome variable was traditional and modern method preference over non-use. The effect of inter-spousal communication on the current method choice was investigated through multinomial logistic regression analysis.

The findings revealed that the odds of current use of any contraceptive method increased by a factor 8.00 (OR=8.00, 95% CI= 7.15-8.94) among women who ever discussed than those who never discussed on FP with their husbands (Model I) when other factors were held constant. Model III depicts that, the women who ever communicated on FP were 7.84 (OR=7.84, 95% CI=5.41-11.34) times as likely as to use any contraceptive method than women who never discussed on FP with their husbands. Model II shows that, after controlling for other confounding factors, husband-wife discussion on FP increased traditional method use by a factor 8.77 (OR=8.77, 95% CI=7.22-10.64) and modern method use by a factor 7.89 (OR=7.89, 95% CI=7.03-8.85).

Current age of women showed positive relationship with current use of both traditional and modern method and overall use of any contraceptive method. The women married at age 18 or above compared to those married-off before age 18 were significantly less likely to use any contraceptive use as well as traditional and modern method. In contrast, as compared to women married at early ages the women married at later age were more likely to intend contraceptive use in future. The women with 3-4 living children were more likely to use any contraceptive method at the time of survey and reported to use contraception in future. In contrast, women with lower parity and at least five children were less likely to use contraceptive method and their intention of FP method use in future also significantly lower as compared to women with 3-4 living children.

Although women's education showed to have no significant effect on current use of any contraceptive method, it showed significantly positive relationship of future use. The non-Muslim women were significantly more likely to use any method compared to their Muslim sisters. Moreover, the likelihood of traditional and modern method use was significantly higher among the non-Muslim women than the Muslims. In contrast, the Muslim women were significantly more preferred to use FP method in future than the non Muslim women.

The employed women compared to the non-working sisters were more likely to use contraceptive method. The odds were also higher to be traditional method and modern method user among those. When other socioeconomic and demographic variables were held constant, visitations of FPWs yielded significantly increased risk of current use of any contraceptive method, traditional and modern method preference and intention of contraceptive method use in future.

Discussion and conclusion

This study confirms that current use of any contraceptive method, also particularly, traditional and modern method choice as well as future intention of contraceptive use is strongly positively related to inter-spousal communication, a relationship which persists even after controlling for other socioeconomic, cultural and programmatic factors. Inter-spousal communication showed to have stronger influence on contraceptive adoption among couples than the programmatic factor such as visitations by FPWs. These findings suggest the dominance of husbands in FP decision-making and the low levels of autonomy of women in rural Bangladesh. Our findings are consistent with many studies conducted on spousal communication and the use of any contraceptive use (Kamal and Islam, 2011; Link, 2011; Ogunjuyigbe et al., 2009; Kulczycki, 2008; DeRose et al., 2004; Islam et al., 2004), modern method choice (Kamal, 1999; Gage, 1995) and intention to use contraceptive method in future (Hamid et al., 2011).

The findings of this study revealed that more than half of the women discussed on FP at least once in the last three months prior to the survey. This implies that at present rural women enjoy a substantial level of autonomy that encourage them to discuss on a taboo issue such as FP in a traditional society like Bangladesh. This may be partly attributed to women's increased level of education, increased rate of women's participation in the income generating activities and decreased conservativeness in society than ever before. Increased level of education and participation in income generating activities are supposed to make individuals more responsible and trustworthy in their households and the community and thereby inter-spousal communication regarding FP. Women's inferior position in the household and lack of negotiation power often limit couple communication from either side (Salway, 1994; Dixon-Muller, 1993).

Studies have shown that men have more knowledge about fertility regulation, men do prefer to use contraceptives at certain points and also men are a major reason for non-use of contraceptives among women (Dodoo et al., 1997). Interest in men's involvement in reproductive behavior gained importance as feminist thinkers started their work on the role of women in childbearing and safe reproductive health of women (Khatun and Cornwell, 2009). The women's health movement has also brought attention to men's roles. As a result, the International Conference on Population and Development leaned toward women's issues, prompting several criticisms by both demographers and non-demographers (Greene and Biddlecom, 2000).

In traditional societies, like Bangladesh, men have more bargaining power and decision making power that can influence a unique solution for using contraceptives or not using contraceptives –this basically involves power relations at the family level (Khatun and Cornwell, 2009). Usually, bargaining theory reconciles apparent differences between individuals in an economic exchange but not in a social situation (Manser and Brown, 1980).

The overwhelming power of men in household as well as society and as major earners, particularly in traditional and patriarchal settings, women have little say in decision making process including reproductive preference. Traditionally, men are considered as providers and women as passive nurturers. It is believed that a man treasures values and norms of the society. As a result, men's role and their opinion significantly motivate women in contraceptive adoption and reproductive decision.

The lower prevalence and lower likelihood of any contraceptive use among the younger may be attributed to the fact that they have not yet achieved family size as their preferred size and hence they are more tended to adopt contraceptive method in future. In addition, higher likelihood of current contraceptive use and intention of future use among women aged 30-39 may be attributed to make space between two births or to limit childbearing. The women aged 40-49 were more tended to use traditional and modern contraceptive method currently as they may have achieved family size as they prefer and they intend to limit childbearing. Besides, the lower likelihood of intention of contraceptive use in future of the older women may be attributed to their perception of menupasue and infecundity. This is also true for women with at least five living children. Most women with at least five children are older and are more reluctant in using any current and future use of contraceptive method than women with 3-4 living children. However, these findings are consistent with those conducted elsewhere (Gharaibeh et al., 2011; Tayyaba and Khairkar, 2011).

Consistent with earlier studies (Tayyaba and Khairkar, 2011), our findings showed that the women married at age 18 or above were less likely to use any contraceptive method. It is evident that the women with higher education are more likely to be married at later age and do hurry to have childbirth (Kabir et al., 2005), resulting in lower likelihood of contraceptive use. In addition, the higher educated women are more informed of various types of FP method, cost and benefit of smaller family size, resulting in higher odds of intention of contraceptive use in future. This finding is consistent with a study conducted on Pakistani women (Agha, 2010). However, the findings for current use and method choice due to insignificant difference of odds for women's different level of education, urge more extensive study.

Religion has immense social, economic, and political significance in most societies, and it plays an important role in sanctioning or promoting acceptance of or creating resistance to FP (Pearce, 2001; Islam et al., 1991). In Bangladesh, as in India, lower contraceptive use rates and higher fertility rates among Muslims than among Hindus and people of "other" religions are well documented (Mishra, 2004). Some argue that, lower contraceptive use and higher fertility among Muslims is mainly due to their lower socioeconomic status (Iyer, 2002), while others argue that it is due to pronatalist ideology and greater opposition to FP among Muslims (Alagarajan and Kulkarni 1998). Differential marriage pattern is also an important factor of lower use rate of FP method among the Muslims. However, our findings are in a quite agreement with those conducted elsewhere (Mishra, 2004; Pearce, 2001; Islam et al., 1991).

Women's work status is also an important determinant of contraceptive use as well as method choice. The increased likelihood of using any method and higher preference of both modern and traditional method for employed women may be partly attributed to "cost and benefit" of childbearing and childrearing. This finding supports the hypothesis that "child care would seem to be a time-intensive activity that is not productive (in terms of earnings) and uses

many hours that could be used at work which is earnings-intensive activity" (Becker, 1965). Moreover, the paid work especially outside the home raises women's bargaining power in the household and hence autonomy. The bargaining power and higher autonomy of economically active women results into higher likelihood of contraceptive use among them. This finding is also in the line of earlier studies (Kamal and Islam, 2011; Ali et al., 2004; Khan 1997)

Visitation by FPWs is another important factor of contraceptive use. This finding is also consistent with previous studies (Janowitz et al., 1999; Kamal and Slogget, 1996). The positive effect of home visitations by FPWs is well documented. The finding further reveals that the Bangladesh FP program is successful due to greater effort of the FPWs who are capable to motivate couples to adopt contraceptive method. Another explanation for the success of the home visit program is that, repeated visits not only provide a convenient source of FP method supply, but also catalyze latent demand for methods through repeated dissemination of information (Janowitz et al., 1999).

The study has several limitations as in other studies. First, the study relied entirely on women's report on FP discussion with husbands which might have error of underreporting. Second, the amount of information available to measure husband-wife communication was inadequate: only one question, "how often husband-wife talked about FP in the last three months?" was asked. Third, the survey did not gather information regarding husband's approval of FP use of wife. Despite these, the strength of the study is that it dealt with a large sample size from a nationally representative DHS data set, which is mostly used in demography and health related studies. Moreover, the study used a main indicator "inter-spousal communication" which showed to have statistically significant effect on the use of any FP method, method choice and intention of future use.

Overall, the analyses of this study indicate larger positive impact of husband-wife discussion on FP. In addition, lack of inter-spousal communication, religious beliefs and deficient of program efforts, particularly lack of home visitations by FPWs are playing mediating role for lower use of contraceptives. Socioeconomic, cultural and religious beliefs are important determinants of contraceptive use in rural Bangladesh. As husbands play a decisive role in their wives' reproductive choices and behavior in the patriarchal society like Bangladesh, greater efforts are needed to influence the husbands' awareness of and attitude towards FP. FP programs should not focus only on women; it should also address men as principal stakeholders. Men should be inspired to confer opportunities to their wives to participate in decision-making process including fertility regulation. This will help women to be empowered to take the right decision not only for fertility and FP issues, also to their better reproductive health. Efforts should be made to enhance home visitation of FPWs and door-step delivery services should be continued and should be increased targeting the poor and backward regions of the country. Young couples should be motivated to use contraceptive for spacing childbearing and older couples who desire for no more children should be inspired to adopt permanent method. As inter-spousal communication appeared as vital factor, couples should be inspired to talk about family size including other familial issues that they may understand each other's views and attitudes. These efforts may help to raise the CPR in Bangladesh that is needed for extra cutback of fertility to reach at replacement level.

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Table 1: Operational definitions of variables and their measurements

Variables	Description	Measurement scale
Dependent variables		
Currently using any contraceptive method	Respondent who were currently using any contraceptive method	Dichotomous 0 = No; 1 = Yes.
Type of current use of contraceptive method	Contraceptive method type the respondents were currently using	Polichotomous 0 = No method; 1 = Modern method; 2 = Traditional method.
Future intention of contraceptive use	Respondents' future intention of contraceptive use	Dichotomous 0 = No; 1 = Yes.
Independent variables		
Current age of women	Respondent's current age at the time of survey	Ordinal 1 = 15-24; 2 = 25-34; 3 = 35-49.
Age at first marriage	Women's age at first marriage	Ordinal 1= below 18; 2= 18+ years.
No. of living children	Number of living children	Ordinal 1 = 0-2; 2=3-4; 3=5 and above.
Women's education	Women's level of education	Ordinal 0 = No formal education 1 = Primary; 2 = Secondary+
Religion	Religious affiliation	Ordinal 1 = Muslim; 2 = Non-Muslim.
Work status	Whether respondents were engaged in income generating activities	Dichotomous 0 = No; 1 = Yes.
Visited by family planning worker (FPW)	Whether the currently married woman were visited by FPW	Dichotomous 0 = No; 1 = Yes.
Wealth index	Luxurious materials available in household	Ordinal 1 = Poorest; 2 = Poorer 3 = Middle; 4 = Richer 5 = Richest.
Discussed FP with husband	Whether a woman discussed on family planning with her husband in the last three months prior to the survey date	Dichotomous 0 = No; 1 = Yes.

Table 2: Background characteristics of rural women of Bangladesh, BDHS 2007

Characteristics	N	%	Mean±SD
Current age			29.8±9.2
15-24	2755	34.8	
25-34	2629	33.2	
35-49	2525	31.9	
Age at first marriage			15.0±2.4
<18	6796	85.9	
18+	1113	14.1	
Number of living children			2.5±1.7
0-2	4436	56.1	
3-4	2477	31.3	
5+	996	12.6	
Women's education			
No education	2759	34.9	
Primary	2453	31.0	
Secondary+	2697	34.1	
Religious affiliation			
Islam	7167	90.6	
Other	742	9.4	
Working status			
Not working	5432	68.7	
Working	2475	31.3	
Visited by FPW			
No	6546	82.8	
Yes	1359	17.2	
Wealth index			
Poorest	1795	22.7	
Poorer	1833	23.2	
Middle	1817	23.0	
Richer	1703	21.5	
Richest	761	9.6	
Discussed FP with husband			
No	3637	46.0	
Yes	4271	54.0	
Total	7909	100.0	

Table 3: Percentage of currently married and non-pregnant women of reproductive age by inter-spousal communication, other background characteristics and fertility behavior aged 15-49 by parity and number of sons and other background characteristics, BDHS 2007

Characteristics	Currently using any FP method		Current use of FP by method type		Future intention of FP using	
	No	Yes	Traditional	Modern	No	Yes
Age group		(*P*<0.001)		(*P*<0.001)		(*P*<0.001)
15-29	53.1	46.9	4.7	42.2	4.3	95.7
30-39	39.3	60.7	6.6	54.1	12.5	87.5
40-49	45.2	54.8	13.0	41.8	73.0	27.0
Women's age at first marriage		(*P*<0.01)		(*P*<0.05)		(*P*<0.001)
<18 years	45.4	54.6	7.8	46.8	30.3	69.7
≥18 years	49.7	50.3	8.9	41.4	17.3	82.7
No. of living children		(*P*<0.001)		(*P*<0.001)		(*P*<0.001)
0-2	49.9	50.1	6.0	44.0	14.9	85.1
3-4	36.7	63.3	9.7	53.6	37.4	62.6
5+	51.4	48.6	12.5	36.1	69.6	30.4
Women's education		(*P*=0.184)		(*P*=0.370)		(*P*<0.001)
No education	47.1	52.9	7.8	45.1	47.6	52.4
Primary	44.6	55.4	8.6	46.9	23.5	76.5
Secondary+	46.2	53.8	7.6	46.2	12.2	87.8
Religion		(*P*<0.05)		(*P*<0.01)		(*P*<0.05)
Islam	46.3	53.7	7.7	45.9	27.8	72.2
Others	42.5	57.5	10.6	46.9	32.9	67.1
Currently working		(*P*<0.001)		(*P*<0.001)		(*P*<0.001)
No	49.6	50.4	7.8	42.6	26.7	73.3
Yes	38.0	62.0	8.4	53.7	32.9	67.1
Visited by FPW		(*P*<0.001)		(*P*<0.001)		(*P*<0.001)
No	50.8	49.2	7.9	41.3	29.5	70.5
Yes	22.8	77.2	8.2	68.9	15.6	84.4
Wealth index		(*P*=0.977)		(*P*=0.470)		(*P*=0.777)
Poorest	45.4	54.6	7.8	46.8	27.1	72.9
Poorer	45.9	54.1	7.5	46.5	28.2	71.8
Middle	46.5	53.5	8.1	45.5	29.6	70.4
Richer	46.0	54.0	7.6	46.4	28.9	71.1
Richest	46.2	53.8	10.3	43.5	26.7	73.3
Discussed FP with husband		(*P*<0.001)		(*P*<0.001)		(*P*<0.001)
No	65.6	34.4	5.6	28.8	34.4	65.6
Yes	21.4	78.6	11.0	67.6	5.3	94.7
Total	46.0	54.0	8.0	46.0	28.3	71.7

Table 4: Adjusted odds ratios (OR) with 95% confidence interval (CI) from logistic regression to identify associations of inter-spousal communication on family planning with contraceptive use pattern among rural women of Bangladesh

Characteristics	Using any FP method	Current method choice		Intention to use any FP method
		Traditional vs. non-use	Modern vs. non-use	
	Model I	Model II		Model II
Discussed FP				
No	1.00	1.00	1.00	1.00
Yes	8.00(7.15-8.94)[a]	8.77(7.22-10.64)[a]	7.89(7.03-8.85)[a]	7.84(5.41-11.34)[a]
Age group				
15-29	1.00	1.00	1.00	1.00
30-39	1.75(1.52-2.02)[a]	1.96(1.49-2.58)[a]	1.73(1.50-2.00)[a]	0.38(0.28-0.51)[a]
40-49	2.10(1.79-2.48)[a]	4.99(3.73-6.68)[a]	1.78(1.51-2.11)[a]	0.03(0.02-0.04)[a]
Age at first marriage				
<18 years	1.00	1.00	1.00	1.00
≥18 years	0.74(0.64-0.86)[a]	0.96(0.74-1.23)	0.71(0.61-0.83)[a]	1.72(1.27-2.34)[a]
No. of living children				
0-2	1.00	1.00	1.00	1.00
3-4	1.43(1.24-1.64)[a]	1.35(1.06-1.70)[b]	1.44(1.25-1.66)[a]	1.38(1.07-1.78)[b]
5+	0.87(0.72-1.05)	1.14(0.85-1.53)	0.80(0.66-0.98)[b]	0.73(0.54-0.99)[c]
Women's education				
No education	ns	ns	ns	1.00
Primary	ns	ns	ns	1.52(1.21-1.92)[a]
Secondary+	ns	ns	ns	1.88(1.45-2.43)[a]
Religion				
Islam	1.00	1.00	1.00	1.00
Others	1.21(1.01-1.44)[c]	1.53(1.16-2.03)[b]	1.15(0.96-0.38)[d]	0.67(0.48-0.94)[a]
Currently working				
No	1.00	1.00	1.00	ns
Yes	1.42(1.27-1.58)[a]	1.19(0.98-1.44)[d]	1.46(1.30-1.64)[a]	ns
Visited by FPW				
No	1.00	1.00	1.00	1.00
Yes	2.91(2.50-3.38)[a]	1.93(1.51-2.47)[a]	3.09(2.65-3.60)[a]	1.99(1.35-2.94)[a]

Note: Level of significance [a] $P<0.001$; [b] $P<0.01$; [c] $P<0.05$; and [d] $P<0.10$.