COMMUNICATION AND CONTRACEPTIVE BEHAVIOUR : INSIGHTS AND EVIDENCES FROM INDIA AND BANGLADESH

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Table of Contents

Abstract

This study explores the differential impact of exposure to mass media and interpersonal communication on current use and future intention to use contraception in two socio-religio-culturally contrasting countries of India and Bangladesh. It is a well-known fact that mass media performs only the knowledge function, while interpersonal communication performs an additional function of persuasion (Rogers, 1971). Using India National Family Health Survey (INFHS-II) 1998-99 for India and Demographic Health Survey (BDHS-III) 1999-2000 data for Bangladesh, this study corroborates this statement that among those who are less motivated, the role of interpersonal communication becomes more important. The findings show that both mass and interpersonal media are strong positive predictors of current contraceptive use and future intention to use contraception. But, when socio-demographic characteristics, mass media and interpersonal communication are controlled, interpersonal communication seems to be more effective in case of Bangladesh than mass media in predicting future intention to use contraception.

Keywords: Mass Media, Interpersonal Communication, India, Bangladesh, Contraception, Future Intention

Introduction

One of the gravest problem, that many countries in the early stages of demographic transition are facing is the burgeoning population problem. To address this issue, National family planning programs, which began in the mid-20th century have evolved rapidly to meet the information and service needs of target groups. All these programs relied heavily upon communication as a means of promoting behaviour change. Communication is the process of exchanging information, usually via a common protocol. Communication can be interactive, transactive, intentional, or unintentional; it can also be verbal or nonverbal.

Mass Media and Interpersonal Channels

Mass Media channels include radio, films/movies, television, newspapers, and magazines. Interpersonal Channels include Counselling; outreach activities; advocacy; and information provided by health professionals and social services workers, religious and community leaders, traditional health practitioners, women's and youth organizations, community councils and organizations, school programmes and groups, trade union and labour group leaders, government services, non-governmental and voluntary organizations, and business leaders. Small Media channels include posters, cassettes, leaflets, brochures, slide sets, videos, flip charts, flash cards, t-shirts, badges, etc. Traditional Media consist of traditional folk arts, story tellers, puppet shows, plays, theatre, role plays, music, dance performances, comedy, magic, festivals, etc. New Communication Technologies include computer networks, global telephone systems, new multimedia technologies, etc. Interpersonal communication is especially effective when supported by appropriate small media such as leaflets, posters, flip charts, video, role play, songs, and drama. Family planning programs around the world employ different types of communication media after segmenting the population, based on their specific and peculiar needs and choices (Piotrow, 1997).

India and Bangladesh

India is projected to have 1,628 million population by 2050 (World Population Data Sheet, 2005) and Bangladesh will follow suit at the 8th position at a staggering 231 million. Both these countries have a lot of similarities as well as a lot of contrasting features. Both the countries belonging to the South Central Asia region have a lot of demographic similarities; such as their Total Fertility Rate (TFR), which is 3.0 lifetime births per woman in both the countries, the Crude Birth Rate (CBR) is 25 per 1000 persons for India and 27 for Bangladesh while the Crude Death Rate (CDR) is 8 per 1000 persons, which is same for both the countries. The life expectancy at birth is 62 years for India and 61 years for Bangladesh (World Population Data Sheet, 2005).

In India, the family welfare programme was launched in 1951, at about the same time family planning was introduced in Bangladesh (then East Pakistan) in the early 1950s through the voluntary efforts of social and medical workers. The government, recognizing the urgency of moderating population growth, adopted family planning as a government-sector program in 1965. In 1976, the government declared the rapid growth of the population as the country's number one problem and adopted a broad-based, multisectoral family planning program along with an official population policy (GOB, 1994:9).

In Bangladesh, the current contraceptive use has increased substantially from 8% in 1975 to 54% in 1999-2000 (BDHS-1999-2000) and it has increased to 58% in 2004 (BDHS-2004), while in India, it increased from 35% in 1980 to 48% in 1998-99 (NFHS-1998-99) and 53% in 2004 (DLHS-RCH-2002-2004). There is an impressive 50 percent fertility decline that characterized the 1980s has stalled at a little above three children per woman. The Total Fertility Rate has reduced from 6.3 births per woman in early 1970s to 3.3 in mid-1990s and now it is at the level at par with India, i.e., 3.0. Three successive DHS surveys, covering the period from 1991 to the present, have shown virtually identical total fertility rates (TFR) of 3.4 in 1993-1994, 3.3 in 1996-1997 and 3.3 in 1999-2000. The success of the Bangladesh family planning program has drawn attention of professionals in the population and planning field. A comprehensive nationwide program of family planning with maternal and child services, implemented door-to-door by some 30,000 female field workers, as well as media and other informational activities, has combined to promote a small-family norm and to increase the use of contraception for both spacing and limiting purposes. In Bangladesh, the Matlab experiment has been an example for others to follow. Addressing the interest of husbands and village opinion leaders through village level discussion groups or *jiggasha*, which has helped to increase contraceptive use, has been found to be quite remarkable (Kincaid et al. 1993). In India, there are more mass media campaigns through state run channels. This being an example of a best practice, it was thought to take Bangladesh to examine what are the determinants of contraceptive use and what role does communication play among these determinants. So, this comparative study between India and Bangladesh has been designed.

Review of Literature

There is a host of evidence regarding the influence of communication on contraceptive use behaviour. Some of these are reviewed in the following pages:

Multivariate findings on differential use by country suggest that choice of contraceptive method was related to health care policy, service provision, and differences in provider preferences. Contraceptive decisions were primarily based on reproductive status, country, educational level, and religious beliefs rather than on the characteristics of the method (Oddens and Lehert, 1997).
Storey et al. (1999) in a study found increased health worker interpersonal interaction skills, improved quality of client-provider interactions, increased client self-efficacy in dealing with health workers, improved client attitudes toward health services and toward the practice of family planning, increased adoption of family planning, and increased family planning service utilization, all attributable to the Radio Communication.

Westoff and Bankole (1999) in a study of mass media and reproductive behaviour in Pakistan, India and Bangladesh have shown that in Pakistan, 34 of the 59 multivariate results in both surveys demonstrate significant media effects. In India, 26 of 32 tests show significant effects and in Bangladesh, 39 out of 64 show significant results for the two surveys; 1992-93 and 1996-97 survey.

A sample of 871 currently married urban Bangladeshi women was used to assess the impact of mass media family planning programmes on current contraceptive use. The analyses suggested that radio had been playing a significant role in spreading family planning messages among eligible clients; 38% of women with access to a radio had heard of family planning messages while the figures for TV and newspaper were 18.5% and 8.5% respectively. Education, number of living children and current contraceptive use were important predictors of exposure to any mass media family planning

messages. There was a negative relationship between breast-feeding and the current use of contraception indicating a low need for contraception among women who were breast-feeding (Kabir and Islam, 2000).

Sohail and Rossem (2002) have also shown that mass media exposure significantly increased the likelihood of that a man or a woman would discuss use of the female condom in the future in Tanzania. It has also been demonstrated by them that though peer educators and providers had a limited coverage, they had a stronger impact than mass media on individual's intention to use a female condom. The contacts with peer educators and providers can be considered as similar to interpersonal communicators, who can perform both the knowledge and persuasion function of development communication.

Coming to India, some studies have also been carried out in India. Some of the relevant ones are as follows: One paper has discussed the impact of mass media exposure and how it leads to an increase in use of contraceptives (Retherford & Mishra, 1997). According to them, in the absence of statistical controls, exposure to family planning messages increase intended future use of contraception by 12% and when, residence, education, and number of living children are statistically controlled, this increase is reduces to 7%. Srivastava (1988) in a study among two ethnic muslim groups of *momin* and *kokni* has reiterated the role of mass communication in explaining inter-spousal communication.

Saksena and Rastogi (1988) investigated reach of 12 different media of communication through which people are exposed to family planning. This included interpersonal, print and audiovisual media namely home visits, group meetings, entertainment/ cultural programmes (puppet shows, religious songs/ recitals, folk drama etc.), radio, films, family planning posters, television, wall-paintings/ hoardings, pamphlets/ leaflets, exhibitions, newspapers and magazines. The results show that radio played an important role in disseminating family planning information in the survey areas. They also showed that media exposure seemed to help reduce misconceptions, fears and apprehensions regarding birth control methods.

Bhat (1996) also has shown that mass media exposure plays an important role in shaping the regional variation in fertility in India. Dwivedi and Ram (2006) have analysed data from Indian National Family Health Survey-I (INFHS-I) and INFHS-II on Uttar Pradesh and have also found that women who are exposed to mass media were more likely to use more contraception compared to those who were not exposed.

Need for the Study

In view of the age-old traditional KAP gap between knowledge and use of contraception, efforts to make people aware, and persuade and promote use of contraception have been underway. World wide communications campaigns have been shown to increase contraceptive use, but it remains unclear whether exposure to messages about contraception through multiple media sources has a greater impact than exposure through one medium. But a lot needs to be known about the comparative effectiveness of different kinds and channels of media, like whether, mass media has a greater impact or interpersonal communication has. The aim here is to see which media has a better impact on current and future use of contraception, controlling for other background socio-demographic variables. Many a studies have been done in the past to understand role of

communication on contraception and a lot of studies has also been carried out to study the mechanism of this impact. Though a lot of studies have been carried out to study the impact of mass media on contraceptive and reproductive behaviour, not many studies have been undertaken to study the impact of interpersonal communication or contacts with health workers on contraceptive use behaviour. So, there a need is felt to study the comparative impact of both and to find out in which context it is so. Hence, this study tries to understand, out of mass media and interpersonal communication, which has greater impact

Objectives

- To study the relationship between different socio-demographic characteristics, mass media, interpersonal communication and contraceptive behaviour.

- To study the differential impact of Mass Media and Interpersonal Communication on contraceptive behaviour in two socio-religio-culturally contrasting countries of India and Bangladesh.

Materials and Methods

Materials : Data

The data used in this paper has been taken from India National Family Health Survey (INFHS, 1998-99) and Bangladesh Demographic Health Survey (BDHS, 1999-2000). The sample of currently married women in the reproductive age of 15-49 years in India is 84682 and it is 9540 in Bangladesh.

INFHS, 1998-99: Indian National Family Health Survey (NFHS-2) was conducted in 1998–99. An important objective of NFHS-2 is to provide state-level and national-level information on fertility, family planning, infant and child mortality, reproductive health, child health, nutrition of women and children, and the quality of health and family welfare services. Another important objective is to examine this information in the context of related socioeconomic and cultural factors. The NFHS-2 sample covers more than 99 percent of India's population living in all 26 states. It does not cover the union territories. NFHS-2 is a household survey with an overall target sample size of approximately 90,000 ever-married women in the age group 15–49. NFHS-2 was conducted with financial support from the United States Agency for International Development (USAID), with additional funding from UNICEF. Technical assistance was provided by ORC Macro, Calverton, Maryland, USA, and the East-West Center, Honolulu, Hawaii, USA (NFHS, 1998-99).

BDHS-1999-2000: The Bangladesh Demographic and Health Survey (BDHS) is intended to serve as a source of population and health data for policymakers and the research community. In general, the objectives of the BDHS are to:
- Assess the overall demographic situation in Bangladesh
- Assist in the evaluation of the population and health programs in Bangladesh
- Advance survey methodology

The objective of the BDHS survey is also to provide up-to-date information on fertility and childhood mortality levels; nuptiality; fertility preferences; awareness, approval, and use of family planning methods; breastfeeding practices; nutrition levels; and maternal and child health. The

1999-2000 BDHS survey was conducted under the authority of the National Institute for Population Research and Training (NIPORT) of the Ministry of Health and Family Welfare. The survey was implemented by Mitra and Associates, a Bangladeshi research firm located in Dhaka. Macro International Inc. of Calverton, Maryland, provided technical assistance to the project as part of its international Demographic and Health Surveys program, and financial assistance was provided by the U.S. Agency for International Development (USAID)/ Bangladesh (BDHS, 1999-2000).

Methods

The paper tries to understand the relationship between communication exposure and its effect on current and future use of contraception among currently married women in the age group of 15-49 years. In addition to this bivariate analysis, multivariate analysis was performed to control for the effects of other correlated factors, as results from bivariate analyses could be thoroughly misleading, for example, contraceptive use could be higher in urban areas not because the type of place of residence has something to do with contraceptive use, but because urbanites are more educated and have a higher standard of living. So, in order to arrive at the true significance of each factor independently keeping all other at their mean values, it is necessary to control or nullify the effects of other factors. In this way, multivariate analyses helps to separate out the independent effect of a factor from the effects of other correlated factors or covariates. As the dependent variable is categorical and dichotomous in nature with two categories; use=0 and non-use=1, Binomial or Binary Logistic regression was carried out to explore the effect of communication on contraception. Logistic regression can be used to predict a dependent variable on the basis of independents and to determine the percent of variance in the dependent variable explained by the independents; to rank the relative importance of independents; to assess interaction effects; and to understand the impact of covariates. Logistic regression applies maximum likelihood estimation after transforming the dependent into a logit variable (the natural log of the odds of the dependent occurring or not). In this way, logistic regression estimates the probability of a certain event occurring. Note that logistic regression calculates changes in the log odds of the dependent, not changes in the dependent itself as OLS regression does. The multiple logit model can be expressed as:

$$\ln\left(\frac{P}{1-P}\right) = \alpha + \beta_1 x_1 + \beta_2 x_2 + ... \beta_i x_i + e$$

- p is the probability that the event Y occurs, p(Y=1)
- p/(1-p) is the "odds ratio"
- ln[p/(1-p)] is the log odds ratio, or "logit"
- β_1, β_2, β_i here refers to beta coefficients.
- X_1, X_2, X_i here refers to the independent variables.
- *e* is the error term
- Interpretation of bi
    - Increase in log-odds for a one unit increase in X_i with all the other X_is constant
    - Measures association between X_i and log-odds adjusted for all other X_i

The model goodness-of-fit was assessed by the difference of the log likelihood values, which is similar to the chi-square difference and it follows a chi-square distribution with degrees of freedom

(*df*) equal to the difference of the *df* between the fitted model and null model. The formula is as given below:

$$G = \chi^2 = -2LL_{null} - \left(-2LL_k\right)$$

where,

G stands for deviance statistic

χ^2 stands for model chi-square

-2LL_{null} stands for null model with just the constant

-2LL_k stands for the k model containing all the predictors

In addition to the difference in deviance, the proportion of *unaccounted* for variance that is reduced by adding variables to the model is the same as the proportion of variance accounted for, or R^2 has also been displayed in the table. In SPSS, there are two modified versions of this basic idea, one developed by Cox & Snell and the other developed by Nagelkerke. Because this R-squared value cannot reach 1.0, Nagelkerke modified it. The correction increases the Cox and Snell version to make 1.0 a possible value for R-squared. This is computed as follows.

Nagelkerke Pseudo-R^2

$$R^2 = \frac{1 - \left[\dfrac{-2LL_{null}}{-2LL_k}\right]^{2/n}}{1 - \left(-2LL_{null}\right)^{2/n}}$$

This version of the Pseudo R^2 has been considered here, which measures the strength of association. Where the null model is the logistic model with just the constant and the *k* model contains all the predictors in the model. For this, five models were considered, Model 1, in which only the composite variable for mass media computed from exposure to TV, Radio and Newspaper, was taken as the independent variable and current use of contraception was taken as the dependent variable and in Model 2, only the background variables thought to be relevant to contribute to the increase in the explanatory power of the dependent variable were taken, while in Model 3, both mass media and the background variables were considered. In Model 4, both mass media and interpersonal communication were taken excluding other background variables and in Model 5, all the three were considered to see whether the effect is there after controlling mass media and interpersonal communication and seeing the independent effect of each separately. This was done for both the countries taking two dependent variables; namely current use of contraception and future intention to use contraception. Only the first three models have been shown here and it has been seen that after controlling for mass media and interpersonal communication also to rule out spurious relationship due to any correlation between them. In this design, Model 1 and Model 4 have been considered as null models to examine the change in the deviance form the null to the full model in addition to the odds and Pseudo R^2. See Table A for details on the model design followed in the study.

Predictors used in the model: The predictors used in the model have been described in Table 1. Two indices were constructed using scores as weights similar to the ones used earlier with promising results (Francis, Bhat & Gulati, 2005). One such index is the women autonomy index for both India and Bangladesh and the other being the index of well being for Bangladesh similar to the household standard of living index computed in case of India.

Two indices were constructed using scores as weights similar to the ones used earlier with promising results (Francis, Bhat & Gulati, 2005). One such index is the women autonomy index for both India and Bangladesh and the other being the index of well being for Bangladesh grossly similar to the household standard of living index computed in case of India. In INFHS-2, women were asked a set of questions about their autonomy. The questions related to the women's involvement in decision-making in the household, her freedom of movement and economic independence. With regards to household decision-making, the questions asked were: who decides on what item to cook, obtaining health care for self, purchasing jewellery and other valuable household items, and going and staying with parents, or siblings. In constructing the index, a score of two is given if the respondent takes the decision; one if respondent takes the decision jointly with husband or others in the household and zero if the woman is not involved in the decision-making. With regard to freedom of movement the questions asked were whether the respondents need any permission to go to the market and whether the respondents need any permission to visit relatives and friends. A score of two is given if the respondent does not need permission and zero if permission is needed or not allowed to go. For, economic independence, only one question was asked: whether the respondent is allowed to keep some money aside and spend according to her wish. A score of two is given if the respondent has the access and zero otherwise. The index of autonomy is obtained by adding up the scores on each question. Thus, the index of autonomy can range from a minimum value of 0 (lowest autonomy) to a maximum value of 14 (highest autonomy).

Similarly, this is constructed for Bangladesh, with a little bit of different questions; like who decides how the money she earns will be used and who has the final say on the decisions regarding; her own care, on making large household purchases, making household purchases for daily needs, visits to family and friends and who decides what is to be cooked each day. For Bangladesh, as no such household standard of living index was there, an index of well-being was constructed taking variables like possession of certain household consumer durables like; possession of almirah (wardrobe), a table or chair, bench, watch or clock, bed or sewing, any homestead, any other land other than homestead, household food consumption and the practice of boiling water. All the responses have been coded as yes, possessing=1 and no, not possessing=0 except one which has 4 response categories like deficit in whole year, sometimes deficit and neither deficit not surplus coded as 1, 2, 3 and 4 respectively. A weight of 1 was given to those who said yes and 0 to those who said no, except the possession of land and sewing machine, which were given a weight of 2, if yes and 0, if no, as they are items, which are often used for income purposes. In case of the question on sufficiency of food consumption in the household, those who said that the food consumption is surplus, were given a score of 3, if sometimes deficit, 2, if neither deficit not surplus, 1 and if deficit in whole year, a score of 0 was given. The index of well-being varied ranged from 0 (lowest well-being) to 16 (highest well-being). It was categorized into three categories of low, medium and high well-being along the lines of the variable of household standard of living index and an effort was made to match their distribution.

Analysis and Results

The results have been shown in the following tables. Table 1, provides the frequency and percentage distribution of the covariates or predictors considered in both the country models. The findings have been described in the following manner: First the bivariate tables for the first dependent variable of current use of contraception has been analysed and followed by the description of the multivariate tables. In similar fashion, the description of the tables for the

second dependent variable of the future intention to use contraception is done. Some of the basic features of the sample is as follows:

- The current contraceptive use among currently married women in the age group of 15-49 years in India is 48% and it is 54% in Bangladesh.
- With regards to the future intention to use contraception, it is also lower in India (60%) compared to Bangladesh (71%).
- The sample is 74% rural in case of India and 80% in case of Bangladesh.
- In the Indian sample, 47% of the women are literate, while it is a little higher in case of Bangladesh, which is a little over half (55%). In a similar study, it was found that in a study on determinants of contraceptive use among married teenage women and newly wed couples, it was found out the female education has emerged as the single most important variable affecting the contraceptive use (Islam et al., 1998).
- The striking difference is in case of the religious composition. The percentage of muslims is 13% in case of India, whereas, it is 88% in case of Bangladesh. Among the women in the age group of 15-49 years, 29% of them belonged to 15-24 years of age in case of India, whereas, in case of Bangladesh, it is 35%. Out of the sample, 21% belonged to the low household standard of living category in case of India and 20% in case of Bangladesh. With regard to their current work status, a little more than one-third (36%) are currently working in case of India, whereas, it is only one-fifth in case of Bangladesh. Complete exposure to mass media is 12% in case of India, while it is 8% for Bangladesh. Contacts and discussion with health and family planning workers taken as an instance of a channel of interpersonal communication is 13% in case of India and 21% in Bangladesh.

Dependent Variable 1 : Current use of contraception

Table 2 provides cross tabulations of the different socio-demographic variables along with the communication variables with the first dependent variable, namely the current use of contraception. It is observed that the differentials of current use of contraception by most of the socio-demographic variables including the communication variables are significant except the variable of number of sons and daughters dead in case of India and the number of daughters dead in case of Bangladesh.

- With increase in the level of mass media exposure and exposure to interpersonal communication, there is an increase in the likelihood of current use of contraception and this is significant at 1% level of significance.

Table 3 shows the odds ratio from the multivariate logistic regression of the likelihood of contraceptive use for mass media.

- It is observed that mass media taken alone has more than twice likelihood of contraceptive use and after controlling for the background socio-demographic variables, the odds were significant and the likelihood though reduced was about twice in case of India, but in case of Bangladesh after controlling for those variables, mass media was found to be positively significant, but with a lower odds than India. The change in the deviance also shows that third model is a better fit than the other alternative models. In case of India, in case of Model 3, all the background characteristics considered as predictor variables in this study like

current and previous place of residence, education of the woman and her husband, religion, current age of the woman, total children ever born, number of sons and daughters dead, household standard of living index, women autonomy index, woman's and her husband's work status and mass media exposure are significantly explaining current contraceptive behaviour. Among these, place of residence; both current and previous place of residence, education of the woman and her husband, current age of woman, total children ever born, woman's and her husband's work status and mass media are positive predictors, while religion, sons and daughters dead, are found to be negative predictors. After controlling for all the background variables, the impact of mass media remains significant with an odds of 1.949 times in case of those who are partially exposed compared to those who had no exposure. The same trend is seen in case of Bangladesh with a lower likelihood among Muslims as in case of India, but the likelihood is not so low like in case of India. In India, the percentage of lower likelihood is $(0.567-1)*100 = 43.3\%$ less than Hindus and in case of Bangladesh, it is $(0.786-1)*100 = 21.4\%$ lower.

Table 4 shows the odds ratios of the 3 logistic regression models for each country taking the variable for interpersonal communication alone, background variables only and both at the same time.

- It shows that in both the countries, interpersonal communication increases likelihood of contraceptive use, but, the striking difference is that interpersonal communication has a higher impact in case of Bangladesh than in India. In addition to the significant difference in deviance between the competing models, there is increase in the amount accounted for variance.

Dependent Variable 2 : Future Intention to use contraception

Table 5 gives an idea about the relationship between the second dependent variable which is the future intention to use contraception and the background or socio-demographic variables including the communication variables. The bivariate table for type of place of current residence shows that in rural area the proportion of future intenders of contraceptive use is more in case of Bangladesh as compared to India. All the variables were significant in case of India, when tested with a chi-square test. But, in case of Bangladesh, all the variables except current place of residence and the index of well-being were significant in case of Bangladesh. With increase in the level of mass media exposure and exposure to interpersonal communication, there is an increase in the likelihood of future intention to use contraception and this is significant at 1% level of significance.

Table 6 provides data on the odds ratio for 3 models for both the countries taking the future intention to use contraception in case of Mass media.

- In the same line as in the above, 3 models for mass media and 3 models for interpersonal communication with future intention to use contraception has been tried. In this case though there is no increase in the impact of interpersonal communication as in case of current use, it is a significant predictor of future intention to use contraception in both India and Bangladesh.

Table 7 provides data on the odds ratio for 3 models for both countries taking the same dependent variable of future intention to use contraception for interpersonal communication.

In Table 8, the last 2 logistic models of 4 and 5 have been provided. In Model 5, after controlling for effects of mass media and interpersonal communication, it was observed that both mass media and interpersonal communication become more significant in case of Bangladesh compared to India, except in case of the category of complete exposure to mass media, where it is not significant. In the case of India, though it may be difficult to draw valid conclusions about the causal relation between media and exposure and contraceptive use because about three-fourths among the users covered in the analysis were either sterilized or has husbands who were sterilized. But in case of Bangladesh, it may be more valid as only 14% of women or their husbands are sterilized. But the findings are quite valid in case of future intention to use contraception.

An interesting finding is that Muslims in case of Bangladesh are showing a promising trend. It is observed that Muslims in Bangladesh, have a lower likelihood in current use of contraception, but surprisingly, contrary to the general belief that they have are not motivated to use contraception, it is seen that they have a higher likelihood of future use of contraception. Education of the woman seems to be a significant factor in leading to this change in attitude. As one's attitude is a precursor and a proxy of intended behaviour, this can be a predictor of future use, as there is an increase in the awareness and sensitivity towards fertility regulation and control.

Conclusion

This study shows that both channels of communication namely; mass media and interpersonal media are significant predictors of current use and future intention to use contraception. Though both these are effective at explaining contraceptive use in both the countries, there is difference by type of communication channel. Mass media is more effective in case of India, whereas, interpersonal communication has greater impact in case of Bangladesh, in case of likelihood of current use of contraception, but the effect is about the same in case of future intention to use. The distinct difference in the cultural and religious milieu of the two countries may offer some explanation to this phenomenon. The persuasion function of communication may have a greater role to play here than merely the knowledge function. Knowledge provided by mass media channels may make people aware and initiate behaviour change, but only among those who are already motivated to accept the method. But the persuasion function may be more relevant in case of those who are not so motivated. This may explain the fact why interpersonal communication is a better predictor of contraceptive use in Bangladesh compared to India. From the policy and intervention point of view for the design of an effect communication strategy, both channels of media should be given adequate importance with greater emphasis on segmenting the target audience on the basis of their level of motivation. In case of those who are less motivated interpersonal media should be employed, while in case of relatively higher motivated ones, mass media can suffice.

Future implications & Policy Recommendations

Mass media, being a significant predictor of current and future use of contraception as evident from a host of studies, in case of India, it can be used as a cost-effective approach to reach millions to result in an initiation to behaviour change. It should be supplemented by interpersonal communication for those audiences, who are less motivated and who are more rigid to the process of change and adoption. While, in case of Bangladesh, more stress and focus should be put on channels of interpersonal communication as it has shown to have greater impact on present and future behaviour change.

The Way Forward

The study tries to unravel the differential effects of different channels of communication on current and future intention to use contraception. The results show that both the channels of mass media and interpersonal communication have a considerable strong effect on the likelihood of current and future use of contraception. But it has to be kept in mind that the population, which is not so motivated, persuasion function of communication may be more effective, while for those who are already motivated, they need to be informed about the newer method choices available and its source for its availability. As this study shows that there is a requirement to increase the level of awareness among those who are less motivated through interpersonal modes of communication like those who are affiliated to the Islam religion, Saksena and Rastogi (1998) have also recommended that intensive efforts should be made to increase the media exposure levels of female, couples belonging to Muslim community and those who are non-literate and less educated. While designing any communication strategy for any programme this should take this into account while segmenting the target audience for any behaviour change communication. On one hand Interpersonal communication is more effective than mass media but on the other it has its own shortcomings of being too costly. In developing countries like India and Bangladesh, it may not be feasible and advisable to go for large scale interpersonal communication in the form of field workers, outreach workers, counselors, but nevertheless, it has to be considered as one of the significant components of any communication strategy. In such countries, where resource constraints create hindrance in the way of development, multi-sectoral, non-governmental and private-public-partnership could be considered as an option to bring in behaviour change.

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ANNEXURE - 1

Table A : Model Design

Independent variables	Model 1	Model 2	Model 3	Model 4	Model 5
Dependent Variables 1. Current use of contraception (Non-use=0 and Use=1) 2. Future intention to use contraceptives (No=0 and Yes=1)					
1.Mass Media Exposure (MM)					
India	MM only	SDVs - MM	MM + SDVs	MM+IPC	MM +IPC+SDVs
Bangladesh	-do-	-do-	-do-	-do-	-do-
2.Interpersonal Communication (IPC)					
India	IPC	SDVs - IPC	IPC +SDVs		
Bangladesh	-do-	-do-	-do-		

(-): minus, (+): plus, SDV: Socio-demographic variables

Table B : Key Demographic Indicators

INDICATORS	INDIA	BANGLADESH
Population	1,103.6 million	144.2 million
Crude Birth Rate (CBR)	25 per 1000 population	27 per 1000 population
Crude Death Rate (CDR)	8 per 1000 population	8 per 1000 population
Rate of Natural Increase	1.7%	1.9%
Total Fertility Rate (TFR)	3.0	3.0
Infant Mortality Rate (IMR)	60	65
Life Expectancy at Birth (LEB)	62	61
Contraceptive Prevalence Rate (CPR)	48.0%	58.0%
0-14 years	30.8%	32.9%
15-64 years	64.3%	63.6%
65 years and over	4.9%	3.5%
Population Growth Rate	1.38%	2.09%
Religious Composition		
Muslims	13.4%	83.0%
Hindu	80.5%	16.0%
Other religions	6.1%	1%
Administrative Divisions	28 states, 7 union territories and 593 districts	6 divisions and 64 districts

Table-1
Predictors used in the Model

Predictors used in the model	Definition	India		Bangladesh	
		N	%	N	%
N		**84682**	**100**	**9540**	**100**
Background - Community Level					
Current Residence	0 for Rural®	62540	73.9	7665	80.3
	1 for Urban	22142	26.1	1875	19.7
Previous Residence	0 for countryside®	70817	83.6	8430	88.4
	1 for City/ town	13866	16.4	1109	11.6
Background - Individual Level					
Education of the woman	0 for Non-literate®	44700	52.8	4267	44.7
	1 for Primary	14241	16.8	2722	28.5
	2 for Secondary	18843	22.3	2121	22.2
	3 for Higher	6898	8.1	429	4.5
Education of the husband	0 for Non-literate®	23521	27.8	3831	40.2
	1 for Primary	16143	19.1	2214	23.2
	2 for Secondary	29597	35.0	2302	24.1
	3 for Higher	15421	18.2	1193	12.5
Religion	0 for Hindu®	69383	81.9	1052	11.0
	1 for Muslim	10597	12.5	8365	87.7
	2 for Other Religions	4702	5.6	123	1.3
Demographic					
Current age of the woman	0 for 15-24 years®	24229	28.6	3314	34.7
	1 for 25-34 years	31737	37.5	3401	35.7
	2 for 35-49 years	28717	33.9	2825	29.6
Total children ever born	0 for <=2 children®	38959	46.0	4518	47.4
	1 for > 2 children	45723	54.0	5022	52.6
Number of sons dead	0 for sons surviving®	71852	84.8	7719	80.9
	1 for sons dead	12830	15.2	1821	19.1
Number of daughters dead	0 for daughters surviving	72322	85.4	7790	81.7
	1 for daughters dead	12360	14.6	1749	18.3
Socio-economic					
Standard of Living Index	0 for Low®	17355	32.9	2893	30.3
	1 for Medium	39504	46.7	4760	49.9
	2 for High®	27822	20.5	1887	19.8
Woman's current work status	0 for not working currently	54446	64.3	7604	79.7
	1 for working currently	30236	35.7	1935	20.3
Husband's current work status	0 for not working currently®	3180	3.8	599	6.3
	1 for working currently	81502	96.2	8940	93.7
Communication Covariates					
Mass Media Exposure	0 for No Exposure®	34732	41.0	4088	42.9
	1 for Partial Exposure	39642	46.8	4669	48.9
	2 for Complete Exposure	10308	12.2	783	8.2
Interpersonal Communication	0 for No®	73521	86.8	7495	78.6
	1 for Yes	11162	13.2	2045	21.4
Dependent variables used in the model					
Current use of contraception	0 for non-users	43836	51.8	4359	45.7
	1 for users	40846	48.2	5181	54.3
		43836	**100**	**4359**	**100**
Future intention to use contraception	0 for non-intenders	17462	39.8	1275	29.2
	1 for intenders	26374	60.2	3084	70.8

Note: Shaded strip refers to absolute numbers.

Table-2
Current use of contraception by Socio-demographic variables among currently married women in the reproductive age of 15-49 years, India (NFHS-II, 1998-1999) and Bangladesh (BDHS-III, 1999-2000)

Background Covariates	Definition	India			Bangladesh		
		Non-users	**Users**	**N**	**Non-users**	**Users**	**N**
Background - Community Level							
Current Residence	Rural	55.3	44.7	62540	47.2	52.8	7665
	Urban	41.8	58.2**	22142	39.6	60.4**	1875
Previous Residence	Countryside	53.9	46.1	70817	46.8	53.2	8435
	City/ town	40.8	59.2**	13866	37.0	63.0**	1104
Background - Individual Level							
Education of the woman	Non-literate	57.9	42.1	44700	48.7	51.3	4268
	Primary	45.6	54.4	14241	45.6	54.4	2723
	Secondary	45.4	54.6	18843	41.9	58.1	2121
	Higher	42.2	57.8**	6898	35.0	65.0**	429
Education of the husband	Non-literate	59.1	40.9	23521	49.8	50.2	3831
	Primary	48.5	51.5	16144	46.8	53.2	2214
	Secondary	50.8	49.2	29598	43.4	56.6	2302
	Higher	45.9	54.1**	15420	35.1	64.9**	1193
Religion	Hindu	50.7	49.3	69383	38.9	61.1	1052
	Muslim	63.0	37.0	10597	46.7	53.3	8365
	Others	41.8	58.2**	4702	34.1	65.9**	123
Demographic							
Current age of woman	15-24 years	80.0	20.0	24228	56.9	43.1	3314
	25-34 years	44.6	55.4	31737	39.2	60.8	3401
	35-49 years	35.9	64.1**	28716	40.4	59.6**	2825
Total children ever born	<=2 children	66.0	34.0	38958	52.1	47.9	4518
	> 2 children	39.6	60.4**	45724	40.0	60.0	5021
Number of sons dead	Sons surviving	51.7	48.3	71851	44.9	55.1	7719
	Sons dead	52.0	48.0 n.s.	12831	48.9	51.1**	1820
Number of daughters dead	Daughters surviving	51.8	48.2	72322	45.6	54.4	7790
	Daughters dead	51.4	48.6 n.s.	12360	45.9	54.1 n.s.	1750
Socio-economic							
Standard of Living Index	Low	60.2	39.8	27822	46.9	53.1	2892
	Medium	51.5	48.5	39504	45.2	54.8	4760
	High	38.8	61.2**	17356	45.2	54.8**	1887
Woman's current work status	Does not work currently	54.5	45.5	54446	47.7	52.3	7604
	Works currently	46.9	53.1**	30236	37.8	62.2**	1935
Husband's current work status	Does not work currently	55.8	44.2	3180	69.0	31.0	600
	Works currently	51.6	48.4**	81502	44.1	55.9**	8940
Communication Covariates							
Mass Media Exposure	No Exposure	63.2	36.8	34732	50.7	49.3	4088
	Partial Exposure	44.8	55.2	39642	42.7	57.3	4669
	Complete Exposure	40.3	59.7**	10308	37.7	62.3**	783
Interpersonal Communication	Has not discussed with health worker	52.3	47.7	73520	50.8	49.2	7496
	Has discussed with health worker	48.4	51.6**	11162	27.1	72.9**	2045
Total		**43,836**	**40,846**	**84,682**	**4,359**	**5,181**	**9,540**

Note: Shaded strip refers to absolute numbers. Chi-Square value significant at *: 5% level **: Significant at 1% level, n.s.: not significant

Table-3
Mass Media (MM)

Odds Ratios from Multivariate Logistic Regression Analysis of the likelihood of contraceptive use among currently married women in the reproductive age of 15-49 years, India (NFHS-II, 1998-1999) and Bangladesh (BDHS-III, 1999-2000)

Dependent Variable: Current use of Contraception

Covariates		India			Bangladesh		
		Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Background – Community Level							
Current Residence	Rural®						
	Urban		1.242**	1.125**		1.092	1.035
Previous Residence	Countryside®						
	City/ town		1.207**	1.172**		1.201*	1.171*
Background – Individual Level							
Education of the woman	Non-literate®						
	Primary		1.811**	1.562**		1.211**	1.160**
	Secondary		2.192**	1.791**		1.488**	1.360**
	Higher		2.019**	1.690**		1.486**	1.350*
Education of the husband	Non-literate®						
	Primary		1.294**	1.241**		1.073	1.060
	Secondary		1.080**	1.032		1.138*	1.103
	Higher		0.965	0.923*		1.364**	1.300**
Religion	Hindu®						
	Muslim		0.562**	0.567**		0.774**	0.786**
	Others		1.046	1.011		1.051	1.003
Demographic							
Current age of the woman	15-24 years®						
	25-34 years		3.446**	3.470**		1.649**	1.665**
	35-49 years		4.487**	4.514**		1.647**	1.665**
Total children ever born	<= 2 children ®						
	>= 2 children		2.803**	2.930**		1.672**	1.703**
No. of sons dead	Sons surviving®						
	Sons dead		0.635**	0.636**		0.666**	0.673**
No. of daughters dead	Daughters surviving®						
	Daughters dead		0.662**	0.671**		0.827**	0.832**
Socio-economic	Low®						
Standard of Living Index	Medium		1.248**	1.097**		1.110*	1.115*
	High		1.680**	1.367**		1.113	1.118
Autonomy Index			1.034**	1.030**		1.024**	1.021**
Woman's current work status	Not working currently®						
	Working currently		1.470**	1.459**		1.436**	1.426**
Husband's current work status	Not working currently®						
	Working currently		1.257**	1.260**		3.216**	3.231**
Mass Media Exposure	No Exposure®						
	Partial Exposure	2.117**		1.949**	1.379**		1.316**
	Complete Exposure	2.538**		1.944**	1.703**		1.376**
Change in Deviance		15964.33**	1193.916**		650.575**	32.27**	
*Pseudo R²*100*		4.9	27.0	28.4	1.1	9.8	10.3

*: Significant at 5% level **: Significant at 1% level. ®-Refers to Reference Category. Shaded strip refers to change in -2LL

Table-4

Interpersonal Communication (IPC)

Odds Ratios from Multivariate Logistic Regression Analysis of the likelihood of contraceptive use among currently married women in the reproductive age of 15-49 years, India (NFHS-II, 1998-1999) and Bangladesh (BDHS-III, 1999-2000)

Dependent Variable: Current use of Contraception

Covariates		India			Bangladesh		
		Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Background – Community Level							
Current Residence	Rural®						
	Urban		1.242**	1.256**		1.092	1.192**
Previous Residence	Countryside®						
	City/ town		1.207**	1.209**		1.201*	1.240**
Background – Individual Level							
Education of the woman	Non-literate®						
	Primary		1.811**	1.783**		1.211**	1.168**
	Secondary		2.192**	2.138**		1.488**	1.445**
	Higher		2.019**	1.977**		1.486**	1.523**
Education of the husband	Non-literate®						
	Primary		1.294**	1.286**		1.073	1.061
	Secondary		1.080**	1.080**		1.138*	1.124
	Higher		0.965	0.971		1.364**	1.390*
Religion	Hindu®						
	Muslim		0.562**	0.561**		0.774**	0.772**
	Others		1.046	1.053		1.051	1.043
Demographic							
Current age of the woman	15-24 years®						
	25-34 years		3.446**	3.492**		1.649**	1.633**
	35-49 years		4.487**	4.614**		1.647**	1.779**
Total children ever born	<= 2 children ®						
	>= 2 children		2.803**	2.799**		1.672**	1.645**
No. of sons dead	Sons surviving®						
	Sons dead		0.635**	0.635**		0.666**	0.663**
No. of daughters dead	Daughters surviving®						
	Daughters dead		0.662**	0.662**		0.827**	0.836**
Socio-economic	Low®						
Standard of Living Index	Medium		1.248**	1.252**		1.110*	1.088
	High		1.680**	1.697**		1.113	1.086
Autonomy Index			1.034**	1.032**		1.024**	1.019**
Woman's Current work status	Not working currently®						
	Working currently		1.470**	1.448**		1.436**	1.406**
Husband's current work status	Not working currently®						
	Working currently		1.257**	1.247**		3.216**	3.033**
Interpersonal Communication	Not discussed®						
	Discussed	1.166**		1.335**	2.768**		2.839**
Change in Deviance		19062.87**	154.00**		354.367**	358.076**	
*Pseudo R²*100*		0.1	27.0	27.2	5.1	9.8	14.4

*: Significant at 5% level **: Significant at 1% level. ®-Refers to Reference Category.   Shaded strip refers to change in -2LL

21

Table-5

Future intention to use contraception by Socio-demographic variables among currently married women in the reproductive age of 15-49 years, India (NFHS-II, 1998-1999) and Bangladesh (BDHS-III, 1999-2000)

Background Covariates	Definition	India			Bangladesh		
		Non-intenders	Intenders	N	Non-intenders	Intenders	N
Background – Community Level							
Current Residence	Rural	40.3	59.7	34588	29.3	70.7	3617
	Urban	38.2	61.8**	9248	29.2	70.8 n.s.	743
	Countryside	40.2	59.8	38184	29.8	70.2	3951
Previous Residence	City/ town	37.4	62.6**	5652	23.8	76.2*	408
Background - Individual Level							
Education of the woman	Non-literate	45.6	54.4	25886	38.4	61.6	2078
	Primary	36.9	63.1	6490	25.7	74.3	1243
	Secondary	29.1	70.9	8549	15.9	84.1	888
	Higher	26.4	73.6**	2911	12.0	88.0**	150
Education of the husband	Non-literate	47.5	52.5	13903	32.5	67.5	1906
	Primary	42.8	57.2	7827	26.6	73.4	1036
	Secondary	35.5	64.5	15034	26.9	73.1	1000
	Higher	30.7	69.3**	7073	26.6	73.4**	418
Religion	Hindu	37.4	62.6	35196	34.5	65.5	409
	Muslim	52.5	47.5	6675	28.5	71.5	3909
	Others	40.9	59.1**	1965	42.9	57.1**	42
Demographic							
Current age of woman	15-24 years	22.3	77.7	19373	7.4	92.6	1886
	25-34 years	33.1	66.9	14141	21.2	78.8	1333
	35-49 years	82.0	18.0**	10323	74.8	25.2**	1141
Total children ever born	<= 2 children	31.3	68.7	25719	15.9	84.1	2352
	>= 2 children	52.0	48.0**	18117	44.9	55.1	2007
Number of sons dead	Sons surviving	37.2	62.8	37167	23.8	76.2	3470
	Sons dead	54.3	45.7**	6669	50.4	49.6**	890
Number of daughters dead	Daughters surviving	37.5	62.5	37482	24.6	75.4	3556
	Daughters dead	53.7	46.3**	6354	49.9	50.1**	803
Socio-economic							
Standard of Living Index	Low	41.9	58.1	16739	29.4	70.6	1356
	Medium	39.1	60.9	20360	28.8	71.2	2152
	High	36.8	63.2**	6738	30.0	70.0n.s.	852
Woman's current work status	Does not work currently	38.6	61.4	29656	28.6	71.4	3627
	Works currently	42.5	57.5**	14180	32.4	67.6**	732
Husband's current work status	Does not work currently	46.9	53.1	1774	30.2	69.8	414
	Works currently	39.5	60.5**	42062	29.2	70.8 n.s.	3945
Communication Covariates							
Mass Media Exposure	No Exposure	45.1	54.9	21938	36.4	63.6	2072
	Partial Exposure	35.2	64.8	17741	23.8	76.2	1993
	Complete Exposure	31.6	68.4**	4157	15.9	84.1**	295
Interpersonal Communication	Has not discussed with health worker	41.9	58.1	38430	30.7	69.3	3804
	Has discussed with health worker	25.5	74.5**	5406	19.1	80.9**	555
Total		17462	26374	43836	1275	3084	4359

*Note: Shaded strip refers to absolute numbers. Chi-Square value significant at *: 5% level **: Significant at 1% level, n.s.: not significant*

Table-6
Mass Media (MM)

Odds Ratios from Multivariate Logistic Regression Analysis of the likelihood of intention to use contraception among currently married women in the reproductive age of 15-49 years, India (NFHS-II, 1998-1999) and Bangladesh (BDHS-III, 1999-2000)

Dependent Variable: Future intention to use Contraception

Covariates		India			Bangladesh		
		Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Background – Community Level							
Current Residence	Rural®						
	Urban		1.207**	1.153**		0.906	0.835
Previous Residence	Countryside®						
	City/ town		1.088*	1.073		1.147	1.106
Background – Individual Level							
Education of the woman	Non-literate®						
	Primary		1.304**	1.226**		1.189	1.128
	Secondary		1.509**	1.382**		2.087**	1.875**
	Higher		2.017**	1.873**		5.154**	4.672**
Education of the husband	Non-literate®						
	Primary		1.184**	1.164**		1.339**	1.302*
	Secondary		1.218**	1.197**		1.039	0.994
	Higher		1.361**	1.340**		0.683*	0.622*
Religion	Hindu®						
	Muslim		0.500**	0.501**		1.312*	1.341*
	Others		0.912	0.897		1.996	1.881
Demographic							
Current age of the woman	15-24 years®						
	25-34 years		0.512**	0.512**		0.289**	0.293**
	35-49 years		0.053**	0.052**		0.027**	0.027**
Total children ever born	<= 2 children ®						
	>= 2 children		1.441**	1.470**		1.279*	1.329*
No. of sons dead	Sons surviving®						
	Sons dead		0.956	0.957		0.852	0.854
No. of daughters dead	Daughters surviving®						
	Daughters dead		1.006	1.008		0.799*	0.799*
Socio-economic	Low®						
Standard of Living Index	Medium		1.033	0.984		1.063	1.063
	High		1.014	0.932		0.886	0.892
Autonomy Index			0.963**	0.962**		1.020	1.016
Woman's current work status	Not working currently®						
	Working currently		1.124**	1.119**		0.950	0.935
Husband's current work status	Not working currently®						
	Working currently		1.400**	1.398**		1.076	1.095
Mass Media Exposure	No Exposure®						
	Partial Exposure	1.510**		1.313**	1.828**		1.447**
	Complete Exposure	1.778**		1.268**	3.036**		1.588*
Change in Deviance		11544.926**	93.85**		1583.287**	15.465**	
*Pseudo R²*100*		1.6	32.6	32.8	3.5	45.8	46.2

*: Significant at 5% level **: Significant at 1% level. ®-Refers to Reference Category. Shaded strip refers to change in -2LL

Table-7
Interpersonal Communication (IPC)

Odds Ratios from Multivariate Logistic Regression Analysis of the likelihood of intention to use contraception among currently married women in the reproductive age of 15-49 years, India (NFHS-II, 1998-1999) and Bangladesh (BDHS-III, 1999-2000)

Dependent Variable: Future intention to use Contraception

Covariates		India			Bangladesh		
		Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Background – Community Level							
Current Residence	Rural®						
	Urban		1.207**	1.228**		0.906	0.926
Previous Residence	Countryside®						
	City/ town		1.088*	1.086*		1.147	1.138
Background – Individual Level							
Education of the woman	Non-literate®						
	Primary		1.304**	1.263**		1.189	1.170
	Secondary		1.509**	1.443**		2.087**	2.066**
	Higher		2.017**	1.950**		5.154**	5.125**
Education of the husband	Non-literate®						
	Primary		1.184**	1.169**		1.339**	1.345**
	Secondary		1.218**	1.218**		1.039	1.036
	Higher		1.361**	1.379**		0.683*	0.691
Religion	Hindu®						
	Muslim		0.500**	0.501**		1.312*	1.306
	Others		0.912	0.924		1.996	1.943
Demographic							
Current age of the woman	15-24 years®						
	25-34 years		0.512**	0.517**		0.289**	0.287**
	35-49 years		0.053**	0.054**		0.027**	0.027**
Total children ever born	<= 2 children ®						
	>= 2 children		1.441**	1.434**		1.279*	1.256*
No. of sons dead	Sons surviving®						
	Sons dead		0.956	0.957		0.852	0.861
No. of daughters dead	Daughters surviving®						
	Daughters dead		1.006	1.010		0.799*	0.807*
Socio-economic	Low®						
Standard of Living Index	Medium		1.033	1.038		1.063	1.046
	High		1.014	1.027		0.886	0.858
Autonomy Index			0.963**	0.959**		1.020	1.018
Woman's current work status	Not working currently®						
	Working currently		1.124**	1.092**		0.950	0.943
Husband's current work status	Not working currently®						
	Working currently		1.400**	1.368**		1.076	1.054
Interpersonal Communication	Not discussed®						
	Discussed	2.108**		1.727**	1.882**		1.742**
Change in Deviance		11515.337**	222.542**		1656.17**	16.54**	
*Pseudo R²*100*		1.7	32.6	33.1	1.1	45.8	46.2

*: Significant at 5% level **: Significant at 1% level. ®-Refers to Reference Category. Shaded strip refers to change in -2LL

<div align="center">
<u>**Table-8**</u>
<u>**Mass Media (MM) and Interpersonal Communication (IPC)**</u>
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Odds Ratios from Multivariate Logistic Regression Analysis of the likelihood of current use and future intention to use contraception among currently married women in the reproductive age of 15-49 years, India (NFHS-II, 1998-1999) and Bangladesh (BDHS-III, 1999-2000)

Dependent Variables : Current use and Future intention to use Contraception

Covariates		Current use of contraception				Future intention to use contraception			
		India		Bangladesh		India		Bangladesh	
		Model 4	Model 5	Model 4	Model 5	Model 4	Model 5	Model 4	Model 5
Background – Community Level									
Current Residence	Rural®								
	Urban		1.138**		1.131		1.176**		0.855
Previous Residence	Countryside®								
	City/ town		1.175**		1.212*		1.073		1.099
Background – Individual Level									
Education of the woman	Non-literate®								
	Primary		1.544**		1.121*		1.193**		1.111
	Secondary		1.757**		1.334**		1.335**		1.870**
	Higher		1.666**		1.412*		1.830**		4.697**
Education of the husband	Non-literate®								
	Primary		1.235**		1.047		1.151**		1.309*
	Secondary		1.032		1.091		1.199**		0.994
	Higher		0.929*		1.331**		1.360**		0.634*
Religion	Hindu®								
	Muslim		0.566**		0.784**		0.503**		1.336*
	Others		1.017		0.997		0.909		1.842
Demographic									
Current age of the woman	15-24 years®								
	25-34 years		3.511**		1.648**		0.517**		0.290**
	35-49 years		4.627**		1.797**		0.054**		0.027**
Total children ever born	<= 2 children ®								
	>= 2 children		2.924**		1.676**		1.460**		1.304*
No. of sons dead	Sons surviving®								
	Sons dead		0.636**		0.669**		0.957		0.862
No. of daughters dead	Daughters surviving®								
	Daughters dead		0.671**		0.841**		1.012		0.808*
Socio-economic	Low®								
Standard of Living Index	Medium		1.101**		1.093		0.993		1.045
	High		1.383**		1.092		0.951		0.864
Autonomy Index			1.029**		1.016*		0.958**		1.014
Woman's current work status	Not working currently®								
	Working currently		1.439**		1.397		1.088**		0.929
Husband's current work status	Not working currently®								
	Working currently		1.251**		3.042**		1.368**		1.072
Mass Media Exposure	No Exposure®								
	Partial Exposure	2.110**	1.932**	1.392**	1.307**	1.473**	1.285**	1.818**	1.435**
	Complete Exposure	2.530**	1.920**	1.711**	1.306**	1.745**	1.233**	2.966**	1.520
Interpersonal Communication	Not discussed®								
	Discussed	1.114**	1.290**	2.780**	2.831**	2.039**	1.698**	1.831**	1.717**
Change in Deviance		17249.24**		662.564**		11343.91**		1583.905**	
*Pseudo R²*100*		4.9	28.6	6.2	14.8	3.1	33.3	4.4	46.5

*: Significant at 5% level **: Significant at 1% level. ®-Refers to Reference Category. Shaded strip refers to change in -2LL.