Discontinuation of contraceptives and method switching in rural Bangladesh

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Abstract

Although contraceptive prevalence rate increases at 7 percent per year, the total fertility rate has almost been stable at 3.3 births per woman in Bangladesh since 1993. Discontinuation of contraceptive use has been identified as a major contributor to the stagnation of the TFR. Frequently switching of methods also results in unwanted pregnancies. This study investigates the pattern and reasons for discontinuation and switching of contraception in an MCH-FP area in rural Bangladesh using longitudinal data for the period of 1988-98. Using multiple –decrement life tables, it was found that discontinuation was significantly related to the contraceptive method, duration of use, incidence of side effects, education of the woman and her religion. Follow up and quality care were associated with switching of methods. The study recommends further emphasis on quality of care, as well as providing supplementary vitamins to the vulnerable groups to overcome the effects of malnutrition.

INTRODUCTION

Demographers and population scientists have marveled at the rising rates of contraceptive prevalence in Bangladesh. From a mere 7.7 percent use in 1978, the figures rose to staggering heights of 53.8 percent quoted in the most recent Bangladesh Demographic and Health Survey (BDHS,1999-2000). In the last decade, a very impressive increase in contraceptive rates of 7 percent per annum has been observed and documented in Bangladesh. However, the corresponding decline in total fertility rates (TFR) has not been encouraging. Although, the initial years of high contraceptive use brought down the TFR from 7 births per woman in 1978 to 3.3 births per woman in 1993, these rates have failed to decline further and has stagnated around 3 births per woman (BDHS,1999). Researchers are both perplexed and concerned about the stagnation of the TFR which is not in tune with the rising contraceptive prevalence rates. The reverse relationship of these two rates is well established in the literature and the lack of further decline and stagnation of the TFR since 1993 has further implications which may even negate earlier theories of sweeping success of the family planning programme in Bangladesh (Cleland et al,1994; Amin et. al,1996). In fact, many researchers have pointed out that family planning alone could not have achieved this success, socioeconomic development and improvement in education, increase in poverty and landlessness have also contributed to the same (Pritchett, 1994,Caldwell et al.1999, Kabeer,,2001).

Investigating the reasons for the stagnation of the TFR, Kamal and Chowdhury (2001) have identified two major causes. Firstly, the high rates of discontinuation of modern

methods, and secondly, the low use of clinical methods of contraception (Intrauterine device and sterilization). The most recent BDHS finds that almost half the users (48.6%) in the sample stop using the method within one calendar year of commencement of use. Among them, 19 percent discontinue due to side effects and other health reasons, 17 percent due to switching and other causes, 8 percent wish to become pregnant and 4 percent due to method failure. Discontinuation rates were found to vary by method use. Users of injection had the highest percentages reporting `side effects/health reasons' as the cause for discontinuation. Condom users reported highest frequency of `method failure' and also of switching to other methods (38.1%) as their cause for discontinuation.

Even before the issue of stagnation of TFR drew the attention of researchers, many were concerned about the effective use of modern contraception in Bangladesh, including the quality of care (Kamal and Sloggett, 1996). Curtis and Blanc (1997) found that in Bangladesh, about two thirds women discontinue use within two years of commencement. Another study by Haque et al (1997) identifies `side effects' as the main reason for discontinuation of use. As Steele and Diamond aptly comment (1999) `The future success of the program will depend increasingly upon the effectiveness of contraceptive use and, in particular, on the way in which women are able to manage their contraceptive careers so as to have the number of children they want when they want to have them'. Looking at switching patterns in Bangladesh using the 1993/94 BDHS they find that at the individual level, method switching is influenced by the method used, method related difficulties with the previous method, and education of the woman. Although discontinuation rates were calculated in this paper, detailed qualitative

investigation into the causes of discontinuation were not conducted (ibid). The study stresses on the inappropriateness of cross sectional data and also admits the failure to conduct qualitative analysis to supplement the findings (ibid).

To investigate current discontinuation rates, causes of discontinuation and switching pattern among the users, in this study, longitudinal data has been used from a rural area of Bangladesh. The study covers the period 1988 to 1998 for which the longitudinal data is available along with most recent entries of covariates which determine method use, discontinuation and switching patterns and affords an advantage over previously conducted studies. Additionally in this study, taking advantage of the registers of current users in the MCH-FP area, qualitative methods were used to investigate causes of method switching as well as discontinuation. These qualitative studies are unique to this paper, which presents a combination of demographic and anthropological methods in order to study the causes in detail.

Matlab Thana in Bangladesh is an area where the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) has been maintaining a Demographic Surveillance System (DSS) since 1966. This DSS area is divided into two halves, one called the treatment area, where the ICDDR,B has provided extensive coverage of Maternal Child Health and Family Planning (MCH-FP) since 1977. The other half is called the comparison area where usual government facilities exist. The resulting CPR in the treatment area is much higher than the rest of Bangladesh (70.6% in 1996) , but unfortunately here too the TFR has stagnated at around 3 births per woman.

Discontinuation rates and switching patterns are therefore important determinants of the contraceptive use dynamics in this area leading to plausible explanations towards the stagnation of TFR in such an area with intensive MCH-FP coverage. A system for monthly collection and monitoring of the data on contraceptive use and reproductive status of married women has been developed in the treatment area. This is called the record keeping system (RKS). This set of longitudinal data from the RKS provides an excellent opportunity to study the discontinuation rates and switching pattern in the Matlab area. Coupled with various socio-economic and demographic data obtained from the DSS, this study investigates the various aspects of discontinuation, specially the probability of having unintended pregnancies after discontinuation .The aim of this paper is therefore to identify detailed causes of discontinuation and switching methods in rural Bangladesh, with a view to suggesting health policies in family planning which may aid in reducing such discontinuation and thereby lead to more effective use of contraceptive methods. To achieve replacement level fertility Bangladesh has to increase the pace of its fertility decline (**Kamal and Chowdhury, et al.,).** In this study, the exercise of determining discontinuation rates and causes , switching patterns and causes have been undertaken to suggest policies aimed at reaching the same.

DATA AND METHODS

In this study, two sources of data sets have been used: The Record Keeping System (RKS) and the Demographic Surveillance System (DSS). The DSS, which has been maintained by ICDDRB: Center for Health and Population Research covers a population of about 220,000 since 1966. The DSS area is divided into two functional units, the

treatment and the comparison area, and further the treatment area is divided into four blocks as A, B, C and D to setup the working area of CHWs. Since 1977, the Maternal Child Health and Family Planning (MCH-FP) project in the treatment area has provided more accessible and high quality family planning services than the standard government services provided in the comparison area. The important component of the MCH-FP project is the monthly collection and monitoring of data on contraceptive use and reproductive status of the married women of childbearing age. This is called Record Keeping System (RKS). The community health workers (CHWS) collect these data through home visits at a 2 weekly interval (monthly since 1997). The completeness of vital registration in Matlab DSS and RKS is exceptionally high (UN,1992) and data collection systems have earned international reputation for high quality data available in a developing country.

The study of contraceptive discontinuation and switching requires longitudinal data on episodes of use, including information on the methods used and reasons for any discontinuation as well as switching. The observations are segments of method use, or nonuse. A "segment" is a period of time during which a woman's contraceptive use or nonuse status does not change. A segment ends when the contraceptive status changes, such as a change of method or a change to nonuse. Therefore, an individual woman can contribute more than one segment to the segment-based data set. Each segment observation contains information on characteristics of the women, pregnancy status and whether the pregnancy was desired or not etc. Such data were being collected prospectively using the RKS method since 1977 under the MCH-FP program in Matlab. Several studies show that the approach is useful and reliable means is superior to other

techniques (Becker and Sosa 1992; Goldman et al. 1989). Data on demographic and socio-economic part were collected in the year 1982 as well as in 1996 through demographic surveillance system and it has been updated with time. However, data on reasons for discontinuation are available only for 1988-96. Whenever a woman discontinued use of a contraceptive method, regardless of her adoption of a second method ,she was asked about the reasons for doing so.

The study follows the framework used in the paper by Steele and Diamond (1999) on contraceptive switching in Bangladesh. The women may have transitions as (1) switched to nonuse; (2) switched to another modern method; (3) switched to a traditional method and (4) continue to use the original method. Data for discontinuation was categorized into two categories of nonusers: one group who discontinued and at risk of unintended pregnancies and another who discontinued and became pregnant willingly or unwillingly. Among women who became nonusers, those who are at risk of unintended pregnancy are of primary interest.

A total of 961 women or their husbands had been sterilized before starting the observation in 1988 has been excluded from the analysis because they can experience no further changes in contraceptive use. The women who never used any form of contraception during the ten-year period of observation were also excluded. Thus the final sample consists of 4252 episodes of pill use, 7566 of injection use and 1379 episodes of use of condom and IUD methods. Pill and injection users are considered separately from the other modern methods because pill and injection both are popular methods in Matlab (HDSS, Matlab, 1998).

For the purpose of this analysis, each transition from a modern method is classified as a separate response category as follows: (1) discontinuing use and at risk of unintended pregnancy (2) switching to another modern method (3) switching to traditional method (4) discontinuing use because woman became pregnant (5) continued use of the original method. However, the main focus of this analysis is on the first category of women who will be contributing to unintended pregnancies and thus an increase in fertility in Bangladesh.

In this analysis multiple decrement life tables are employed. This type of life table allows for the simultaneous consideration of multiple options in which the users switch to, and calculate the probability of a terminal event occurring at particular time points for each switching type. Three models were developed to estimate three types of transition probabilities at different time intervals. Visual Basic programming and SPSS have been used in different steps of data analysis and statistical treatment.

To investigate the causes for discontinuation and method switching, six Focus Group Discussions (FGDs) were conducted. The RKS keeps the records of current users and this has an added advantage over all other sources of data in Bangladesh. The groups for FGDs were selected on the basis of such transitions (1) pill to injection (2) injection to pill (3) IUD to any other modern method (4) condom to any other modern method .In order to obtain multiple switchers in the study, the women selected for each group satisfied the criteria of being a user for at least three years (ever user as well current use). The women for each group were listed from the CHW's record keeping book. Thereafter, according to the list, women have been contacted for our discussion. Considering the

available resource and time, we have conducted six FGDs covering two blocks A and B where three FGDs for 'pill to injection' (one from B block and two from A block) and the rest for 'injection to pill' (one from B block and two from A block). Though switching from IUD or condom to another modern method was not available, ten in-depth interviews, with five respondents in each group , were conducted for those two types of switching. To avoid recall error, the most recent episode of switching was taken into consideration for each of the FGD.

Results:

The analysis is based on 14,635 cases, out of which 4252 were pill users and 7566 were injection users during 1988-1998.

Table 1 presents the estimated percentages of women switching from one modern method to various outcomes on a one year period. The table finds that the rate of discontinuation is highest for pill users, followed by condom users. This is revealed from the column titled `non use and at risk'. This is the most vulnerable group where the users have discontinued use and do not intend to get pregnant. For the two other methods considered in this study, IUD and injection, the percentage of women in this category is much lower, indicating that the pill and condom users demand the maximum attention. The table also finds that users of IUD and injection are less likely to discontinue the methods within one year. Additionally, it is found that condom users have the highest percentages of switching to another modern method, being followed by IUD users (20%). Injection users have lowest percentages of switching to another modern method (13%). It may be mentioned here that the method mix for BDHS (1999) is different from that of the RKS

(1998), while pill is the most popular method in Bangladesh, in the matlab RKS data injection use is highest.

In Table 2, the results are presented for those women who had switched to one modern method from another. Therefore, the sample in Table 2 is a subset of the women presented in Table1. In this table, it is observed that almost 94 percent of women who switch from injection, to other modern method, switch to pill. The reverse is also true, showing that a total of almost 84% women who switch from pills, adopt their next method as injection. There seems to be a lot of switching between these two methods, which are the most popular ones in Bangladesh. IUD and condom users are almost equally likely to switch to either pill or injection within a one year period.

Table 3 presents the percentages of women who shifted to other methods, presented by their reasons for switching. The table finds that for pill users, almost one third women discontinue use to become pregnant, while another one third have method related problems, leaving with the other one third who have problems other than method related which were not available from this RKS data.

Two figures Figure 3 and 4 represent estimated probabilities of switching from one method to another by their duration of use. Figure 3 presents estimates of probabilities of discontinuation, while Figure 4 presents estimates of switching to another method. Figure 3 is specially significant because it represents those who shift to non use, are still in their fertile ages and are at a risk of becoming pregnant. With duration of use, both users of

pill and condom show increasing probability of discontinuation. This is highly discouraging for this data from an intensive MCH-FP area, because these women receive much higher follow up and care compared to other users in the rest of Bangladesh. High probabilities of discontinuation in this data almost matches the nationally observed figures for the cross sectional data of BDHS 1999-2000. Although the probability of discontinuation among users of IUD and injection is less than half of those for pills and condoms, the total rates of discontinuation is alarming (44 percent) and merits detailed investigation, as it renders the high CPR to a much lower one when multiplied by use effectiveness.

In Figure 4, the probabilities of switching to other modern methods is calculated and presented by duration of use. Injection users have lowest probabilities of switching to other modern methods, while condom users have the highest (almost 50%). For all methods, the probability of switching increases with duration of use. Condom users have highest likelihood of shifting to other modern methods which is encouraging, indicating that after certain duration users shift to more reliable methods and the probability increases. In the study by Steele and Diamond (1999) using nationally representative data from the 1993-94 BDHS, the reverse direction was observed. They found that condom users were least likely to shift to other modern methods, while injection users were more likely to switch to other modern methods. Two arguments can be offered in this direction. Firstly, during the years of 1993-94 injection use was much more recent compared to use of pill, IUD and condom in Bangladesh. Women could have been more daunted by

the onset of side effects including heavy bleeding and irregular period and had switched to other modern methods which were successfully used by known users. Secondly, the data from this study is from the treatment area of the MCH-FP of the Matlab project. The extensive FP services accords a much better follow up compared to that of the rest of Bangladesh. Injection is highly popular here and people have had more advise and follow- up on side effect management and care. Hence the observed switching rates maybe much lower than the national rates.

However, in Figure 5 we observe that for condom users the probability of switching to traditional method is highest, compared to users of pills, injection and IUD. The probabilities are very low (below<.1) and the patterns match with previous findings by Steele and Diamond (1999). It is encouraging to note that IUD users are least likely to switch to any traditional method, and also least likely to discontinue use over time (Figure 5). It seems that if a user can retain the IUD until the end of the first year, then she is highly likely to retain it further. The first year seems to be the crucial year for IUD users and adequate follow up and advise could probably work as positive inputs towards continuation.

Results of multiple decrement life table analysis are given in Table 4 and Table 5. In Table 4 the switching pattern of pill users have been investigated with other covariates using the multiple decrement life tables. The covariates were chosen from knowledge of contraceptive use dynamics and experiences in other similar studies (Steele and Diamond,1999).

In this table it was observed that the variable `education of the woman' was the most significant covariate which had influence on switching patterns of pill users. Specifically, compared to their counterparts, less educated women had higher probabilities of being nonusers and at risk of getting pregnant. Similarly, educated women had higher probabilities of continuing the method which only reiterates the role of education on the use of contraception (Kamal, 2000). Among other variables, women with zero parity and also those following Islamic faith had higher probabilities of discontinuation. The women with zero parity is easily explained by the universal demand for children in Bangladesh, the tendency of Muslims to have higher likelihood of discontinuation may be linked with more opposition to contraceptive methods as have been found in various studies (Kamal and Sloggett, 1996 Amin et al., 1994). Those who had more land, represent women from higher socio-economic group and had higher likelihood of being in non-use and at risk. This may be because the more affluent section has higher demand for children (Kabeer, 2000).

In Table 5 the switching patterns of injection users is presented along with the covariates using a multiple decrement life table. Here too we find that woman's education has a role but the effect is much lower than that observed among pill users. Compared to women with no education and those with primary education, women educated up to secondary level have very low probabilities of being non users and at risk. Similarly, they have lower probabilities of being currently pregnant. All other variables, such as women's socioeconomic status, parity, religion, mobility to health center and age show similar directions of switching pattern such as those observed in Table 4. However,

the difference between the categories is much smaller than Table 4, specially the difference between those of different religions is almost nil.

Table 6 illustrates the behaviour of different method users after the first method was discontinued. The table finds that women who adopted injection had highest rates of return to the same within one and two years. For one year the probability of returning to injection was almost 50 percent and almost 60 percent for within two years. This shows high popularity of this method, that in spite of switching they are highly likely to return to this method. Pill users have the next highest probability of returning to the same. Condom users have very low probability of returning to the same, but the worst figures are found for IUD users. Only 3 percent women return to this method within one year and less than 1 percent return within two years. This shows the unpopularity of this method and also implies that further side effect management and follow up care have to be made effective for improvement of discontinuation rates.

Table 7 presents the number of transitions a woman has experienced over one year, from various original methods considered in this paper. Among modern methods, pill users are most likely to experience one transition within one year. IUD users seem to be most dissatisfied and have the highest percentages of having two transitions within one year (22%).

Findings from the focus group discussions

Six focus group discussions (FGD) with a total of thirty-four attendants and ten in-depth interviews were conducted in the treatment area of Matlab. Several questions were

directed towards the respondents who claimed to be switchers. The switcher groups are '*pill to injection'*, '*injection to pill'*, '*IUD to another modern method'*, and '*condom to another modern method'*. The main goal of these FGDs and in-depth interviews was to ascertain the reasons of contraceptive switching.

All respondents who attended the six FGDs were housewives though four women mentioned that they did occasional work in paddy field, tailoring, handicraft etc. for cash. Out of forty-four, two third respondents were above age thirty, half of the respondents had lower than primary education and almost an equal percentage of women reported that they had one to two or three plus children that constituted the total sample. All forty-four women except five or six stated that their husbands disagreed to use permanent methods (tubectomy/ligation). The reasons for refusal were, as they perceived, lack of strength to work after operation and religious reasons. Additionally, three fourth of the women stated that their husbands disagreed to use either condom or rythm method. About half the women who attended the FGDs did not want any more children but they were not adopting a permanent method.

In our FGDs it was observed that severe side effects were the main reason of switching from '*injection to pill*'. The reported side effects were heavy bleeding, spotting, anemia, weakness, dizziness, headache, no menstruation, burning sensation and blood clot in the abdomen. Almost all women perceived that it is a problem to attend a religious occasion if she has spotting. Two women became pregnant by abandoning use of injection for health problems. The reported problems indicated that women have difficulty in

maintaining continuous use, so they often expose themselves to the risk of an unwanted pregnancy. Some women said that the CHWs recommend nutritious food and they perceive that the inability to do so produces such side effects.

Four women became pregnant because they ran out of supplies (pill) and, thereafter switched back to the previous method (injection) again. An interesting finding was that one woman used two methods *pill and injection* simultaneously. She believed that using two methods simultaneously could prevent both unwanted pregnancy and bleeding.
The following citation is from a woman who discontinued injection use:
"*Can't take bath in the pond, after bathing in pond I can't come out and two ears do not work. In using injection blood became black, eyes burned, couldn't take food and feel very weak".*

All the sixteen women who attended the FGDs *'pill to injection'* used pill with range 1-4 years and thereafter switched to injection. Four women were found better suited with injection and the rest found problems with injection. It reflects from the FGDs that those women unsuited with injection are likely to return to pill again.

The three main reasons of switching from pill were unintended pregnancy, fear of forgetfulness and health problems for prolonged use such as weight gain, jaundice, gastric, fever etc. However, three or four cases (new born mother) had switched by being influenced by others that pill taking would reduce breast milk. Five women had changed method four times, two of them twice and the rest once. An important finding was that those who switched from pill did not report severe side effects, while those who changed from injection reported many.

Two main reasons were found for switching from IUD to other methods. Firstly, heavy bleeding and secondly, losing the thread into the abdomen. The symptoms reported by four out of five (such as heavy bleeding, white discharge) could be attributed to other illness such as weakness, anemia etc. Two women also said that their husbands found difficulties during sexual union. One of five withdrew the IUD by learning from their neighbours that the thread of IUD may be lost into the abdomen. Three women (from IUD) switched to pill and two women switched to injection. One woman became pregnant during IUD use. She described as: "I told *a CHW that I had no menstruation for three months but the CHW convinced me by saying that menstruation will resume after sometime. Observing the situation I went to the hospital and removed the IUD by confirming the pregnancy".* The FGD findings and the in-depth findings reveal that the IUD users were less likely to switch back to IUD (compared to pill and injection users), a similar finding was observed in quantitative analysis (Table-6).

Two of the five women opined that they themselves do not like condom use at sexual union, one reported that her husband does not like and another two reported that they fear condom leakage. Out of five, three switched to pill and two switched to injection. Unwanted pregnancy was not observed due to condom failure.

Conclusions:

It is widely known that Bangladesh family planning programme is a success story. But the TFR is almost stable during 1993-2000, although the CPR increased by about 9%. In this situation researchers are both perplexed and concerned about the stagnation of TFR. Discontinuation of contraceptive use has been identified as a major contributor to the stagnation of TFR (Kamal and Choudhury, 2002). The transition moment of frequent switching of methods also result in unwanted pregnancies. This study investigates the pattern and reasons for discontinuation and switching of contraception in an MCH-FP area in Matlab, a rural Bangladesh using longitudinal data for the period of 1988-98. Multiple–decrement life table technique was employed to calculate the transition probabilities.

The findings of the study suggest that the rate of discontinuation is highest for the pill users followed by the condom users. This is highly discouraging for this data from an intensive MCH-FP area, because these women receive much higher follow up and care compared to other users in the rest of Bangladesh. The FGD findings reveal that the pill users often stopped in pill taking because of getting unwanted pregnancy due to forgetfulness. An evidence of individual level variation is found in transitions from pill use to non-use among women at risk of experiencing of unintended pregnancy. 8% women moved from pill to non use within one year where it was 11% vs. 16% evidence from one study in NSFG (1986) and another study in USA within two year of use. Women are having no living children more likely to be non-user, which is in same tune

with the findings of study conducted at USA. The discontinuation is low among the educated women. This finding also coincides with the findings of USA. USA results show a greater movement between pill and condom whereas in our data movement occurs pill and injection. According to the reasons of switching it is found that almost one-third women discontinue pill use having method related problems, and this percentage is less than the percentages mentioned by the users of other two methods IUD and Injection. These findings are similar to the findings originated from the discussions in the focus group. The highest discontinuation and unwanted pregnancies due to method (pill) use may lead to the stagnation of TFR.

It is found that condom users have the highest percentages of switching to another modern method, being followed by IUD users (20%). Condom users are most likely to switch to either a modern method or another traditional methods. It seems from the data that older women who use condoms are more likely to switch to traditional methods. The pattern of the rate of continuation for methods Injection and IUD, Pill and Condom is similar with study findings conducted in USA (ibid).

The study findings reveal that IUD users are less likely to discontinue in method use within one year. Data also finds that IUD user (52%) are more likely to dissatisfied followed by injection (47%) resulting the users of both methods more frequently discontinue in method use and then switch to other methods. The first year for the IUD users may assume is the crucial year. So if a special follow-up care and better side effect

management can be ensured for the first period of use it could possible to reduce the discontinuation rate.

Finding shows that injection users have the lowest percentage of switching to another modern methods (13%) compared to the other methods. The discontinuation rate is also lowest for injection. This is revealed from the column titled ‘ non-use and at risk’. Furthermore, those who switched once had the highest return rate 51% within one year and 68% within two year. FGD findings suggest that due to physical problems such as lack of nutrient food resulted anemia, excessive bleeding, burning sensation etc., the injection users stop to use for sometimes or switch to another method and thereafter switch back to the same because of unsuitability with other methods. As Bangladesh is a developing country about 50 % people are living under poverty line (BBS, 1996). The nutrition status also low especially for children and women. It is that about 45 percent of women are suffering from malnutrition (WFP’1999) though this percentage varies with a wide range up to 60 percent in some areas. Hence, injection supply with nutrient tablet may be recommended for future policy implementation, which can supplement the nutrition status of a woman, and therefore the rate of discontinuation may decline.

The method mix for BDHS’99 is different from that of RKS’98 where pill is the most popular method in Bangladesh and in RKS data injection is the most popular method. Quantitative data do not explain this but FGDs reveal that women are more reluctant to use pills that may causes unwanted pregnancy compared to one doze injection for three months. On the other hand, Matlab MCH-FP area is a family planning comprehensive

area where quality of services are assumed to be ensured, clinic based service facilities are exists, better follow-up and better side effect management suppose to be held where in rest of the Bangladesh all the indicators are almost absent.

In the light of HPSP, since 1998 the health and family planning services shifted from doorstep to fixed site clinics at peripheral level. One clinic supposed to serve about 6000 people. These are full phases clinics including providers medical doctor, family welfare visitors (FWVs), health assistants (HAs), and family welfare assistants (FWAs), and equipments for performing safe delivery and at minimum level of primary health care. However, it is concluded that less effective method use might have a role to the stagnation of TFR (Saha and Bairagi, 2002). Hence to reduce the possibility of method failure and at risk of becoming pregnant injection or IUD can be promoted more in national level where fixed site clinic facilities are available to serve at peripheral level. To make more effective use a strong counseling and motivation programme including the side effect management training at the field level providers should be ensured at users level. It is also expected that the Pharmaceutical Companies can bring a change in the manufacturing procedure in case of hormonal methods, which can improve the health status as well as survival status of our rural contraceptive users. Or with a continued follow-up scheme a user guide including advantage and disadvantage of each of the methods, and minimum period to be continued to settle down the side effects mainly due to hormonal or physiological changes brought about by the method used can be developed to ensure proper use of contraceptives.

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Table-1 Estimated percentage of women switching from the pill within 12 months initiating of its uses, Bangladesh, 1988-98

Methods	Type of transition						
	Continue use	Another modern method	Traditional method	Non use & at risk	Pregnancy	Total	Number
Pill	57.0	17.0	0.5	8.0	18.0	100.0	4252
Injection	76.8	13.4	0.2	3.0	7.0	100.0	7566
IUD	73.0	20.2	0.1	3.0	4.0	100.0	401
Condom	52.7	31.0	1.3	7.0	8.1	100.0	654

Table-2 Percentage distribution of women surveyed who reported switching to another method, by their original method, according to the method they switched to, Bangladesh, 1988-98

Destination method							
Methods	Pill	Injectable	IUD	Condom	Traditional	Total	Number
Pill	-	83.6	2.6	9.3	4.5	100	731
Injection	93.4	-	0.8	4.0	2.0	100	1465
IUD	49.5	44.1	-	5.3	1.1	100	188
Condom	42.6	46.4	5.5	-	5.5	100	183

Table-3 Percentage distribution of women surveyed who reported switched to another method, by their original method, according to the reasons of switching to, Bangladesh, 1988-96

Original methods	Reasons for switching			
	Method related	No need	Not method related	N
Pill	30.0	34.1	35.9	1170
IUD	52.0	11.9	36.2	177
Injection	47.3	21.7	31.0	1650
Condom	10.5	26.6	62.9	124
Foam	27.3	9.1	63.6	11
Traditional	16.2	25.7	58.1	74

Table-4 Estimated percentage of women switching from the pill within 12 months of initiating its use, Bangladesh, 1988-98

Variables	Type of transition				
	Nonuse and at risk	Another modern method	Traditional method	Pregnancy	Continue use
Age at start of use episode (years)					
<=24	4.6	16.4	0.4	24.4	54.0
25-29	7.2	18.0	0.4	18.7	55.6
30+	13.4	18.2	1.1	10.1	57.0
Number of living children					
0	12.7	10.2	0.0	20.4	56.3
1	7.1	20.7	0.8	23.0	48.4
2	4.1	18.6	0.5	17.7	59.0
3+	8.8	17.8	0.8	19.3	53.2
Education					
None	9.4	17.7	0.4	18.8	53.7
Primary	7.4	19.2	0.6	21.1	51.7
Secondary +	5.3	13.8	1.0	16.6	63.3
Religion					
Muslim	8.0	17.4	0.6	19.6	54.3
Hindu	5.5	17.0	0.2	17.6	59.8
Mobility to health center alone					
Yes	9.5	14.7	0.4	17.6	58.0
No	7.5	17.1	0.5	18.3	56.4
Ownership of land					
1-199	8.0	18.0	0.6	15.2	58.0
200 +	8.1	17.2	0.4	18.0	56.0

Table-5 Estimated percentage of women switching from the injection within 12 months of initiating its use, Bangladesh, 1988-98

Variables	Type of transition				
	Nonuse and at risk	Another modern method	Traditional method	Pregnancy	Continue use
Age at start of use episode (years)					
<=24	0.5	7.0	0.02	4.0	89.0
25-29	1.0	7.0	0.02	4.0	88.0
30+	2.0	3.8	0.09	1.2	93.0
Number of living children					
0	4.4	19.9	0	19.5	56.0
1	2.3	12.7	0	4.8	80.0
2	1.7	13.1	0.2	8.5	76.2
3+	3.1	11.6	0.2	7.0	88.0
Education					
None	2.1	42.7	0.1	5.3	49.7
Primary	2.2	46.6	0.1	4.7	46.0
Secondary +	1.3	60.0	0.4	3.9	34.3
Religion					
Muslim	2.6	13.4	0.2	6.9	76.8
Hindu	2.3	12.9	0	6.7	88.0
Mobility to health center alone					
Yes	4.0	13.2	0.7	5.5	76.0
No	2.7	13.6	0.1	6.5	77.0
Own ership of land					
1-199	2.5	13.0	0.2	6.4	88.0
200 +	3.2	13.4	0.2	7.0	76.0

Table-6 Cumulative probability of return to the same method used as before following discontinuation by duration of use.

Original methods used as before	Return within one year	Return within two year	N
Pill	.3105	.4172	163
IUD	0.037	.0067	2
Injection	.5109	.6803	318
Condom	.0463	.0573	16

Table-7 Percentage distribution of users who had in transition by number of transitions within 12 months of initiation a method.

First method adopted	Once	Twice	More than twice	N
Pill	89.7	10.1	0.2	2437
IUD	76.0	22.0	2.0	260
Injection	84.5	15.1	0.5	2647
Condom	82.0	16.0	2.0	409
Traditional method	90.5	9.5	0.0	147

Figure 1

Contraceptive Methodmix in Matlab MCH-FP area

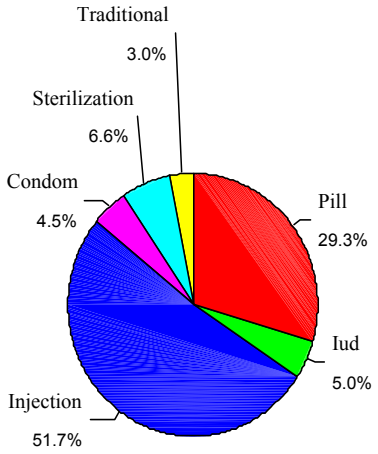


Figure 2

Contraceptive Method Mix BDHS'99-2(

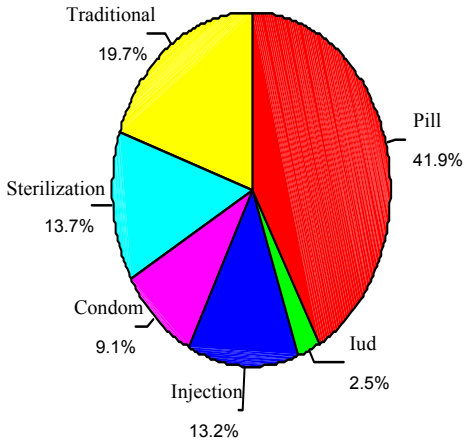


Figure 3

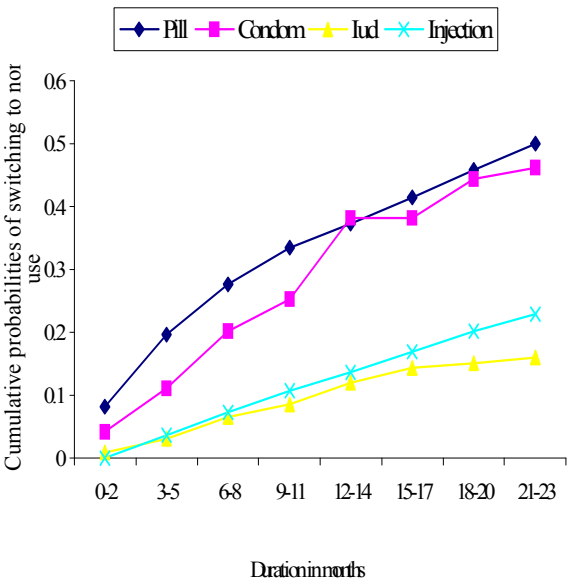


Figure -4

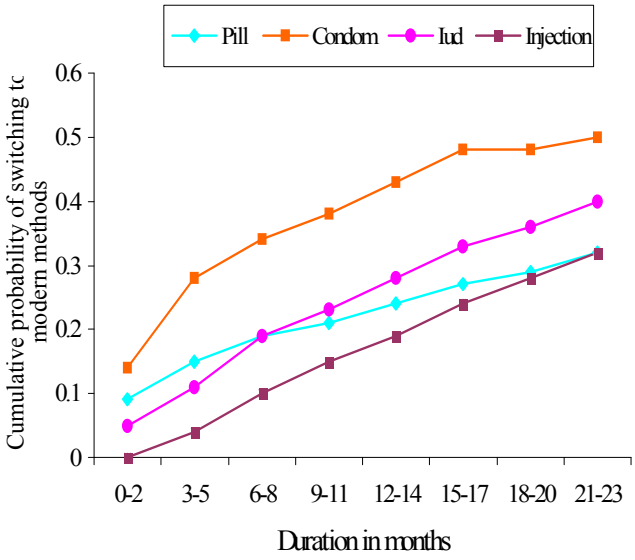
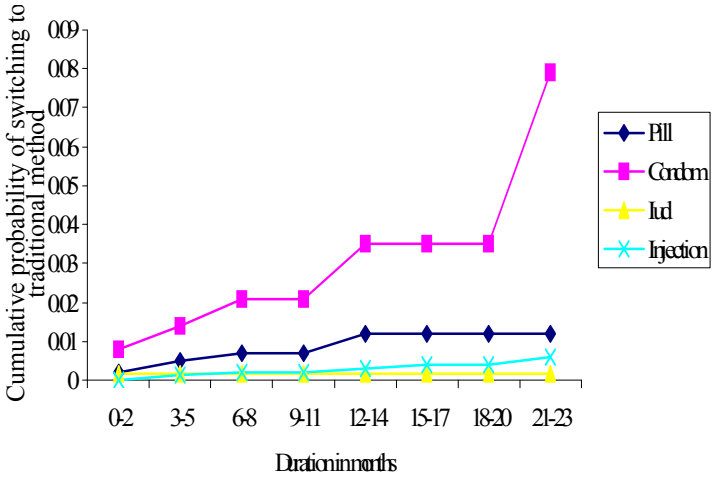


Figure-5



Acknowledgements

The research was supported by the Commission of European Communities and ICDDR,B: Center for Health and Population Research. The Center is supported by several countries, donor agencies and others, which share its concern for the health and population problems of developing countries.