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27 January 1999

To : Professor V.I. Mathan
Chairman, RRC

From : Radheshyam Bairagi
Senior Scientist and Head, HDSP

Subject: Approval of protocol # 98-029 entitled "Contraceptive use dynamics in Bangladesh"

Thank you for your letter of 18 November 1998 about the above-mentioned subject. We have revised the protocol incorporating the comments and suggestions made by the RRC and by Dr. Carol Jenkins. Here I am describing the changes, point by point, with reference to your letter.

1. That a part of the study will be done in Kalkini Thana of Madaripur district has been mentioned in the relevant places in the protocol (see pages 3, 13, 16 etc.).
2. The hypotheses regarding the factors influencing the declining trend of use of permanent method have been specified (see page 4) and the methods of testing them have been given (pages 17-18).
3. We have reviewed the literature further and revised the protocol accordingly. Unlike Sub-Saharan Africa and Latin America, abortions associated with extramarital sex is not a big problem in this country. Moreover, Matlab DSS does not record illegitimate conception. It is a very sensitive issue and beyond the scope of this study. However, the study will make an attempt to investigate the factors of abortions associated with illegitimate conceptions (page 10, 19).
4. We have discussed the methodology of cost calculation with Dr. Mahmud Khan, Health Economist. It is given on page 22.
5. Relevant studies from this country and the region have been reviewed and the references are given (pages 27-29).
6. All modifications have been made within the sanctioned budget.

We had a long and useful discussion with Dr. Jenkins on 25 January 1999. Her suggestions have been incorporated in the text and in the questionnaires of the protocol.

Response to Dr. Jenkins points mentioned in her letter to RRC about this protocol:

1. Literature was reviewed further as per given guidelines. Relevant references have been cited in pages 5-12.

2. Hypotheses have been revised in view of the Bangladesh context (See page 4).

3-4. A brief discussion on the appropriateness of the selected social science methods for this study is given on pages 13-14. Dr. Jenkins agreed with us about the appropriateness of the use of FGD and in-depth interviews for this study.

5. The Research Team and the Advisory Committee of the project have experts from different fields including sociology and anthropology. Advice will be taken from other experts in course of time, if needed.

The design of the study provides opportunities to undertake sub-studies on each of the topics mentioned (Dr. Jenkins agreed with us about it).

A copy of the revised protocol is enclosed for your consideration for approval.

Thank you.

(FACE SHEET) ETHICAL REVIEW COMMITTEE, ICDDR,B.

Principal Investigator: Dr. Radheshyam Bairagi Trainee Investigator (if any): _____

Application No. _____ Supporting Agency (if Non-ICDDR,B) EU _____

Title of Study: Contraceptive Use Dynamics in Bangladesh. Project Status: _____

New Study

Continuation with change

No change (do not fill out rest of the form)

Circle the appropriate answer to each of the following (If Not Applicable write NA)

- Source of Population:
 - (a) Ill subjects Yes No
 - (b) Non-ill subjects Yes No
 - (c) Minor or persons under guardianship Yes No
 - Does the Study Involve:
 - (a) Physical risk to the subjects Yes No
 - (b) Social risk Yes No
 - (c) Psychological risks to subjects Yes No
 - (d) Discomfort to subjects Yes No
 - (e) Invasion of privacy Yes No
 - (f) Disclosure of information damaging to subject or others Yes No
 - Does the Study Involve:
 - (a) Use of records (hospital, medical, death or other) Yes No
 - (b) Use of fetal tissue or abortus Yes No
 - (c) Use of organs or body fluids Yes No
 - Are Subjects Clearly Informed About:
 - (a) Nature and purposes of the study Yes No
 - (b) Procedures to be followed including alternatives used Yes No
 - (c) Physical risk Yes No
 - (d) Sensitive questions Yes No
 - (e) Benefits to be derived Yes No
 - (f) Right to refuse to participate or to withdraw from study Yes No
 - (g) Confidential handling of data Yes No
 - (h) Compensation &/or treatment where there are risks or privacy is involved in any particular procedure Yes No
 - Will Signed Consent Form be Required:
 - (a) From subjects Yes No
 - (b) From parents or guardian (if subjects are minor) Yes No
 - Will precautions be taken to protect anonymity of subjects Yes No
 - Check documents being submitted herewith to Committee:
 - Umbrella proposal - Initially submit an with overview (all other requirements will be submitted with individual studies)
 - Protocol (Required)
 - Abstract Summary (Required)
 - Statement given or read to subjects on nature of study, risks, types of questions to be asked, and right to refuse to participate or withdraw (Required)
 - Informed consent form for subjects
 - Informed consent form for parent or guardian
 - Procedure for maintaining confidentiality
 - Questionnaire or interview schedule*
- * If the final instrument is not completed prior to review, the following information should be included in the abstract summary
- A description of the areas to be covered in the questionnaire or interview which could be considered either sensitive or which would constitute an invasion of privacy
 - Example of the type of specific questions to be asked in the sensitive areas
 - An indication as to when the questionnaire will be presented to the Committee for review


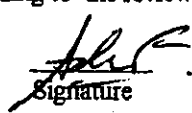
We agree to obtain approval of the Ethical Review Committee for any changes involving the rights and welfare of subjects before making such change.

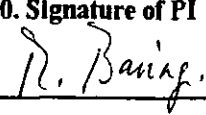
Dr. Radheshyam Bairagi
Principal Investigator

Trainee

International Center for Diarrhea Disease Research, Bangladesh RESEARCH PROTOCOL	FOR OFFICE USE ONLY Protocol No: _____ Date: _____ RRC Approval: Yes/ No _____ Date: _____ ERC Approval: Yes/No _____ Date: _____
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1. Title of Project: Contraceptive Use Dynamics in Bangladesh											
2a. Name of the Principal Investigator(s) (Last, Middle, First) Bairagi Radheshyam	2b. Position / Title Senior Scientist	2c. Qualifications Doctor of Science									
3. Name of the Division/ Branch / Programme of ICDDR,B under which the study will be carried out. Public Health Sciences Division											
4. Contact Address of the Principal Investigator 4a. Office Location: ICDDR,B		4b. Fax No: 880-2-883116 4c. E-mail: bairagi@icddrb.org 4d. Phone / Ext: 880-2-870024									
5. Use of Human Subjects Yes <input type="checkbox"/> No <input type="checkbox"/>	5a. Use of Live Animal Yes <input type="checkbox"/> No <input type="checkbox"/>	5b. If Yes, Specify Animal Species 									
6. Dates of Proposed Period of Support (Day, Month, Year - DD/MM/YY) 29/05/1998 As soon as possible	7. Cost Required for the Budget Period <table style="width:100%; border: none;"> <tr> <td style="width:33%;">7a. 1st Year (\$):</td> <td style="width:33%;">2nd Year (\$):</td> <td style="width:33%;">3rd Year:</td> </tr> <tr> <td style="text-align: center;">256,438</td> <td style="text-align: center;">216,629</td> <td style="text-align: center;">228,003</td> </tr> <tr> <td>7b. Direct Cost (\$)</td> <td colspan="2" style="text-align: right;">Total Cost (\$)</td> </tr> </table>		7a. 1st Year (\$):	2nd Year (\$):	3rd Year:	256,438	216,629	228,003	7b. Direct Cost (\$)	Total Cost (\$)	
7a. 1st Year (\$):	2nd Year (\$):	3rd Year:									
256,438	216,629	228,003									
7b. Direct Cost (\$)	Total Cost (\$)										

8. Approval of the Project by the Division Director of the Applicant The above-mentioned project has been discussed and reviewed at the Division level as well by the external reviewers. The protocol has been revised according to the reviewer's comments and is approved.		
 Name of the Division Director	 Signature	29.05.1998 Date of Approval

9. Certification by the Principal Investigator I certify that the statements herein are true, complete and accurate to the best of my knowledge. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. I agree to accept responsibility for the scientific conduct of the project and to provide the required progress reports if a grant is awarded as a result of this application.	10. Signature of PI  <hr/> Date: 4 November 1998
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Research Protocol

Title of the Project : **Contraceptive Use Dynamics in Bangladesh**

Name of the Principal Investigator : Dr. Radheshyam Bairagi
Senior Scientist
Public Health Sciences Division
ICDDR,B, GPO Box 128, Dhaka 1000
Bangladesh

Starting date : 29 May 1998

Duration : Five years

Principal Investigator: Bairagi Radheshyam

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Principal Investigator: Bairagi Radheslyam

CONTRACEPTIVE USE DYNAMICS IN BANGLADESH

1. PROJECT SUMMARY

The project will start with an investigation of the levels, trends, determinants and reasons for contraceptive use-failure, abortions, the declining in permanent method use, and the effectiveness of the rhythm method in Bangladesh. It will also undertake several sub-studies to meet these specific objectives. The study is scheduled to be conducted in the MCH-FP area and in the Comparison area of Matlab Thana where ICDDR,B has carried out numerous projects in the last two decades. Another part will be conducted in Kalkini Thana of Madaripur District. Existing Matlab MCH-FP data will be cleaned, transferred to the computer and analyzed. Additional quantitative and qualitative data will be collected and analyzed from each of the areas. The study will take the opportunity to evaluate the impact of the new FP delivery system through the Community Clinic (CC) under the Government's Health and Population Sector Program (HPSP) over door-step delivery. The impact of this new delivery system on the FP Program will be measured from surveillance system data and by a few follow-up sample surveys. The findings of this study will lead to recommendations on changes to be made in the FP program. The results are expected to be useful to the planners and policy makers of Bangladesh and other developing countries to make FP programs cost-effective and sustainable.

KEY PERSONNEL

<u>Name</u>	<u>Professional Discipline/ Specialty</u>	<u>Role in the Project</u>
1. Dr. Radheslyam Bairagi	Demographer/Public Health	PI
2. Dr. Abdur Razzaque	Demographer	Co-investigator
3. Mr. Jyotsnamoy Chakrabarty	MCH-FP	Co-investigator
4. Dr. M. Mazharul Islam	Statistician/Demographer	Co-investigator
5. Dr. Ahmed Al-Sabir	Demographer/Training	Co-investigator
6. Dr. K.M.A. Aziz	Sociologist/Anthropology	Co-investigator
7. Dr. Nashid Kamal	Demographer	Co-investigator

Principal Investigator: Bairagi Radheshyam

2. DESCRIPTION OF THE RESEARCH PROJECT

2.1 Hypothesis to be tested

The following hypotheses have been formulated for testing:

1. There are some program factors as well as individual and familial factors that are mainly responsible for declining trend in permanent method use.
2. An extensive family planning program can help decline the overall abortion rate as well as clandestine and unsafe abortion.
3. Women seek abortion not only because they do not want to be pregnant but there are other socio-economic, demographic and behavioural factors associated with an abortion.
4. There is no difference in the compliance of pills and condom between Matlab MCH-FP area and any other rural area of Bangladesh (i.e. pills and condom failures in Matlab and at national level are same).
5. The delivery of the FP services through Community Clinic (CC) approach will be more cost-effective than that the door-to-door delivery system.

2.2 Specific Aims

- (i) To identify the factors responsible for declining trends in the popularity of permanent methods.
- (ii) To investigate the determinants of the use of permanent methods as well as other methods.
- (iii) To study the levels, trends and determinants of switching, discontinuation, unmet needs, failures, and abortions.
- (iv) To identify the reasons for switching, discontinuation, failures, and abortions.
- (v) To evaluate the impact of new service delivery through CC approach on contraceptive use dynamics and its cost-effectiveness.
- (vi) To implement and evaluate the recommendations of this study in Matlab and a thana.
- (vii) To disseminate the findings to GoB and other interested parties and policy makers with a view to improving family planning services throughout Bangladesh.

Principal Investigator: Bairagi Radheshyam

3. Background and Introduction of the Project

Population pressure is one of the most serious problems facing Bangladesh. Although the success of its Family Planning Program has been remarkable, it is far from achieving replacement level fertility, i.e., total fertility of 2.1. Moreover, the Bangladesh Family Planning Program depends mainly on non-clinical methods, such as pills, through house-to-house delivery. This is very expensive from the program point of view. The per capita expenditure for family planning in this country is about \$2 and is perhaps the highest in the developing world (Cleland and Streatfield, 1992). Moreover, the existing family planning service delivery system is facing many obstacles that limit its optimum utilization, effectiveness and efficacy. Most of the expenditure of the FP program in the country is borne by foreign aid. There is speculation that such external support may not be readily available in the near future and may even stop. There is, therefore, growing concern about the sustainability of the program, which is an extra burden for a nation like Bangladesh where more than 86 percent of the population live below the poverty line (UNDP, 1991). Because of possible financial and other constraints in the near future, the planners need to examine alternative cost-effective approaches.

In order to make the Bangladesh FP more cost-effective and sustainable, the Government is planning to implement an integrated health and FP service delivery through static centres called Community Clinics (CCs) for each 6,000 population instead of the present door-to-door delivery service. Each CC will have a Health Assistant (HA) and a Family Welfare Assistant (FWA). While the HA will provide antenatal care (ANC) and postnatal care (PNC) and services for ARI, diarrhoea, malaria and EPI etc., the FWA will provide non-clinical family planning services. The FWA will also provide the second and subsequent doses of injectables. The first dose of injectables and IUD will be provided by a Family Welfare Visitor (FWV), who will visit the CC routinely. However, it is extremely important to investigate the impact of this change from door-step delivery to CC on FP program in the country. The project will investigate the impact of this change in the Matlab MCH-FP area.

Sterilization is of particular importance in Bangladesh because many women achieve their desired family size, which is currently 2.5, at an early age and are thus in need of a further 15 or more years of continuous protection against pregnancy. For couples desiring no more

children, sterilization is the most effective contraceptive method available for them. Its main advantages are that it is one-time method and that, once accepted, relieves couples from continuous worries about protecting against unwanted pregnancies. Each sterilization operation is estimated to avert 1.5 to 2.5 births or a higher number than continued use of any other modern reversible methods (Lubell, 1978). The total demographic impact of sterilization depends upon the age and parity of the adopters and the number of couples choosing the method. As younger couples with fewer children opt for sterilization, the number of births averted obviously increases. Sterilization is also cost-effective compared to other modern reversible methods. Further, in a country like Bangladesh where literacy rate is very low and the poverty level is high, the increased use of sterilization will help solve the difficult problem of sustaining motivation among eligible couples to continue the regular practice of family planning methods. But it appears from audited figures in Bangladesh that the number of vasectomies peaked in the mid-1980s and has since dwindled to low levels. The number of tubectomies performed annually has also declined considerably from peaks in the 1980s. Generally, with an increase in contraceptive use, the use of permanent methods not only increases, but the rate of increase is more than the rate of increase of temporary methods. But in Bangladesh the situation is quite the opposite. Permanent method use in 1989 was 10.5 percent and in 1993-94 came down to 9.2 percent (Islam, Mamun and Bairagi 1996). It declined further to 8.7 percent in 1996-97 (Mitra et. al. 1997). If one compares the method mix with neighboring countries such as India and Sri Lanka, the use of permanent methods in Bangladesh is unusually low. Among the users of any method, 50 percent in Sri Lanka and 75 percent in India use permanent methods, but in Bangladesh this is only 20 percent (Mitra et al 1994; Kantner and He 1996).

Sterilization was first introduced in mid-sixties on a large scale in Bangladesh (then East Pakistan) as part of the Government's national family planning program. At the beginning, lack of knowledge, lack of hospital and clinic facilities and shortage of funding for sterilization services remains as obstacles for the expansion of services. Sterilization started gaining popularity by the end of the seventies. The number of sterilization increased from 84 thousand in 1975/76 to 363 thousand in 1982/83 - a more than 4 fold increase in 7 years - followed by a sharp of 552 thousand in 1983/84 (Ahmed and others, 1992). The sharp increase in sterilization between 1980/81 and 1983/84 can be attributed to many programmatic factors which include mainly: increase in compensation payments to clients, increase in referral fees to FP workers and doctors, setting of sterilization targets for FP workers, special activities of district-level mobile teams providing sterilization services and government measures for maintaining and improving the quality of services.

The decline in sterilization acceptance began in the mid-eighties. There is much speculation about the decline in permanent method use in this country, but the exact nature of the causes of decline has yet to be ascertained. It is worth to mention here that, during both its Third (1985-1990) and Fourth (1990-1995) Five Year Plan, the Government of Bangladesh set ambitious goals for increasing contraceptive prevalence through a 'cafeteria' approach offering a variety of choice of modern methods including sterilization (Planning Commission, 1990). At the same time Government has withdrawn the referral fee and mobile sterilization camp. Some observers think that this programmatic shift may cause decline in sterilization. While others feel that the abandonment of the "motivator's fee" in the latter 1980s, plus the erosion by inflation of the clients' compensation payment are responsible for the decline in permanent method use. Some others feel that, unlike India and some other countries, the absence of any target-driven sterilization campaigns is a reason for the low proportion of permanent method use in this country. In a recent study Miah et al. (1995) identified several program and individual factors for declining trend in sterilization as mentioned by the program managers, field workers and clients. These factors include: changes in the choice of methods by couples due to availability of wide range of modern methods, fear of surgical operation, insufficient amount of compensation fee, withdrawal of referral fee, withdrawal of mobile camp system, shortage of facilities and trained doctors and lack of proper coordination between the health and family planning personnel. However, no clear reason or evidence for the downward trend in permanent method has been established. One of the main objectives of this study is to identify the factors which work as obstacles to the use of permanent methods. The essence of this objective is the choice between permanent and temporary methods. It is likely that both service-related factors and family factors are instrumental in this choice. It is important to identify those factors to remove the obstacles in using permanent methods. The objective needs viewing from the historical perspective as well.

Another matter of concern for the Bangladesh family planning program is contraceptive use-failure. Contraceptive failure is, perhaps, the most important component of use-effectiveness of a family planning program. High acceptance and continuation rate of a method do not mean much if the use-failure is very high. Data from Matlab suggest that the contraceptive failures of pills and condoms in Bangladesh are alarmingly high (Bairagi and Rahman 1996; Bairagi, Islam and Barua 1997). A major limitations of these studies was that failure resulting in non-live birth (abortion, still birth or miscarriage) was not considered. A thorough understanding of the failure of temporary methods and its reasons is important for planners and policy makers in this country. Unfortunately, research on contraceptive failure in the developing countries

including Bangladesh is extremely limited, mainly because of the non-availability of reliable data. In this regard, a unique data set which is prospective in nature and is thought to be very high in quality and free from memory lapse or recollection of the past contraceptive behavior as in the case of retrospective data set presently being collected by the ICDDR,B. This data set and some more data to be collected from the field will be used to investigate failure issue.

Unsafe and clandestine abortion appears as a serious reproductive health problem in Bangladesh (Khan et al. 1984, Begum et al. 1991). Abortion-related maternal morbidity and mortality is very high in Bangladesh. Hospital-base statistics demonstrate that nearly half of the admissions to gynecology units of major hospitals in Bangladesh are due to abortion-related complications (Measham et al. 1981, Singh et al. 1997) and field-base studies suggest that almost one-fifth of the total maternal mortality are associated with induced abortion (Alauddin 1986, Fauveau and Blanchet 1989, Koenig et al. 1988). This is particularly tragic since deaths from abortion are almost completely preventable. The 1994 International Conference on Population and Development (ICPD) in Cairo directly addressed issues pertaining to abortion. The paragraph of the "program of action" that every participating government signed states:

All Governments and relevant intergovernmental and non-governmental organizations are urged to strengthen their commitment to women's health, to deal with the health impact of unsafe abortions a major public health concern and to reduce the recourse to abortion through expanded and improved family planning services.... In all cases, women should have access to quality services for the management of complications arising from abortion (ICPD, 8.25).

The implementation of this paragraph in the ICPD *Program of Action* is a major challenge for reproductive health professionals worldwide. A first step in this process is simply to define the magnitude of the health care problems associated with abortion.

The hazards of abortion to women health depends upon two important variables: whether the operation is legal or not and at what stage it is carried out. The accessibility and utilization of abortion services is confounded by a host of issues including societal mores, religious beliefs, the availability of family planning services and accurate knowledge about abortion. In countries where abortion is legal and abortion facilities are widely available, abortions pose a minimum threat to women's health. On the other hand where abortion is restricted, abortions are usually performed in a substandard and unsanitary conditions, leading to a high incidence of complications and resulting chronic morbidity and often deaths. However, greater access to

legalized facilities for poor rural women will depend on the nation's socioeconomic progress (Agadjanian 1998). Unsafe abortion is defined as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both (WHO, 1993).

In Bangladesh, abortion is illegal except in a few special circumstances such as to save the life of a pregnant woman. Nonetheless, evidence from hospitals, clinic records and other sources suggests that abortion is far from rare in Bangladesh. Many unqualified persons and institutions are involved with abortion (Khan et al., 1986). The government of Bangladesh, however, declared in 1979 that menstrual regulation (MR) is an "interim method of establishing non-pregnancy" for a woman at risk of being pregnant, whether or not she is pregnant. Many abortions are performed under the mantle of MR to avoid legal controversy. With the promotion of menstrual regulation (MR) services as a method of birth control in Bangladesh, late pregnancies are also frequently aborted. Although MR is offered in government hospitals and other family planning service centers, the service is not widely available in rural areas. Available records from hospitals and clinics suggest a rising trend in MR/abortion which is supposed to be declined as contraceptive use becomes more widespread and as users attain proficiency in the use of a method. It is hypothesized that the increase rate in abortion is partly because desired family size is declining and partly due to poor use-effectiveness resulting high failure rate. In this respect, it is important to investigate the reasons for abortion (for example, why one woman will go for abortion, while the other will go for having a live birth) and its dynamics in Bangladesh. The most commonly reported reason that women cite for having an abortion, in both developed and developing countries, is to postpone or stop childbearing. A recent study based on data from 27 developed and developing countries concluded that the reasons for abortion are often far more complex than simply not intending to become pregnant and it vary from culture to culture and country to country and the decision to have an abortion is usually motivated by more than one factors which include socioeconomic concerns and sexual behavior and partners marital relationships (Bankole et al. 1998). For example, in Sub-Saharan Africa where most of the women who obtain abortions are young and unmarried, the most important reasons for abortion relate to socioeconomic factors - specially, that women perceive pregnancy as disrupting education and employment. Partners relationship problems are another important reasons why women have abortions in this region (Renne, 1996). In Latin American countries, three categories of reasons compete for the position of primary importance: socioeconomic reasons (combining not being able to afford a baby and disruption to education and work), relationship problems and reasons related to being young. The first two categories of reasons are probably linked to the high prevalence

of consensual unions as such unions have higher dissolution rates than legal marriages and usually imply less commitment by the cohabiting partners. On the other hands these are less important reasons with most of the Asia countries including Bangladesh where desire to postpone or stop childbearing appeared as the most prominent reason for abortion.

The studies on abortion in Bangladesh are extremely limited in number and the scope and the results of the available studies are not consistent. This is mainly the results of underreporting caused by legal constraints as well as social sensitivity and ethical unacceptability, which make collection of accurate data on abortions through survey difficult and also affect the quality of the information obtained. However, the Matlab DSS collects complete pregnancy history data through the CHWs every fortnight since 1966 (monthly since September 1997). If the pregnancy of a woman is observed or reported during the fortnightly visit of a CHW, it is recorded. From 1966 to 1976, the outcome of a pregnancy was registered as one of three events: live birth, still birth, or fetal wastage. From 1977 to 1986, however, fetal wastage was classified as a spontaneous abortion or an induced abortion; and since 1987, an induced abortion has been recorded as either: (i) MR, (ii) D&C, (iii) drug applied, (iv) injection used, (v) drug ingested, (vi) internal manipulation via vagina (non D&C), (vii) manipulation on abdomen, (viii) other means or (ix) unknown. This abortion data can be utilized to analyse levels, trends and determinants.

Since the data collected on reproductive status is prospective in nature, it is largely free from the recall errors and biases that characterize most retrospectively collected data. Each of the Matlab CHWs is from the locality and has been known to the Matlab community very intimately. As a result, unlike other areas or other populations, there is little scope of suppressing any reproductive health events including abortion by a woman in Matlab DSS area. Data from Matlab thus provides a unique opportunity to examine issues related to abortion. However, due sensitivity and cultural reasons, it is likely that a certain proportion of abortion cases, particularly those abortions which are related to illegal conception, are not reported. The study will make an attempt to find the factors associated with those abortions and to have an estimate of the rate of such abortion. The experimental setting of the MCH-FP program in Matlab also provides opportunity to test the hypothesis that an intensive MCH-FP program reduces the quantity of abortion by reducing the unsafe abortion and thus improve the quality of abortion.

One of the puzzles of recent trends in contraceptive use is the growing number of women who report periodic abstinence (rhythm) as their current method of contraception. According to the

1991 Contraceptive Prevalence Survey, and 1993-94 Demographic and Health Survey such users comprise 5 percent of all currently married women in the reproductive age range and account for 12 percent of all users (Mitra et al. 1994). Periodic abstinence (rhythm method) is presently the third most popular method.

A number of important and fascinating questions naturally arise. Do these couples have sufficient understanding of reproductive physiology to use this method with any hope of success? If so, how effectively is it used? How is knowledge disseminated? To what extent does its use reflect lack of access to other methods? Should family planning workers attempt to persuade periodic abstinence users to shift to more effective methods? Should the family planning programme include reproductive physiology in its educational efforts? Our current understanding of the determinants and its effectiveness is extremely limited. The policy makers and planners need to gather considerably more knowledge about the strength and weakness of this method in Bangladesh to develop appropriate policy.

Method continuation and switching also deserve attention. As the proportion of couples who are willing to try contraception increases, the issue of method continuation and use effectiveness becomes a greater concern. Studies in Bangladesh suggest that continuation rates for most methods are rather low: typically 50 percent or so of adopters stop using a method within the first 12 months.

The surveillance sites of ICDDR,B are uniquely equipped to study continuation and switching, which call for the kind of prospective information readily available for these sites. Questions that can be addressed while existing data include: How do particular methods compare in terms of continuation and use-effectiveness? How do the characteristics of couples influence sustained use? For instance, are illiterate women able to use oral contraception as effectively as literate women? Do continuation rates improve or deteriorate over time? To what extent does discontinuation reflect weak motivation? What are the predominant patterns of method switching? How quickly does this take place? Are some couples inherently poor users of contraception or is it more appropriate to characterize high discontinuation and switching rates as a couple's search for the method that is best for them and which they will then use effectively for a long period?

Answers to these and related questions have huge implications for the national program, because they are directly relevant to contraceptive choice and field worker counseling strategies. It is therefore important to study the contraceptive use dynamics in Bangladesh.

Contraceptive use dynamics (CUD) studies usually encompass the following topics: contraceptive use and its method-mix, unmet needs, contraceptive switching behaviour, contraceptive discontinuation, failure and subsequent abortions. Some of these essential components of contraceptive use dynamics have been addressed separately by previous studies. However, this study will cover all the essential components of contraceptive use dynamics simultaneously.

Studies of contraceptive use dynamics constitute an essential component of family planning (FP) research and evaluation for a variety of reasons. Although contraceptive prevalence rates are typically stressed in evaluating a family planning program (FPP), they do not provide a comprehensive evaluation of program success. The impact of contraceptive use on fertility depends both upon effective use and continuity of use. Thus the FPP policy makers need to know the contraceptive failure and discontinuation rates for a complete assessment of program achievements. They also need this information to understand the efficacy of contraceptive use and to guide the program toward achieving its demographic goals. Information from contraceptive use dynamics studies is also essential in counseling couples who wish to space and/or limit births in order to assist them in making an informed choice of contraceptive methods, to provide them with a range of contraceptive options to suit their needs, and to encourage them to maintain use. Furthermore, contraceptive failure becomes a progressively more prominent fertility determinant as fertility preferences decline and as use of contraception increases. This implies that the study of contraceptive use dynamics becomes increasingly important for a population as it reaches relatively high levels of contraceptive use.

Principal Investigator: Bairagi Radheshyam

4. Research Design and Methods

A substantial part of the project's aim will be met through analysis of the existing data-set from Matlab MCH-FP program area and comparison area. The main data set that will be used in this study will come from the Matlab Record Keeping System (RKS) and Demographic Surveillance System (DSS). Data from different censuses (1974, 1982, 1996) will also be used for the project.

In addition to the existing RKS and DSS data, **quantitative and qualitative surveys** (focus group discussions and in-depth interviews) will be conducted in Matlab (MCH-FP and comparison area) and in another rural Thana (Kalkini Thana of Madaripur District) to identify the reasons for : (i) declining trend in permanent methods use; (ii) having an abortion; (iii) accidental pregnancy or failure of a method; and (iv) opting for the traditional method (rhythm). Attention will also be given to determining how effectively the rhythm method is used.

Both qualitative and quantitative methods of data collection have their own advantages and disadvantages, but they can complement each other. A skillful use of a combination of both techniques can maximize the quality of the data collected and reduce the chance of bias. The combination of different techniques is called *triangulation*.

Quantitative research methods, such as closed interview or written surveys, give numerical estimates (e.g., 20 percent of mothers surveyed breastfed their last child). This type of research generates conclusive data. It estimates how many, verifies the number of times, or documents differences between things that can be measured in numbers. On the other hand, qualitative research does not lead to numerical estimates. It gives the researcher a deeper understanding of what people think, feel and do (e.g., some mothers feel breastfeeding is not modern). Qualitative research helps get insight into why people think or act as they do about a particular research topic. It enables program management to gain insight into attitudes, beliefs, motives and behaviour of the target population. When applied properly, qualitative techniques are used

along with quantitative techniques in an interrelated complementary manner. Qualitative research is interpretive rather than descriptive. It involves small numbers of respondents who are generally sampled on a probability basis. No attempt is made to draw firm conclusions or to generalize results to the population at large.

Focus groups discussion (FGD) are one of the several qualitative research methods. Other methods are observation, individual in-depth interviews and community meetings. FGD and in-depth interviews are thought to be two most important qualitative methods of data collection for this study. ^ Appropriate guidelines for conducting FGDs and in-depth interviews will be developed in consultation with the anthropologist.

While conducting the FGDs and in-depth interviews, privacy will be guaranteed. FGDs and in-depth interviews on female participants will be conducted by the the female moderators and reporteur.

Matlab Setting

Since the major part of the work will be done in the Matlab MCH-FP project area, a brief description of the project is in order. The starting point for demographic research at ICDDR,B came with the establishment in 1966 of the Demographic Surveillance System (DSS), begun in Matlab thana. Matlab is about 50 kilometers southeast of Dhaka, though transport and communications are so poor that the area is quite isolated from the capital. It is a low-lying deltaic floodplain intersected by canals and branches of the Meghna and Gumti rivers. Travel between villages and the market town is by foot or country boat. Farming is the main occupation, more than 40% are landless. About 85% of the population is Muslim, the rest being almost all Hindu.

The area was originally chosen as a suitable site for trials of cholera vaccines, and the DSS was set up to provide a continuous register of births, deaths, marriages, divorces and migration as a way of keeping track of households and individuals. More than 200,000 persons live in the area covered by DSS. Each household in the area is visited once every two weeks by a field worker who records births, deaths, marriages and other demographic information.

In July 1975 a Contraceptive Distribution Project (CDP), with village midwives distributing pills and condoms to clients in their homes, was started in part of the DSS area. It was to test

the basic idea of community-based distribution, on the premise that getting supplies and messages to the people would lead to greater contraceptive use (Huber and Khan 1979).

In 1977 a more comprehensive MCH-FP project was begun in half of the area covered by DSS. New workers (Community Health Workers, or CHWs) were hired and trained to deliver services through home visits twice every month (Bhatia et al, 1980). The new workers had to be local married women with eight years' of schooling, and themselves users of contraceptives. In the following years, different components of MCH were added to the tasks of the CHWs. In the MCH-FP area, in addition to the DSS, there is a record-keeping system for more complete recording of contraceptive use, children's immunization and nutrition status, and morbidity. This also serves as the Management Information System (MIS) for managing service delivery.

The Matlab project has several datasets. The main dataset that will be used in this study will come from the Matlab Record Keeping System (RKS). It covers about 16,000 eligible women, living in any of the MCH-FP villages and currently married and of reproductive age (up to menopause), and about 18,000 children under 5 years of age. In addition to RKS data, all DSS (Demographic Surveillance System) data, and data of different censuses (1974, 1982, 1996) will be used for the project.

One function of the RKS is to record all services provided to eligible mothers and children. This includes contraceptive methods, ORS packets, essential drugs, immunizations, nutrition supplements, and also anthropometric measurements and referrals to the MCH-FP clinics in the sub-centre or in Matlab.

Eighty female community Health Workers (CHWs) visit each household of their village(s) fortnightly. Each CHW is responsible for an average of 200 households, and they visit 20 households per working day. During the first visit of the month, they inquire about the mothers, their menstrual status, contraceptive use, contraceptive side-effects, pregnancy, breastfeeding and morbidity since the last visit. They provide contraceptives and basic medicines as needed, and refer patients with complications to one of the 4 sub-centre clinics staffed by paramedics. They carry a computer-printed Service Record Book (SRB), in which they note, in a coded format, all changes regarding the information described above.

CHWs meet their supervisors and managers twice a month at the sub-centres to receive directives, ensure continual training, and perform administrative tasks. A group of coders also

join these meetings and transfer the information from the SRBs, which CIWs carry all the time, to coding sheets.

Each and every person in Matlab has a unique identification number. With the help of this identification number, the RKS file can be linked with the files of the Demographic Surveillance System (DSS), occasional socioeconomic surveys (SES), etc. It may be mentioned that much of this data, such as reasons for discontinuation, sources of family planning materials, which have been collected since 1987 have not been cleaned and transferred to the computer as yet.

Survey Design for Kalkini Thana

Kalkini is a typical rural thana of Bangladesh. It is a very remote (216 km from Capital city Dhaka) and riverine area (nested by many river and canals). Most of the areas of the thana is inaccessible by road. Country boat or motor boat is widely used for communication within the areas. It is a very big thana consisting 15 unions and 2,51,000 population. Compared to most of the other rural thanas in Bangladesh, Kalkini has higher proportion of Hindus (....%). There are few areas in Kalkini where the proportion of Hindu population is as high as 98% (Nabagram Union). This religious difference can make a difference in contraceptive use dynamics. Besides, all unions do not have equally good communication with thana head quarter. This could also be a determining factor in contraceptive use dynamics. Considering these factors we have decided to employ stratified cluster sampling design in selecting the users from Kalkini thana excluding the Hindu majority unions.

We first divide the unions of the thana in to two strata on the basis of accessibility (good communication and with in 5 km from thana head quarter). Out of 15 unions, 6 are accessible and 9 are inaccessible. After exclusion of Hindu majority thana, we have 6 and 7 unions in first and second strata respectively. To select the unions from each strata we applied probability proportional to size (PPS) sampling. We propose to select 4 unions: 2 from accessible category and 2 from in accessible category. The selected unions are as follows:

1. Alinagar (accessible)
2. Balirgram (accessible)
3. Bansgari (inaccessible)
4. Ramzanpur (inaccessible)

From each selected union, equal number of users will be selected for a particular survey. For different surveys, different number of users will be selected from the selected unions. Within the selected unions the selection of users will be made through systematic sampling considering its flexibility of execution by a non-statistician also. The sampling frame in each selected union will be made available from the FWA register.

In the following sections a brief description of the methodology on different issues are given.

Permanent method issues

Levels, trends and determinants of permanent methods will be studied by analysing the existing RKS and DSS data from Matlab. However, to identify the factors responsible for declining trends in the popularity of permanent methods a sub-study will be undertaken in Matlab and Kalkini Thana. For the sub-study both quantitative and qualitative (FGD and indepth interview) method of research will be employed.

As we have mentioned earlier, permanent method use may be affected by service-related factors and also by individual and family factors. Service related factors such as presence or absence of sterilization facilities, differences in the availability of temporary and clinical methods among the areas may make a change in the use of permanent methods etc. For this, areal variation in method mix need to be examined and explanation sought in terms of service providers' and program managers' attitudes, procedures. This will be done by comparing the method mix between two areas (MCH-FP and comparison area) in Matlab and also by comparing the method mix and facilities in different districts in the country. The district level

data will be obtained from Management Information System (MIS) office of the Government. Other service related factors such as lack of motivation, lack of trained doctor/nurse and withdrawal of sterilization camp system and monetary incentive etc. which may act as a barrier to the acceptance of sterilization will also be examined. Besides, to identify the reasons for declining trends in use of permanent methods, the matter will be examined from a historical perspective as well.

To identify the individual and family factors such as fear of operation, religiosity, family members attitude, quality of services, preference for modern reversible methods, lack of knowledge about sterilization etc. , a case-control study will be undertaken in the Matlab MCH-FP area and in Kalkini Thana of Madaripur district. A sample of 300 permanent method users (250 tubectomy and 50 vesectomy as 85% of the total permanent method users are using tubectomy) and a sample of 300 temporary method users who do not want more children in each area will be sufficient to identify a relative risk of 2 with 5% level of significance and 90% power of the test (Kahn 1983; p 53-55). Control will be matched for age, family size, sex composition of children, desire for no more children etc. Draft questionnaire on permanent method issues may be seen in Appendix 1.

To gain more insight about permanent method use and its declining trend, qualitative method of data collection through FGD and individual in-depth interview will be followed. Five FGDs will be administered in each area of research (Matlab MCH-FP and Kalkini Thana). Each FGD will consist of 5 individuals from each of the following category of client.

1. Sterilized male
2. Sterilized female
3. Temporary method user (male who do not want more children)
4. Temporary method user (female who do not want more children)
5. Program managers and service providers.

The individuals from each category will be selected at random from the study area. Another 5 individuals will be selected from each of the above category of the respondents for in-depth interview. Thus, there will be 25 in-depth interviews in Matlab and 25 in Kalkini.

Abortion issues

It is to be mentioned here that the study on abortion issues will be confined in Matlab MCH-FP and comparison area only due to lack of data on abortion in Kalkini. Levels, trends and determinants of abortion and the impact of an MCH-FP program on the quantity and quality of abortion will be examined from existing DSS and RKS data and from an ongoing abortion study in Matlab area. However, to investigate the reasons for abortion, a case-control study will be undertaken with women who had an abortion as the cases and the women who had a live birth as the control. In each group, there will be 300 women. This sample size will be sufficient to identify a relative risk of 2. The cases and controls will be matched for area (MCH-FP vs Comparison), age, parity, sex composition of children before abortion, education, etc. The variables (risk) of interest will be occupation, religiosity, modernization, prior acquaintance with an abortee, etc. The Matlab DSS area has more than 150 abortions each year. So the project will need to study all the abortion cases of 1997-98 only. Draft questionnaire on abortion issues may be seen in Appendix 2.

For qualitative study on abortion issues, 6 FGDs will be conducted in Matlab MCH-FP and comparison area. In each area there will be 3 FGDs each consisting 5 participants from each of the following categories.

1. Women who had abortion
2. Women who had live birth
3. Abortion providers
4. Males having 2-3 children (from the households neighbouring to women who had an abortion).

Similarly there will be 30 in-depth interviews in two areas. There will be 5 in-depth interviews on each of the above category of respondents.

Failure issues

While the levels, trends and determinants of failure rates of each temporary method will be investigated from RKS data, the reasons for failure will be investigated by a case-control study in the Matlab MCH-FP area for pill and condoms, two of the most widely used methods in the country. Failure rates of these two methods were found to be very high in Matlab, which is probably true for the rest of the country. It will be difficult to undertake this investigation in the Comparison area or in Kalkini Thana, because, unlike the MCH-FP area, due to the absence of any systematic record keeping to track failures in these areas. A case for a method will be who failed and control will be an user of the method who did not fail. Identification of the case and control will be through RKS data. The sample size will be 200 for each group for each method. Control will be matched for age, parity, sex composition of children, SES, desire for children, etc.

There may be a question as to whether the Matlab MCH-FP failure rate can be compared to the failure rate of the nation. To answer this question, compliance of pills and condoms will be investigated from the MCH-FP area and Kalkini Thana of Madaripur district from 200 users of each method in each area. Draft questionnaire on failure issues may be seen in Appendix 3.

For qualitative study of pills and condom failures and their compliance, six FGDs will be conducted in 3 areas (Matlab MCH-FP and comparison area and Kalkini Thana). In each area there will be two FGDs, one for pills users and one for condom users. Each FGD will comprised 5 participants. Similarly there will be 10 in-depth interviews in each area - 5 for condom users and 5 for pills users resulting 30 in-depth interviews.

Rhythm issues

The determinants and use-effectiveness of the rhythm method use will be estimated from RKS data. A list of 100 users of the rhythm method will be identified from the RKS file and data will be collected from them on their understanding of reproductive physiology and why they use this method and how effectively they use this method. Draft questionnaire on rhythm issues may be seen in Appendix 4.

To gain more insight about rhythm methods, 4 FGDs and 20 in-depth interviews on rhythm method users will be conducted in Matlab and Kalkini Thana. In Matlab MCH-FP area there will be 2 FGDs - one for male and one for female. Similarly in Kalkini thana there will be 2 FGDs.

Evaluation of Service Delivery through CC Approach

The study will take the opportunity for evaluation of the impact of integrated health and family planning service delivery system from a static centre called community clinic (CC) for each 6000 population replacing the house-to-house delivery service. This new delivery system is expected to be more cost-effective and sustainable for Bangladesh and other developing countries.

For this evaluation study, the Matlab MCH-FP area will be divided into two equal parts. In one part, the existing door-to-door health and FP service delivery will continue. In the other half, services will be delivered through CC. The staff composition in the Matlab CC will be somewhat different from the Government's proposed CCs. In Matlab, a CHW will provide both health and family planning services. In each CC, there will be one CHW. The CC will be of varying size (for example, 1,500 to 3,000 population) to investigate the impact of the size. The problems that may arise in getting the services from the CCs will be monitored and measures will be taken to improve the delivery system during the first six months.

This type of study design is called non-equivalent control group design. The non-equivalent control group design is a particularly good one to use in evaluation if the event has already taken place or yet to be taken place. It is also a good design to use when a program intervention is introduced into one area (say CC area) and we want to compare the program effects in that area against a similar, but not necessarily equivalent, neighboring area. One critical issue with this design is the fact that both groups are self-selected. Therefore, the researchers have to make special efforts to approximate comparability between the experimental and control groups. In using this design, one should give careful attention to the analysis and comparison of the pre-test baselines of two groups. In particular, one should look for selection effects or major differences between the experimental and the non-equivalent control group that might help explain differences (or lack of differences) in the post-tests information comparison. However, using multivariate statistical techniques, the researchers can equate the experimental and control groups on the basis of some common characteristics (e.g., age, education, ethnicity, class) and the pre-test, thus ruling out the alternative explanation that pre-existing differences in those factors accounted for differences between the two groups on the post-test.

It is expected that after shifting to CC approach the expenditure for family planning will be reduced as it will require less operational cost and supply cost. We will calculate per capita expenditure of family planning for house to house delivery system as well as for CC approach excluding the cost for health component. We will also calculate the Couple Years of Protection (CYP) under both the system. The CYP will be adjusted for age. A comparison of cost and CYP under both the system will tell us which system is cost-effective and to what extent from the program point of view. We will also calculate the cost of the person-hour lost by the clients for traveling and for waiting to get the services from CCs. The cost for traveling and wastage in two systems will also be estimated and compared.

Monitoring and evaluation of improved FP delivery

The work of the first three years of the project is expected to produce a complete set of recommendations for the improvement of the FP program in Bangladesh and other developing countries. The remaining period will be for implementation and evaluation of these recommendations. The recommendation will be implemented in Matlab and in Kalkini Thana following a quasi-experimental design, so that the impact of the intervention (improved FP delivery system) can easily be evaluated. We propose to implement improved FP delivery in 50% of the Matlab MCH-FP area and Kalkini Thana, and the remaining 50% of the Matlab MCH-FP area and Kalkini Thana be used as control.

In Matlab the evaluation study will be done on the basis of the on-going RKS data, but for Kalkini Thana it will be done through two quantitative surveys: one at the beginning of intervention and the other after one year. For the survey, a modified cluster sampling design that is being used by the UNICEF in Bangladesh and other countries will be followed (Turner 1996). This is modified version of the sampling design suggested by WHO for estimating the coverage rate of the EPI. A "mouza" will be considered as a cluster. Seventy-two mouzas with 50 couples from mouza will be selected for interviewing (interviews with 3,600 married women 10-50 years old). The respondent who will be interviewed in the baseline survey will be reinterviewed in the follow-up survey.

5. Facilities Available

The work will be done at ICDDR,B, which has all the necessary facilities such as library, computers, statistical packages, transport, field settings, and collaborative arrangements for doing work in a government area with the sample size required for this study.

Principal Investigator: Bairagi Radheshyam

6. Data Analysis

Three parts can be identified in the proposed study. The project will begin with the cleaning and computerization of data collected in the Matlab MCH-FP area by the Record Keeping System (RKS) but not yet transferred to the computer. Using this improved data base, the existing data will be analyzed relating to the topics of discontinuation, use of methods, switching behavior, unmet needs and reasons of use versus non-use, abortions and contraceptive failure.

Using the information from these 3 sources of data (RKS and quantitative and qualitative data from the DSS and non-DSS areas), a fairly complete analysis on the above topics will be possible.

To evaluate the impact of the CCs, CPR, method mix, continuation and failure of different methods between the CC area and door-to-door delivery areas will be calculated and compared.

Preliminary analysis of both quantitative and qualitative data will be done by tabulation and cross-tabulation. A suitable statistical model and life table technique will be used for univariate and multivariate analysis. The appropriate model will depend on the nature of the dependent variables. A few examples are given below:

Dependent Variables and Proposed Analysis Techniques

Dependent Variables	Type of variable	Types of analysis	
		Bivariate	Multivariate
1. Desired Family Size	Discrete	Mean	Linear Regression
2. Contraceptive Prevalence	Dichotomous	Proportion	Logistic Regression
3. Contraceptive Method Mix	Categorical	Proportion	Multinomial Logit
4. Contraceptive Adoption	Dichotomous	Proportion	Logistic Regression
5. Switching	Categorical	Contingency Analysis	Multinomial Logit

6. Contraceptive Continuation	Failure Time	Life Table Prob. Survival Rate	Discrete-time Hazard
7. Method Effectiveness and Failure	Time	Life Table Prob. Survival Rate	Discrete-time Hazard

A List of Independent Variables is Shown as an Example

Socio-demographic and family planning:

Age (continuous)
 Total pregnancy (Discrete)
 Living children by sex (Discrete)
 Reproductive status (Nominal)
 Lactation (Nominal)
 Number of methods known (Discrete)
 Dwelling space (an economic indicator in Matlab area)
 (continuous)

Education of wife (Continuous)
 Education of husband (Continuous)
 Religion (Nominal)

Motivational:

Desire for additional children (Nominal)
 Feelings about having another son/daughter (Nominal)
 Desired length of spacing next birth (Continuous)

Familial:

Husband's desire for additional children (Nominal)
 Mother-in-law's desire for additional children (Nominal)
 Husband's/mother-in-law's attitude towards family planning and abortion (Nominal)

Program characteristics:

Prior use of current method (Nominal)
 Side-effects/side-effects management (Nominal)
 Frequency and regularity of visits by female outreach worker (Discrete)
 Quality of outreach visits (Ordinal)
 Effectiveness of female outreach worker (Ordinal)

7. Ethical Assurance for Protection of Human Rights

The study will be based mainly on secondary data of ICDDR,B. However, some data on contraceptive use, reasons for and health consequences of contraceptive failure and abortions will be collected from the Matlab DSS and non-DSS areas by female workers from females and by male workers from males. The information will be kept confidential and will be used only for research purposes. The study will not create any health risk for the respondents. However, the consent of the respondents will be obtained before the interview as per the attached "Voluntary Consent Form".

Principal investigator: Bairagi Radheshyam

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Principal investigator: Bairagi Radheshyam

9. Dissemination and Use of Findings

The findings of the study will be disseminated through several national seminars where the researchers, program managers and policy makers from government, non-government and international agencies will be invited. We also hope to present the results in more than one international conference/meeting such as Population Association of America. However, the main vehicle for dissemination will be publication of the results in peer reviewed journals. We will also try to implement the recommendations of this study in one of the 50 thanas where the Government is planning to initiate CC of HPSP from July 1998.

If this study can identify the reasons for downward trend in the use of permanent methods and low use-effectiveness of different temporary methods and can demonstrate that an alternative delivery system through CCs can make a FP program more cost-effective it will have important lessons for program managers and policy makers.

10. Collaborative Arrangements

This will be a collaborative study of the ICDDR,B University of Dhaka and the National Institute of Population Research and Training (NIPORT). ICDDR,B is collaborating with many national and international organizations and institutions for different research in health and population. The University of Dhaka is the most prestigious academic institution in Bangladesh. Dr. Mazharul Islam, a co-investigator of this project, is a faculty member of this University. He will utilize the data and results of this project in his research work and teaching at the graduate level at the university. On the other hand, NIPORT is the most important institution of the government for developing and modifying course materials and training manuals for family planning workers and managers in the country. Dr. Ahmed Al-Sabir, a co-investigator of this project, is Director of Research at NIPORT. His involvement in the project will be very useful for the development, evaluation and implementation of alternative FP service delivery.

12. Voluntary Consent Form

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Purpose

Assalam-alaikum! ICDDR,B has been involved in population and health research in Matlab Thana for about three decades. It is planning to undertake a research project on "Contraceptive Use Dynamics?" The main purpose of the study is to gain a better understanding of the problems related to different family planning methods, and its use-effectiveness. You have been invited to participate as someone who might be able to provide valuable information on this subject.

Procedures

If you agree to participate, I will ask you some questions about your contraceptive use, the reasons for deciding to use or not use, reasons for declining permanent method use, menstrual regulation or abortion, where you go for advice and information about health matters, what kind of treatment you do you receive, and future contraceptive use (whatever is applicable). These questions will take about 20 minutes of your time.

Confidentially

Your name and address will be kept strictly confidential. The information that you give will be used only for this research.

Risks and benefits

Your participation in this research is entirely voluntary and will not in any way affect your relationship with ICDDR,B or the services to which you are entitled. Some questions may cause discomfort, but you may skip any question that you do not wish to answer, and you may stop the interview at any time. The findings of this project are expected to be useful for the improvement of the reproductive health of women of Bangladesh and other developing countries

Certificate of consent

Participation in this research is entirely voluntary. You are free to withdraw from the study at any time or refuse to answer any question you wish.

Do you have any questions about the information that I have just read? If so, please feel free to ask me about anything that is unclear.

I certify that the Voluntary Consent Form has been read to the interviewee before the interview, and that consent has been freely given.

Signature of the interviewer

Date: _____