

**DETERMINANTS OF AREAL VARIATION IN
CONTRACEPTIVE PRACTICE IN BANGLADESH**

by

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ABSTRACT

The debate about which is the best route to fertility decline in less developed countries - social and economic development versus aggressive family planning programmes - has been termed the major controversy in demography (Berelson, 1975). In this dissertation an attempt has been made to evaluate this debate in light of the experience of a family planning experimental project in a rural area of Bangladesh. The project, known as the Matlab MCH-FP project, was initiated to test the effect of family planning on fertility in the absence of significant socio-economic development. A dramatic increase in contraceptive use-prevalence following the initiation of the project confirmed that there existed an unmet demand for contraceptive services in the area. However, the average use rate soon stabilized at around 33 per cent and remained more or less the same in the next four years. More importantly, from the beginning of the project there was pronounced clustering of users in some villages, resulting in a wide inter-village variation in contraceptive use-prevalence rates.

In order to identify the factors associated with the observed areal variation in contraceptive practice we conducted a series of surveys using community (village), female village workers, bari and eligible women residing in the bari as units of investigation. At the level of the village we observed that village communities varied in their responsiveness to family

planning services and much of this variation could be explained by a combination of factors, but the key factors tended to be the village literacy rate defined by the proportion of literate household heads, and the credibility of the female village worker defined by her age, strength of samaj and size of target population. At the level of the individual woman we observed that much of the variation in contraceptive use among eligible women could be explained by three factors - number of living sons, education of husband and wife, and wife's listening to the radio. An examination of the effects of these variables by areas, however, suggested that a fuller realization of the potential effect of the latter two variables indicating individual's modernity might require a relatively modern environment. Thus we observed that in the low use-prevalence areas dominated by illiterate and conservative bari heads, education of husband and wife, and wife's listening to the radio did not exercise any significant effect on the individuals' contraceptive use. In such an environment, traditional group values and conservatism appeared to override individuals' modernity; the opinion of the bari head became a crucial factor in the individual couple's decision to use contraception.

To conclude, of the two schools of thought - that which argues that basic social and economic conditions are the primary determinants of fertility reduction, and that which argues that the supply of contraceptive services is the key - neither is fully vindicated by our findings on the determinants of areal

variation in contraceptive practice in the Matlab MCH-FP project. Rather, the results seem to show that the actual determinants are exceedingly complex. Both the inputs into the family planning programme and the general environment into which they are introduced determine the response, but both are greatly affected by the manner in which the interventions are organized and implemented.

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CHAPTER 1

INTRODUCTION

1.1 OBJECTIVES

The rapid population growth of less developed countries is one of the most pressing issues among current national and international problems. The most common policy response has been the introduction of government family planning programmes with the objective to reduce fertility. The basic assumption behind such a response is that the motivational shift from large to small families that occurred over many decades in western countries can be accelerated in less developed countries by family planning programmes designed to generate and satisfy demands for contraceptive services (Freedman and Berelson, 1976).

The relatively moderate achievement of family planning programmes in many less developed countries such as India, Pakistan and Bangladesh has, however, brought into question the adequacy of this assumption. Many of those who sought to explain the relative failure of these programmes have argued that in order for such programmes to be successful and fertility rates to be reduced it is necessary for these countries to achieve a fairly advanced level of development (Blake and Gupta, 1975; Hauser, 1971; Davis, 1967). However, others claim that the main reason for the failure of these programmes lies in their weakness in satisfying the existing demand for contraceptive services and generating new demand through persuasive efforts of field-level workers (Boque, 1967; Ravenholt and Cho^u, 1974). Their

argument is based on the observation that many respondents in sample surveys in these countries express attitudes and intentions consistent with birth control behaviour despite a low prevalence of contraceptive use.

This debate over 'the best route' to fertility decline - social and economic development versus aggressive family planning programme - has far reaching research and policy implications. At issue is whether the family planning programmes in less developed countries can succeed or whether funds are more appropriately invested in social and economic development programmes. The debate continued through the 1970s and remains unresolved to date.

The Matlab thana (county) of Bangladesh is one of the few areas where some empirical research related to this debate has been done, under the auspices of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B). In late 1975, the ICDDR,B began a contraceptive distribution programme in the area with the objective of confirming the existence of unmet demand for contraception. From the beginning of the programme a pronounced clustering of users in some villages, resulting in a wide inter-village variation in contraceptive use-prevalence rates, has been observed. The present study is an investigation of the factors associated with this observed areal variation in contraceptive practice. The primary objective of the study is to examine to what extent theories and findings of other studies on the causes of variation in levels of contraceptive practice apply in the rural area of Bangladesh. A corollary objective of the study is to identify some policy parameters and guidelines that could be utilized to improve or modify the present educational and

motivational strategy of the Matlab project, in particular, and the national population control programme, in general. The ultimate objective of the study is to contribute to a better appreciation of the debate over the 'best route' to fertility decline in the less developed countries mentioned above.

1.2 BACKGROUND

Bangladesh is the eighth most populous country in the world with an estimated population of 90 million as of 1980 and an annual growth rate of 2.5 per cent (Bangladesh, 1980). The necessity to control population growth as a prerequisite for achieving the country's developmental goal was seriously recognized as early as 1965 when a large-scale national family planning programme was initiated. However, the National Impact Survey conducted in 1968 revealed that while the family planning message had reached a large proportion of the population, there has been little success in promoting family planning practice. Thus, while 64 per cent of married women of reproductive age reported during the survey that they had heard about family planning and 55 per cent expressed a desire to cease child-bearing, only 3.3 per cent were found to be using modern contraceptives (Sirageldin et al., 1975). Similar dissonance between reported desire and actual practice was noted by other recent surveys, both national and regional [1]. A crucial suggestion underscored by these studies was that the lack of general availability of modern contraceptives was the major constraint to programme success.

[1] A useful review of these surveys appeared in Khuda, 1984.

In order to test this hypothesis, the ICDDR,B in collaboration with the Bangladesh Ministry of Health and Population Control initiated a contraceptive distribution programme in its field research area in Matlab, in late 1975. Before proceeding to a discussion of the programme, a brief description of the socio-economic condition of the area is in order to familiarize readers with the overall setting of the study.

Matlab is a rural thana [2] of Bangladesh, situated at a distance of about 45 km south-east of Dhaka, the capital of Bangladesh (Fig. 1.1). To get to the thana headquarters from the capital requires first a bus ride of about two hours and then another four hours' journey by launch. The area is low-lying deltaic plain intersected by a tidal river, Gumti, and its canals (Fig. 1.2). They are fed primarily by the river Meghna, one of the three largest rivers draining the country. The river Gumti has divided the area into two parts and is used as a transportation route within and outside the area. A recently constructed motorable road links the Matlab thana headquarters with the district town of Comilla, but communication within the area is only possible by foot, country boat and, in some cases, small steamer or launch.

As in the greater part of Bangladesh, the people of Matlab are mostly poor and uneducated, and find their livelihood in agricultural pursuits. According to the 1974 census taken by the ICDDR,B in the area only 30 per cent of the population aged five years and over were

[2] A thana is the lowest administrative unit of the country generally covering 150-300 villages with 200,000 - 400,000 population. In 1974, there were 370,000 people living in the Matlab thana within an area of 158 square miles. including river (Bangladesh. 1975).

FIGURE 1.1

Bangladesh Map Showing the Location of Matlab

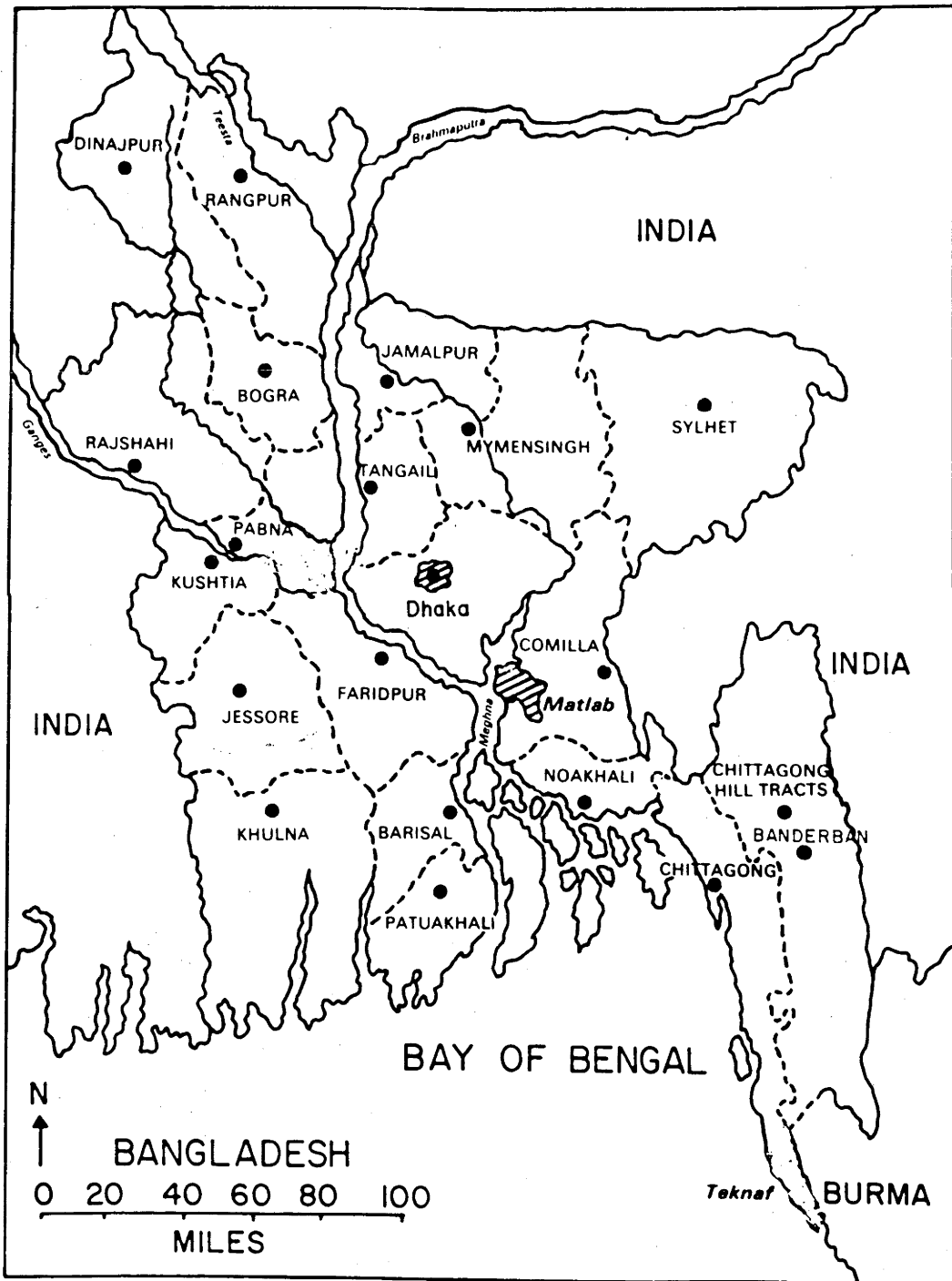
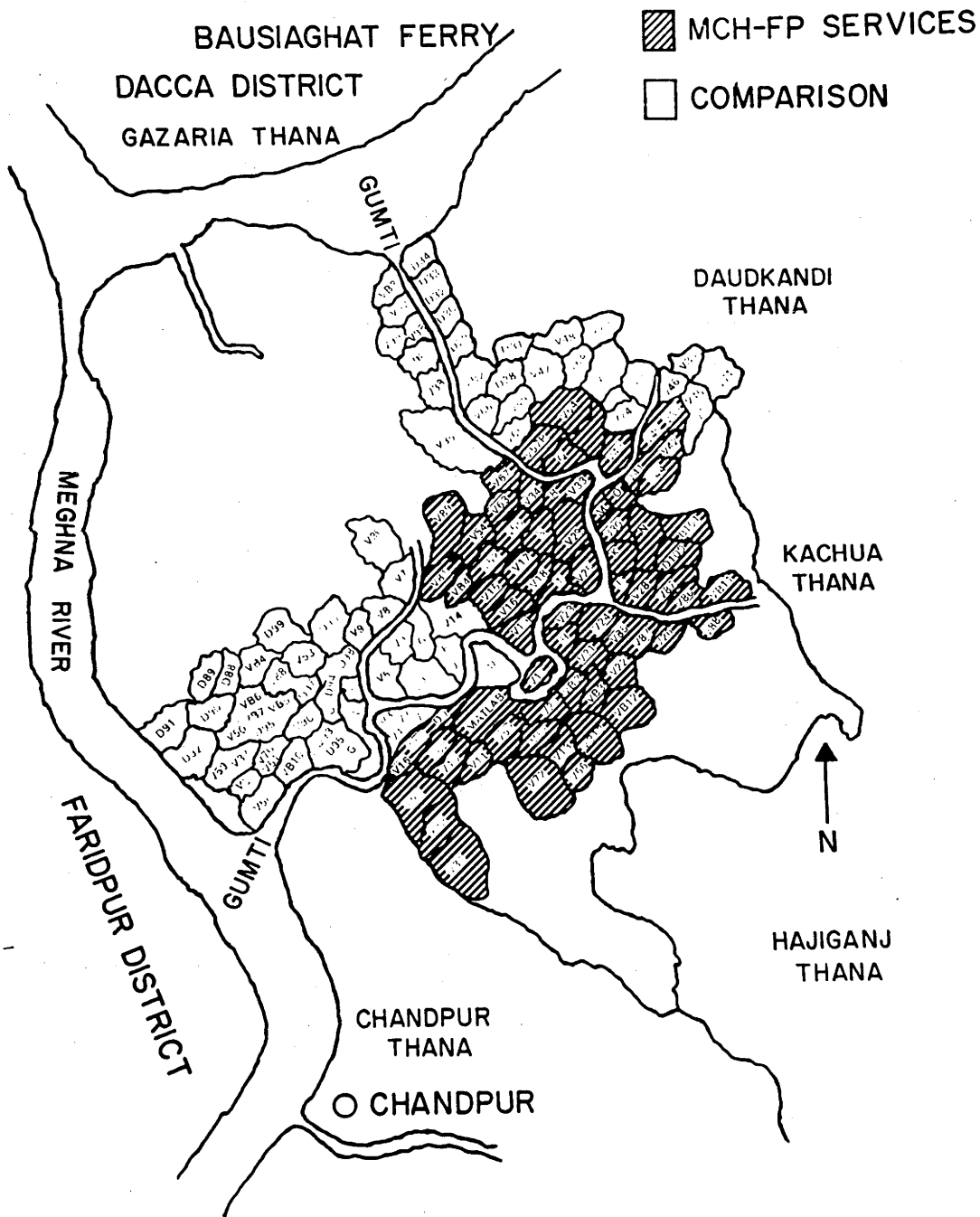


FIGURE 1.2

Map Showing the Villages of the Matlab Field Surveillance Area



literate, but among the females only 16 per cent were literate (ICDDR,B, 1978). Except for a few villages where fishing is the main source of livelihood, agriculture is the principal economic activity of the area. This agricultural life is very hard. In the best of times it does not provide a great deal more than subsistence and in bad times when the rains fail or when there is widespread flooding, the hardship becomes particularly severe for most people. Rapid growth of population has recently exacerbated the situation. Holdings are becoming smaller and tend to be of uneconomic size. In 1974, about 20 per cent of the families were absolutely landless (ICDDR,B, 1978). If 'landless' is, however, defined as ownership of less than 0.5 acres, 47 per cent of the families would be classified as landless - a proportion that has been growing over time. For many families share cropping and work on other's land on a daily wage basis have become the main sources of livelihood. Also, more people are now trying to earn their living or augment their income by trade, mostly in local markets. A good number of families (about 10 per cent) have their chief bread-winner working in jute mills and factories in different towns and cities of the country (Rahman et al., 1979).

Religion and kinship are the two main features of all social organization in the area. About 88 per cent of the population belong to the Muslim community; essentially all the remainder are Hindus. Differences in some social and religious customs between the two communities gave rise to a preference among the population to live in contiguous residential areas with their co-religionists (Aziz, 1979). However, the two communities have been, by and large, tolerant to each other and communal antagonism seldom occurs. As a rule Muslims and Hindus attend the same schools and Muslims consult Hindu health

practitioners and vice versa.

The patrilocally established homestead or bari, as it is called locally, is the basic residential and social unit in the area (detailed description of the bari is given in Chapter 2). It provides a major organizational nucleus for political and social activity in the village. For women, the bari defines a physical as well as a social boundary within which they should move and work. The practice of purdha (a social custom which excludes women from extra-familial social activities and restricts their appearance before any non-relative male person, including some senior male relatives) does not allow women to work outside their own baris.

The population is characterized by high fertility and comparatively high mortality. Until very recently birth rates and death rates were well above 40 and 15 per thousand respectively, with slight year-to-year fluctuations due to natural calamities (D'Souza et al., 1983). In recent years there has been a downward trend in these rates, particularly in the villages where the ICDDR,B has introduced selected health interventions (see for example, Rahman and D'Souza, 1982; Chen et al., 1983).

The ICDDR,B began a field research programme in the area in 1963 with the basic aim of testing cholera vaccine in field-trials. A small diarrhoea treatment unit was established in the thana headquarters and a fleet of small speed boats was maintained to transport patients to the unit and to support the field work. In order to obtain demographic data for the epidemiological study a continuous household registration of births, deaths and migrations (known as the Matlab demographic surveillance system or DSS and

described in Chapter 3) was instituted in 1966. While most of the data were intended originally to facilitate epidemiological studies, they subsequently became valuable in their own right for demographic studies. The availability of a reliable data base and registration of vital events motivated the ICDDR,B to undertake the contraceptive distribution programme mentioned earlier.

At the beginning of the contraceptive distribution programme [3] (or CDP as it was called initially) there were 233 villages with an estimated population of 260,000 as of 1975 in the Matlab DSS area. The CDP involved free distribution of oral pills and condoms on a house-to-house basis to half the population of the DSS area. The other half of the DSS area was to serve as a comparison group. One hundred and fifty-four lady village workers of the ICDDR,B known as dais, were briefly trained to work as distributors and depot-holders of the two contraceptives. The dais were usually elderly village women, many of them widows, and illiterate. For ten to twelve years they had been making daily home visits to collect information on births, deaths, marriages and migrations, and to detect diarrhoea cases in their respective assigned villages. One dai was responsible for approximately 1,000 population or 200 families in the neighbourhood of her residence.

The initial results of the CDP were encouraging. Within three months following the initial mass distribution, the percentage of married women of reproductive age currently using contraceptives, mainly oral pills, rose from a base-line level of one per cent to

[3] Detailed description of the CDP and its impact appeared in Huber and Khan, 1979; Rahman et al., 1980; Stinson et al., 1982.

about 18 per cent (Table 1.1). However, this was only about half of the expected point-prevalence demand assessed by the bench-mark KAP survey (Osteria et al., 1978). More importantly, only 37.6 per cent of the acceptors sustained use for one year and barely over 26 per cent continued use for two years (Rahman et al., 1980). The rate of recruitment of new acceptors also fell from 25 per cent in the first three months period to about two per cent in a corresponding period in the remaining part of the year (Rahman et al., 1980). As a result, the current use rate fell below 12 per cent in the second year of the programme (Table 1.1). The resulting demographic impact of the programme was only temporary and largely limited to older women (Stinson et al., 1980).

A number of special studies and follow-up surveys were conducted during late 1976 and early 1977 to identify the factors responsible for the programme deterioration. The most important factors underscored by these studies were: limited choice of contraceptive methods, discouragement due to the experience of side-effects, inadequate medical back-up to treat or alleviate side-effects, and limited capacity of the illiterate dais of low social status to counsel on the methods and on the side-effects (Rahman et al., 1979). Introduction of injectable contraceptives (DMPA) in six villages through a trained worker led to an increase in all-method contraceptive practice to 20 per cent in a four-months period, with a 14 per cent of pill users switching to injectables (Huber et al., 1977). From this experience it appeared that better educated, better trained and supervised village workers offering a wider range of methods, and providing a more intensive follow-up and referral could serve the latent demand for contraception more effectively than the

TABLE 1.1

Percentage Distribution of Married Women Aged 15-44 years*
by Current Use of Contraceptives, Matlab MCH-FP Project,
October 1975 - July 1982

Months since beginning of the programme	Percentage of current users**
CDP began	1.0
3	17.8
6	16.8
9	14.2
12	14.4
15	12.5
18	12.8
24	12.0
MCH - Fp began	--
27	20.7
39	32.5
51	33.5
63	33.4
75	33.6
82	34.4

Note: * Women aged 45 years and above were also included if they reported to have regular menstrual periods.

** Women reported to be using or to have used a method in past two weeks.

Source: Matlab MCH-FP Service Records.

This hypothesis led to a substantial modification of the field structure staffing and programme activities of the original CDP in late 1977. The modified programme, known as the Matlab MCH-FP project, replaced the dais by a cadre of better educated and better trained female village workers (FVW), backed up by a strong supportive supervision and technical staff in 70 villages (population about 92,000 in 1981) to provide a full range of contraceptives and selected MCH services [4]. The villages under the MCH-FP project were drawn equally from the original distribution and comparison areas. In all, 80 FVWs were locally recruited, all of them literate, young married women. They initially received two weeks' training in human reproduction and fertility control technology, followed by two weeks of closely supervised field training. Subsequently, in weekly sessions, they were gradually given additional training in maternal and child nutrition, tetanus toxoid immunization and oral rehydration for diarrhoea [5].

Each FVW serves a population of about 1,000 (or about 200 families) and almost all of them reside in the village or area where they work. A group of 20 FVWs is assigned to a subcentre that is staffed by a full-time paramedic to provide routine maternal and child health services, IUD services, menstrual regulation services and referral support. Work routines require each FVW to visit all

[4] Detailed description of this project and its impact appeared in Bhatia et al., 1980; Phillips et al., 1982.

[5] See Bhatia (1981) for detailed description of training programmes.

currently married women of reproductive age of her area fortnightly and provide conventional contraceptives (condom and oral Pill) and DMPA injections at the house of the client. The FVW attends fortnightly meetings at the subcentre to report on work progress. A senior supervisor is assigned to the entire project area and one senior health assistant is assigned to each subcentre to conduct meetings and provide day-to-day supervision. The project has one lady physician who does regular rounds in the field and provides professional support to a central sterilization clinic in the Matlab headquarters.

The original plan of the project was to assign comprehensive MCH-FP duties to the FVW: general family planning services, comprehensive immunization services, antenatal and postnatal care, nutritional education and treatment of diarrhoeal diseases. The development of the project proceeded from general training of FVWs to a gradual introduction of all these duties, but only three components have been fully implemented so far: family planning services, tetanus immunization [6] and treatment of diarrhoeal diseases. Only recently, additional MCH services have been introduced to include measles vaccination, antenatal care, and high risk pregnancy identification and referral.

Along with the ICDDR,B's programme, the Government family planning programme has been continuing its activities both in the MCH-FP area and the comparison area [7]. At the time when the ICDDR,B began its contraceptive distribution programme in 1975, the Government

[6] Detailed description of tetanus immunization programme and its impacts on infant mortality appeared in Rahman *et al.*, 1982a.

family planning programme was operative in the area with one thana family planning officer, two male assistants and two lady paramedics, all stationed at the thana headquarters. There were no full-time village-level workers and the dais, the part-time village-based workers appointed under earlier Government family planning programme, were no longer active in the field. By the end of 1976 the Government family planning programme started recruiting village level female workers (known as family welfare assistant or FWA) at the rate of one to serve a population of about 6,000, but could not complete with recruitment until 1978 when the educational qualification of FWA was relaxed from tenth to eighth grade of schooling. The FWA is responsible for routine home visits and provision of family planning information, motivation and supplies of contraceptives at the doorstep of the eligible couples. Recently, the Government family planning programme has established one family welfare centre (FWC) to serve a population of approximately 20,000. The FWC is staffed by one lady paramedic (known as family welfare visitor or FWV) and provides IUD services, menstrual regulation services and injectable contraceptives. One male family planning assistant is assigned to each FWC to supervise and coordinate the work of FWAs in the area. In addition, both male and female sterilization facilities have been established in the Government rural health centre in the thana headquarters.

The effect of the MCH-FP project was a prompt and continuing rise in contraceptive use-prevalence rates. The proportion of married women of reproductive age using contraceptives rose rapidly to 32 per

[7] To minimize the cost of its operation the ICDDR,B contracted the DSS area in early 1978, leaving 79 villages (population about 90,000 as of 1981) to serve as the comparison group for the 70 MCH-FP villages.

cent in the first year and stayed at 33 per cent in the second year (Table 1.1). The project has been maintaining this use-prevalence rate for the last four years with only a slight increase to 34 per cent (coinciding with the decentralization of IUD services from the subcentre to the village level in early 1982). An analysis of the demographic impact of the project showed that by 1979 fertility in the MCH-FP area was 25 per cent lower than in the comparison area (Phillips et al., 1982). Recent analysis of the DSS data suggests that the project is also having significant impact on infant and child mortality (D'Souza et al., 1983).

1.3 RESEARCH PROBLEMS

The findings from the Matlab project suggest that the spontaneous demand for contraception that exists in the Matlab area as indicated by the base line KAP survey of 1975 has been met by the project. This, in turn, has had substantial effects on fertility. It is also evident from a stable use-prevalence rate for over four years that the project is unlikely to generate additional demand sufficient to reduce fertility to replacement level as is envisaged in the country's current development plan (Bangladesh, 1980). At issue, then, is how to increase the effectiveness of the present programme.

An important observation made in the assessments of the Matlab project is that acceptors tend to cluster geographically, producing a wide inter-village variation in use-prevalence rate. Under the original CDP, current use rates reached more than 40 per cent in some villages, while they remained below one per cent in others (Table 1.2). The variation has not been reduced dramatically under the

TABLE 1.2

Percentage Distribution of Villages by Current Use Rates of Contraceptives, Matlab, MCH-Fp Project

Current Use Rate*	Percentage of villages	
	November 1977	July 1982
Less than 5	10.0	1.4
5 - 9	26.7	-
10 - 19	36.7	2.9
20 - 29	16.7	24.3
30 - 39	6.6	45.7
40 - 49	3.3	20.0
50 and above	-	5.7
Mean use rate	14.6	34.4
Range	0.0-42.1	5.0-55.0

Note: * Percentage of eligible women (currently married, aged 15-44 years or above experiencing regular menstrual periods) reported to be using or to have used a method in past two weeks.

Source: Matlab MCH-FP Service Records.

MCH-FP project with the strengthened cadres of trained workers and availability of a full range of contraceptives. Although there has been an overall increase in contraceptive use rates over time, there still remain villages that have use-prevalence as low as five per cent, while others have passed 50 per cent (Table 1.2).

One way of increasing the effectiveness of the present programme thus seems to be to investigate whether it is possible to replicate in the low use-prevalence villages the conditions prevailing in the high use-prevalence villages. This calls for, first, identification of the conditions and factors responsible for high or low use-prevalence and then selection of factors amenable to programme modification. This is, in broad terms, the major focus of the present study.

On the basis of the review of literature and drawing on our observations in the field it will be hypothesized in this study that a complex combination of factors relating to (1) the socio-economic infrastructure of the village, (2) acceptance and influence of the FWV for provision and facilitation of services in the village and (3) characteristics of eligible village women and of their baris has contributed to the observed areal variation in contraceptive practice. It also follows that a multi-level approach encompassing village, FWV, bari and eligible women as units of investigation will be necessary for a fuller understanding of the causes of observed variations.

1.4 SIGNIFICANCE OF THE STUDY

The present study is significant from both theoretical and policy points of view. In recent years the debate over the 'best route' to fertility decline in less developed countries has stimulated intensive

research efforts to understand the efficacy of contraceptive services programmes. A reconnaissance of these studies, however, reveals many limitations. Most of these studies focused either on programme activities or clients' characteristics. Very few dealt simultaneously with both programme factors and client factors. Even fewer studies embraced the community or social context of the contraceptive decision-making process despite the recently evinced concern about its importance in demographic literature (see, for example, Freedman, 1974).

What distinguishes the approach adopted in this study is that we have employed more than one level of analysis and viewed both programme factors and client factors as interrelated. In our approach to the latter we have incorporated the study of social context within which the individual's decision about contraception is made. Secondly, we acknowledge the relevance of developments and simultaneously recognize that family planning programmes offer one means of attempting to reduce population growth. We assume that development and family planning are interrelated both in a normative and an empirical sense.

The study has implications for policy makers in Bangladesh's family planning programme, in particular, and community development programmes in general. Implicit in the motivational and educational strategy of the national family planning programme is the legitimization of contraceptive practice in rural areas. However, until now all the field workers' efforts have been directed solely to individual couples. One reason for this target group orientation of the programme may be the absence of organized, broad-based village

groups with which the programme could establish links for support and legitimization. A similar concern has been expressed in the area of other rural development programmes such as agricultural improvement (see, for example, Bertocci, 1976). Nevertheless, there exist various social groups in the village which appear to hold considerable potential for providing such support and social legitimization of any innovative programmes. One such group, as mentioned earlier, is the bari. A number of earlier anthropological studies (Aziz, 1979; Islam, 1974; Bertocci, 1969) have emphasized the importance of the bari in the control of all types of social behaviour of its members, including their reproductive behaviour. The most important thing about the bari is that it serves as a building-block of all social groups in the village (Bertocci, 1969).

Despite this widespread recognition of the bari as a guardian of individual behaviour and controller of social relations in the village, no study so far has included the bari as a unit of investigation. All the inferences and conclusions drawn by the above mentioned studies are based on the observation of individual members of baris. In that respect the attempt in the present study to consider the bari as a unit of investigation is an important innovation. A theoretical implication of this approach is that it may bridge the gap between the conceptual extremes of the society or community at one pole and of the individual at the other, making possible observation of both social norms and individual behaviour as they are interrelated in real life.

In addition, our study of worker characteristics has direct programme implications for both the Matlab project and the national family planning programme. As mentioned earlier, the Government has recently replaced its part-time village-based workers (dais) by a cadre of full-time literate female workers (FWA). Some recent studies (Quddus, 1979; Proggani, 1979), however, reported a wide variation in the performance of the FWAs in different parts of the country. If the present study finds that certain attributes of workers are related to their differential performance it will have important programme implications: for instance, background characteristics of the successful workers may be indicative of the criteria that should be used in the selection of workers; acquired skills represent attributes that training programmes should emphasize in their curricula.

1.5 ORGANIZATION OF THE STUDY

The primary objective of this study, as mentioned earlier, is to identify which factors related to the characteristics of village, FWV, baris and eligible women residing in the baris have contributed to the observed areal variation in contraceptive practice in the Matlab MCH-FP project. To accomplish this objective the structure of the study is designed as follows.

In Chapter 2, broad hypotheses concerning the observed areal variation in contraceptive practice are presented. An analytical framework showing the hypothesized relationships among major blocks of variables conceived in the study is then proposed. Some relevant approaches to contraceptive behaviour providing theoretical and methodological clues to the present study are also briefly reviewed.

Chapter 3 presents methods and procedures of the data collection and the description of sampling design, conduct of various surveys used in the study and the sources of secondary data.

Chapter 4 is a description of the socio-economic infrastructure of the villages of the Matlab MCH-FP project. Relationship of this structure with village contraceptive use-prevalence rates is then examined. In Chapter 5, we focus on the FWWs, including their acceptance by and influence in the community, and examine the relationship of these characteristics with contraceptive use-prevalence rates in their assigned areas. In Chapter 6, an attempt is made to examine the contrast between high and low use-prevalence worker units in selected villages to gain some idea about the relative importance of village and FWW characteristics for the variation in contraception use prevalence.

Chapter 7 presents selected socio-economic and leadership characteristics of our samples baris and their relationship with contraceptive use by eligible women of these baris. A contrast among the low, average and high use-prevalence units of the sample villages in the important characteristics of baris is then examined. Chapter 8 presents distribution of eligible women of the sample baris according to selected socio-economic and demographic characteristics. A multivariate analysis using a generalized log-linear model is then conducted to study the effects of these characteristics on contraceptive use and to examine their possible contribution to the observed areal variation in contraceptive use-prevalence rates. The final chapter, Chapter 9, summarizes the major findings of this study and discusses both their policy and further research implications.

CHAPTER 2

RESEARCH HYPOTHESES AND ANALYTICAL FRAMEWORK

The fundamental question that will guide this study is: why do contraceptive use rates differ among a population that has free and easy access to family planning services? In this chapter we present some broad hypotheses concerning this question. The hypotheses are based on a review of literature related to the general theory of fertility transition and on the specific aspects of Bangladeshi culture and traditions derived from our observations in the field. More specific working hypotheses and the variables needed for their empirical verification are presented in the chapters that follow. An analytical framework will be proposed in this chapter setting the hypothesized relationships among the major blocks of variables and indicating the guidelines for analysis.

2.1 GENERAL THEORY OF FERTILITY TRANSITION

The most widely discussed theory of fertility transition in the demographic literature is the demographic transition theory developed originally by Frank W. Notestein and his colleagues at the Princeton Office of Population Research. The theory first appeared in a paper written by Notestein in 1943. By 1945 three additional elaborations of the theory by Thompson (1944), Notestein (1945), and Davis (1945) had been published and with that the theory came into a prominent position in the field of population study.

The theory of demographic transition is basically a description of the sequence of events that are assumed to take place at a macro-level and result in the society moving from high to low levels of death and birth rates. The theory builds largely upon the experience of Western Europe where the demographic change started at the time of the Industrial Revolution and lasted 100-150 years. The main argument of the theory is that demographic change is a result of the general modernization process. As Notestein (1945:39) observed, 'The whole process of modernization in Europe and Europe overseas brought rising levels of living, new control over disease and reduced mortality.' Fertility was 'less responsive' to the process of modernization but eventually it, too, began to decline. Couples in economically advanced societies reduced the number of their children 'in response to drastic changes in social and economic setting that radically altered the motives and aims of people with respect to family size' (1945:40).

As regards high fertility in the 'premodern' societies, the theory maintains that the omnipresence of high mortality in these societies resulted in social systems that were conducive to high fertility. Successful (in terms of their survival) societies were those in which 'religious doctrines, moral codes, laws, education, community customs, marriage habits, and family organizations are all focused toward maintaining high fertility' (Notestein, 1945:39-40). Davis (1948:561-562) categorized premodern societies as being 'familistic societies', in which kinship was the primary basis of social organization. Children in such societies are needed to attain nearly every life goal:

The salvation of the soul, the protection of the hearth, the assurance of affection may depend upon

the presence, help and comfort of progeny. This arrangement, this articulation of the parental status with the rest of one's status, is the supreme encouragement of high fertility. (Davis, 1948)

As regards high growth rate in contemporary non-industrialized countries of the world, the theory maintains that a 'one-sided modernization' in these countries has reduced mortality but not fertility. Notestein (1945) addressed himself to this issue when he said:

The fundamental nature of the agrarian family life, of native customs, religious beliefs, and educational horizons has changed little. The result is that the materials out of which declining fertility grew in the West are not present. In short, the modern nations of the west have imposed on the world's non-industrial people that part of their culture which reduces mortality sufficiently to permit growth, while withholding, or at least failing to foster, those changes in the social setting out of which the reduction of fertility eventually developed in the west. The result is large and congested populations living little above the margin of subsistence. (pp51-52).

On the basis of this observation, Notestein (1945) recommended an integrated programme of modernization for bringing fertility down in less developed countries. He argued that 'nearly all peoples' possessed knowledge of potentially effective contraceptive practice; the prevalence of contraceptive practice was determined primarily by social structural factors. Change the social structure with 'a complete and integrated program of modernization', and fertility would decline, 'for it is only when rising levels of living, improved health, increasing education, and rising hope for the future give new value to individual life that old customs break and fertility comes under control' (1945:57).

However, an unprecedented growth of population in less developed countries during the first post war decade and its consequences for economic development of these countries led Notestein to modify his recommendations eight years later. He saw 'almost insuperable difficulties involved in achieving the sort of economic development required to permit reliance upon the automatic process of social-economic change for the transition to low birth - and death - rates' (1953:25). Embracing an interventionist policy, Notestein advocated 'direct measures' to lower fertility. He argued, 'it is within the bounds of possibility that the wise use of modern methods of communication and training to promote higher marriage age and the practice of birth control would bring a considerable reduction of the birth-rate even in peasant societies' (1953:28). However, in a later article in 1964 he cautioned that the direct policy interventions aimed at lowering birth rates should be considered 'not as a substitute for modernization, but as a means of hastening the impact on fertility of the process of modernization' (Notestein, 1983:356).

Notestein's admission that the interventionist policy approach may be effective for ensuing fertility transition in less developed countries was reinforced by Davis' observation of the Indian situation. From a review of a survey dealing with knowledge and attitudes toward contraception in India, Davis argued that although ignorance of modern contraception prevailed 'there is a preponderantly favourable attitude toward its purpose' (1954:75). His analysis of the changed conditions of peasant life led him to conclude that '... the ordinary Indian, with more than the traditional number of children on his hands, with rising ambition for them, and with conditions of life more difficult, is literally being driven into seeing the

necessity of birth control' (1954:79). Davis even went on to suggest that 'India had a chance to be the first country to achieve a major revolution in human life - the planned diffusion of fertility control in a peasant population prior to, and for the benefit of, the urban-industrial transition' (1954:87-88).

Thus, by shifting from a strictly scientific perspective to a policy intervention orientation [1] and by placing emphasis on the socio-economic changes that had already occurred rather than simply decrying the paucity of industrial development, the transition theorists were able to offer a theoretically coherent rationale for family planning programmes in the 'regions of high growth potential'. In 1960 only three countries of the Third World (India, Hong Kong and Pakistan) had population planning policies, only one government (Hong Kong) was actually offering family planning services, and no international agency was working in the field of family planning (Berelson, 1969). As of 1973, thirty-two of 117 developing countries had official family planning programmes (Freedman and Berelson, 1976). These 32 countries - 19 in Asia, 7 in Africa, 6 in Latin America, contained 75 per cent of the total developing world population (p5).

Thus, the decade of the 1960s marked the rise of family planning programmes in the less developed countries of the world. However, in recent years these programmes have come under more and more questioning in terms of both feasibility and scientific rationality. Thus, for instance, Hauser (1967) wrote:

[1] A concise and scholarly discussion of this shift of transition theorists from a strictly scientific perspective to one of policy orientation appeared in Hodgson (1983).

... at the present time it is not known whether the direct approach being used will in fact turn out to be a short cut in inducing social change. It is not yet known whether a birth control communication program and a birth control clinic will, in fact, bring about a more rapid decline in birth rate than improved and universal general education, or new industry that would increase productivity, or other types of innovations that may break the 'cake of custom' and produce social foment (p412).

One important reason for the controversy surrounding the direct approach appears to be the lack of a conclusive proof of fertility decline through family planning programmes in any less developed country. During the 1960s some countries in Asia (for instance, Taiwan, South Korea, Hong Kong, Singapore, Malaysia and Sri Lanka) concurrently experienced fertility decline, established national family planning programmes, and underwent significant social change and economic development (Mauldin and Berelson, 1978). The concurrence of these events allowed both the advocates and the critics of the direct approach to draw quite different conclusions from the same facts. The data served to fuel the debate between 'family planners' and 'developmentalists'. More interestingly, Davis, once a strong advocate of direct approach, changed his earlier stand and argued:

If it were admitted that the creation and care of new human beings is socially motivated, like other forms of behavior, by being part of a system of rewards and punishments that is built into human relationships, and thus is bound up with the individual's economic and personal interests, it would be apparent that the social structure and economy must be changed before a deliberate reduction in the birth rate can be achieved (1967:733).

Another reason for the continued controversy seems to be the lack of efforts to update the theory of demographic transition in the light of the experience of less developed countries. This concern has been best expressed by Caldwell in his recent writings. He contended:

The theory has little changed in the last 20 years. Indeed the period has seen a plethora of analysis of differentials in fertility, especially those found in contemporary American society, which have tended to obscure the all important distinction between the origin of the fertility decline and the subsequent history of societies experiencing such decline. This failure to update the theory is curious because the last two decades has provided researchers with far more experience of preindustrial and early transitional societies than they had previously been able to obtain. (1982:115).

Although Caldwell's argument appears to question the relevance of the demographic transition theory for explaining fertility transition in the less developed countries, he in fact is saying that the theory deserves continued investigation. More importantly, as argued by the Committee for the Population Council's International Research Awards Program (1981),

. recent developments in historical demography (e.g., Coale, 1975) have caused many of the simple generalizations about demographic transition to be questioned. Yet when this conceptual strut is removed, one is left with little with which to interpret the kinds of statistical associations that have been found (p314).

2.2 HYPOTHESES

The essential generalization of the theory of demographic transition is that fertility change is a consequence of socio-economic change. From the perspective of family planning programme it follows that the introduction of contraceptive practice will be easier in a community that has been experiencing a change in its socio-economic structure than in one with a relatively static, traditional structure.

For the past three or four decades, rural life in Bangladesh has been in a process of change (Khan, 1967; Zaidi, 1970; Arthur and McNicol, 1978). The pattern of this change relates principally to two factors - (1) decline of agricultural economy and (2) impact of village development programmes.

In the past, the village in Bangladesh was a relatively self sufficient unit, in which the main occupation was agriculture, with the usual complement of weaving, pottery making, carpentry, oil pressing, etc. (Mukherjee, 1971). The main reason for the decline of the agricultural economy in recent years, as mentioned earlier, has been the growth of population. At each successive generation there has been an increase in the number of people dependent on a given limited amount of land. As a result of this, the employment structure in the village has gradually changed. At first, the cultivators' family land has become no longer sufficient to support the households. The young men have to hire out their services as agricultural labourers and the older men may be forced to do likewise. Next, employment shifts from agriculture to traditional non-agricultural pursuits, such as sale of vegetables, firewood, roof thatching, or

hawking from village to village. Since the demand for such services in the villages is limited, adult males of the households owning only a small plot of land or no land at all move out of their home village in search of agricultural or other traditional employment in other villages or small rural towns. However, since the scope for employment may be limited in all rural areas, the job seekers ultimately drift to specific urban occupations, usually as factory workers or unskilled casual labourers, or seek menial work in the nearby larger towns and cities.

With the decline of employment opportunities in the agricultural economy and resultant transition of the occupational pattern, social organizations in the village appear to have become increasingly less effective and, to that extent, life is becoming estranged from traditional content and values (Khan, 1967). At the same time recent attempts by Government to promote village development and agricultural improvement seem to have brought a realization among some villagers that their fortunes could be improved. As a consequence of this awareness there seems to have occurred some relaxation of the traditional fatalism in the sense that nowadays not only is there a feeling that change is possible but also a desire for change is emerging (Schuman, 1967).

However, this positive attitude towards change, which in the family planning literature is considered conducive to acceptance of contraception, has not developed equally among all villages and social strata. One reason is that contact with urban life through urban employment and other such vehicles of experience is not equally accessible to all villages, partly because of difficult communication

links between the nearest towns and villages, and partly because of the difficulty individuals have in finding a patron who can help them in getting a job in urban mills or factories. In addition, not all villages benefit equally from the government development programmes. Villages with modern leadership (for instance, in the person of Union Council member [2]) and direct links, political or otherwise, with high ranking government officials have enjoyed the lion's share of the developmental benefits (Alavi, 1976; Sobhan, 1968). As a result, villages have developed differently with regards to infrastructure, economic structure, local government, health and educational facilities and communication.

Our first hypothesis is that a difference in the socio-economic infrastructure among the villages of the Matlab MCH-FP project area has contributed to the variation in contraceptive use-prevalence among them. The variables defining the village socio-economic infrastructure are given in Chapter 4.

One reason, according to the transition theory, for non-use or low use of contraception in less developed countries is that people in these countries have either not yet crystallized their reproductive goals in terms of the new economic and social settings, or, if they have, they lack the means of implementing their new goals (Davis, 1955:290). Most of the national family planning programmes in less developed countries initially tried to furnish people with 'a redefinition of the situation' and to provide them with 'appropriate instrumentalities' by - (1) making people aware of the need and

[2] For details see Chapters 3 and 4.

benefit of family planning through mass media (usually radio and newspapers) and (2) making modern contraceptives available at clinics and hospitals. However, the clinical approach turned out to be less successful, at least in many instances, than was originally hoped for. This led the family planning programmes to adopt subsequently an 'extension education' strategy [3]. This approach is based on the assumption that the adoption of contraception is a process that has to be stimulated, overseen, and guided by some local agents (or 'change agent aides' [4]). The success of the family planning programme then depends, in part, on the acceptance of the change agent aides in their communities and the influence they can exercise.

According to Rogers (1973), there are two important attributes of a "change agent aide" that facilitate the acceptance of innovation in her (most workers at this level are females) community: First, her 'professional competence' credibility, usually acquired through training and experience; Secondly, her 'safety' credibility, defined by her relation with the client, trustworthiness, and personal adoption of the innovation she is promoting. Professional competence credibility is considered to be more important at the knowledge stage in the innovation-decision process, while 'safety' credibility gains dominant importance at the persuasion stage.

[3] An overview of the sequential change of emphasis from a clinical approach to one of extension education appeared in Rogers (1973).

[4] The term change agent aides refers to the grass-root-level workers of the family planning programmes and is defined by Rogers as ones who are less than fully-professional change agents but work intensively with clients to influence their innovation decision (1973:109).

The importance of the credibility of workers was recognized by the Matlab project when an evaluation of the workers' performance during the first phase of the programme revealed that about 25 per cent of areal variation in contraceptive use prevalence could be attributed to differentials in the characteristics of the workers (age, number of children, education, and knowledge about contraceptive use) (Rahman et al., 1978). With the recruitment of a better educated cadre of workers and intensive training during the second phase of the programme, the contribution of differential characteristics of workers has been reduced to only about three per cent, although the range of inter-worker variation in performance still remains high (Osteria et al., 1979).

A major limitation of the previous studies has been that they did not include the attributes of 'safety credibility in their investigation. Our observation in the field, however, suggests pronounced variation in this respect among the female village workers or FVWs (the grass-root-level workers or change agent aides of the project). Some FVWs, for example, appear to their clients to be very trustworthy because the clients believe that 'daughters-in-law' of certain families cannot give them wrong advice or leave them uncared for should they suffer from any side-effects of the contraceptives. Some FVWs belong to very powerful kin or patronage groups in their villages. It appears that their comparatively larger circle of relatives as well as non-relatives, especially those who seem to depend on the FVWs' families for help and advice in social matters as well as personal problems, provides them with a wider scope for recruiting acceptors.

Our second hypothesis, thus, is that the variation in the FVWs' acceptance by and influence in their communities contributes to the observed inter-village variation in contraceptive use-prevalence. The variables defining the acceptance and influence of the FVWs are discussed in Chapter 5.

There is a consensus among sociological writers (e.g., Davis, 1955; Freedman, 1961-1962) that high fertility in contemporary as well as historical pre-industrial societies, from the point of view of the society, is a functional adjustment to high mortality and that, from the point of view of the reproducing couples, it is motivated by the importance of familial and kinship ties. Lorimer et al. (1954) hypothesized that societies emphasizing unilineal (either patrilineal or matrilineal) descent or having corporate kinship groups tend to generate strong cultural motives for high fertility; and that cohesive groups, such as extended families, tend to enforce conformity to societal norms. Such corporate kinship groups and extended families tend to break down in the course of economic development, and that leads to a weakening of societal constraints on individual decision-making.

In Bangladesh, there exists an informal institutional framework in every village, variously called panchayat, samaj, biradari, or samiti (Aziz, 1979; Bertocci, 1969; Islam, 1974). This sets a pattern of mutual relationship of groups within the village, and for interaction of individuals within the village as well as between one village and another. However, a view frequently held in the literature (Khan, 1967) and supported by our own observation in the field is that this broader village-social organization has been losing

its importance. The loosening of the informal ties is attributed to a steady decline in agricultural self-sufficiency of the villages, increasing contacts of villagers with urban life and intervention by government and other outside agencies (Mukherjee, 1971; Zaidi, 1970; Arthur and McNicol, 1978; Khan, 1967). Besides the broader village social organization, there exists in each village an organizational subsystem that regulates the life of subgroups in the village. This subgroup affiliation becomes quite distinct when individuals are faced with a choice situation, as it is in the case of accepting an innovative idea or practice. As regards acceptance of contraception, the most crucial subsystem appears to be the bari, the lowest social group next to an individual household.

Physically, a bari in a Bangladeshi village is composed of dwellings, usually arranged in a rectangular fashion around one or more courtyards, and flanked by subsidiary buildings such as kitchens, cow-sheds, and the like. Within this physical unit there live a group of households. The basis of this group is the patrilineal extended family, but the bari sometimes also includes matrilineal and affinal kinsmen. The bari is the building block of all social groupings in the village. It acts as a source of collective security for its members and as a guardian of their mores (Aziz, 1979).

Our observation in the field suggests that contraceptive use is often the result of support from and indeed initiation of other members of the bari: when one woman of a bari accepts contraceptive, several others of the same bari are likely to do so. However, a disadvantage of this clustering of users is that when one discontinues use because of dissatisfaction (for instance, due to side-effects of

the method) others appear to follow her (Rahman et al., 1979). Even more important is the observation that in every village there are some baris that tend to accept any innovation earlier than others. A recent study in the Matlab area found that the acceptors of tetanus immunization (one of the services provided by the Matlab MCH-FP project) came mostly from the baris whose members also accepted contraception and oral therapy for diarrhoea treatment (Rahman et al., 1982b).

Given this observation, our third hypothesis is that the villages of the Matlab MCH-FP project differ in providing institutional support to contraceptive acceptance. This, in turn, may have contributed to the observed inter-village variation in contraceptive use-prevalence. A major concern of this part of the study will be to identify the difference between innovative and more traditional or conservative baris, both at aggregate and individual levels. A detailed list of these characteristics and their hypothesized relationship with contraceptive use are given in Chapters 7 and 8.

2.3 ANALYTICAL FRAMEWORK

Ideally, as it is apparent from our discussion in the preceding sections, the study of areal variation in contraceptive practice could be best approached within the context of a general theory of social change that not only anticipates levels and directions of change in social structure but also considers how such change may influence, and interact with, individual decisions, especially those related to fertility behaviour. Such a theory however, has not been developed.

Recent developments of social theory do not examine fertility behaviour as an integral component [5]. The theory of demographic transition, on the other hand, is conceptually based on oversimplified characterization of the historical experience of the now industrialized countries and lacks specification of the mechanisms through which social and economic factors influence fertility behaviour.

There are four broad theoretical currents in the study of fertility behaviour: (1) micro-economic; (2) sociological; (3) psychological; and (4) anthropological (Committee for the Population Council's International Research Awards Program, 1981).

The most prominent micro-economic theory of fertility behaviour is that of the Chicago School which originated with the work of Becker (1960), and centres around the household production model. According to this framework, the household is viewed as an enterprise engaged in the production of household 'commodities'. Children are defined as one of these commodities. They provide services - both monetary and psychic - from which parents derive utility. They also have costs both direct costs of 'production' and opportunity costs associated with the value of parents' time spent for raising children. Households are assumed to allocate their resources to maximize the utility functionⁱⁿ which the child services compete with all other itemsⁱⁿ consumed by the household. The shape of this function is determined by the tastes or preferences of the household. Fertility behaviour, then, is determined by the household's utility function, the prices of

[5] For a detailed discussion of this problem see, for example, Caldwell (1982).

the commodities and the household's income.

The economic conceptualization of fertility behaviour makes possible a formal explanation of the commonly observed negative relationship between income and fertility in Western-industrial countries. According to this explanation, the price or substitution effect of the income reduces the demand for children by increasing their price relative to the price of other goods, by inducing the high-income couples to substitute other goods for children (Becker, 1960). This price effect of income operates chiefly through the increasing opportunity cost of mother's time as women increase their educational attainment and employment opportunities. Secondly, with increase in income, parents opt for 'high quality' children devoting more of their time and income to children's health and education.

In the context of less developed countries and particularly in the rural communities, neither opportunity cost of mother's time nor the cost of children can be considered as serious constraints on the number of children desired by the family. In these communities women's employment is mostly within the household and whenever women work in the field or cottage industry the organization of the work is such that they can take care of their young children or the extended family can arrange for baby sitting. Thus, there is rarely any incompatibility observed between the worker and mother role (Jaffe and Azumi, 1960; Stycos and Weller, 1967).

On the other hand, contrary to the situation in Western-industrial countries, from the point of view of the parents in rural communities the cost of children is not as important as their potential economic benefits. Besides expectation of support by

children in old age, parents in these communities are also motivated to have children as a source of insurance against risk of various kinds, such as drought, flood, illness, death of spouse, and loss of job (Cain, 1980). From this observation Jones (1978) argues that a 'survival' theory of fertility encompassing the concept of 'risk minimization', rather than 'utility maximization', may provide a better appreciation of fertility behaviour of the landless and poor peasants of many countries, including Bangladesh.

The most recent works of Leibenstein (1975) and Easterlin (1975) have tried to avoid the economic deterministic view of the Chicago School by incorporating more social variables, such as social class and individual preferences or aspirations, in their analysis. Their approach, however, appears to place sole emphasis on the individual household to the exclusion of its relationship with the institutional setting in which the household is placed, and its cultural and material environment. The approach thus fails to come to grips with the reality of less developed countries, particularly rural Bangladesh where the influence of societal norms appears to predominate over that of the individual's choice and where couples have a limited decision-making role in childbearing.

The sociological theory of fertility behaviour is centred around the concept of 'norm' and its most ardent advocates are Blake (1968), Davis (1955), Freedman (1961-1962) and Yaukey (1969). According to this theory individual action, such as fertility behaviour, takes place within a context of social structure and is inseparable from social status. Social status defines the social stratification system in a social structure and is associated with social role. This role

embodies the rules of behaviour that govern the occupants of a particular social status. These rules, called social norms by sociologists, reflect the behavioural expectations of the members of each social stratum. The individual, in order to be accepted as a member of a stratum, has to harmonize his or her action with the norms that are specific for this stratum.

The sociological perspective suggests that the position an individual occupies in the social stratification and the norms that regulate social relations within the social structure are relevant determinants of fertility behaviour (Freedman, 1961-1962). Following this perspective, studies have been conducted to examine the effect of rural-urban residence, socio-economic status, religion, and ethnicity on individual fertility behaviour [6]. The findings have confirmed an inverse relationship between fertility and variables measuring some dimension of development of 'modernity'. However, a major limitation of these studies (and, hence, of the conceptual approach they followed) is the failure to specify the 'intermediate' or 'proximate' variables through which socio-economic factors operate to affect fertility (Davis and Blake, 1956; Bongaarts, 1978).

A substantial number of studies of fertility behaviour have focused on psychological aspects of fertility decisions. Numerous KAP surveys conducted in the 1960s provided a large amount of cross-national information on fertility attitudes and preferences, in addition to data on contraceptive use. The extent of unmet demand for

[6] A concise review of these studies appeared in a staff report of the Interdisciplinary Communications Program (ICP, 1974). For the most recent findings see the 'Multivariate Analysis of World Fertility Survey Data for Selected ESCAP Countries' (ESCAP, 1981).

contraception suggested by these surveys gave an impetus to the development of family planning programmes in many less developed countries. The subsequent low use prevalence and persistence of high fertility in many of these countries, however, brought into question the adequacy of the methodology followed by the KAP surveys and the reliability of the information collected.

Other psychological studies attempt to relate underlying personality attributes, such as the components of 'individual modernization', to fertility behaviour (Williamson, 1970; Rosen and Simons, 1971), and to the relationships between inter-spouse communication and adoption of contraception (Yaukey et al., 1967). Finally, a great deal of research has been devoted to the identification and measurement of perceived costs and benefits of children. The international value-of-children studies of Fawcett and his colleagues are specially notable (see, for example, Bulatao, 1981). An important limitation of these studies, however, is the problem of interpreting the association between the independent variables and fertility behaviour when abstracted from the broader institutional and material context in which fertility takes place.

Some of these weaknesses have been overcome in the recently conducted intensive village studies that followed a semi-anthropological approach. Examples are: Caldwell's Changing African Family Project (Caldwell, 1976); Cain's study of the system of patriarchal authority in rural Bangladesh and its implication for women's work and fertility (Cain et al., 1979); the study of the economic value of children by Nag et al. (1977); and the study of social change in South China by Parish and Whyte (1978). These

studies, few as they are in number, stand apart from the mainstream of conventional fertility studies and have yielded important insight into the institutional setting of fertility behaviour.

From this brief review of the current approaches to the study of fertility behaviour it is apparent that none of them exactly suits our problem. As evident from the set of hypotheses presented in the preceding section, we need a multi-level analytical approach for our study. Most of the studies mentioned above have focused on individual and household characteristics to the exclusion of social institutions in which the individuals or households are placed. On the other hand, the few studies that have focused on the institutional context of fertility behaviour have not given adequate consideration to the processes associated with the adoption of contraception that are the major concern of the present study. This study is undertaking the difficult task of linking different levels of analysis - village, bari and individual levels - in an attempt to discover how each may contribute to understanding the determinants of contraceptive behaviour. But the most important problem to be mentioned in this context is the lack of comprehensive theory of fertility behaviour. Bogue (1966) contended:

Family planning research identifies explicitly the sociological and psychological knowledge that is needed to solve the world's population problem and sets out on a long trail of producing it. The raison d'etre for family planning research is the recognition that none of the theories or hypotheses being employed by traditional demography can provide the basis for stepped-up 'crash' programs for fertility reduction (p724).

This 'setting out on a long trail' argument made by Bogue about two decades ago hinted at the possibility of some future theoretical breakthrough in family planning research through its sociological and

psychological orientation. However, this seems to have remained still in a 'trail' stage. Thus, in the absence of a definitive general theory of contraceptive behaviour, family planning researchers, including this one, will have to depend on largely descriptive analysis of independent variables seen as being systematically related within some sociological units, such as family and community. In the present study, reliance is thus placed on existing middle-range generalizations about these social units and their influence on individual's contraceptive behaviour.

One conceptual framework which comes closest to the theoretical and methodological orientation of the present study is Freedman's analytical framework developed for the analysis of community-level data in fertility surveys (Freedman, 1974). We will adopt this conceptual framework as a starting point in developing an analytical framework for our study.

According to Freedman (1974), the reproductive behaviour of couples is affected both by their personal characteristics and the social context in which they live and, especially, by interaction or relation between the individual and group characteristics. He designated this 'social context' or 'group' as a community and argued that an understanding of individual reproductive behaviour should go beyond the individual and encompass the characteristics of the community in which most individual and household social activities take place.

Freedman's argument appears to be based on empirical evidence from a number of studies. Thus, for example, a re-analysis of data from the Indianapolis study by Duncan (1964) showed that the average

number of children ever-born to women of each economic class depended upon the socio-economic status of that residential areas as well as upon the economic status of the couples. Similarly, in his study of the effect of location and residence, Goldberg (1976) found that residential location in Ankara and Mexico City had an important effect on the individuals' behaviour including their fertility. Anker (1973) observed that in rural Gujrat, India, the level of development of the village in which the couple lived was highly associated with the three measures of fertility - desired family size, family planning and completed fertility.

The mechanism through which community characteristics affect individual fertility behaviour is usually explained in terms of the concept of reference group (Freedman, 1974; Goldberg, 1975). Broadly, this means that an individual's self-perception and behaviour conform partly to the standard observed in the community; this standard is determined by the characteristics of the community. Hence, for example, the family size norms and attitudes towards contraception should be different for communities with closer contact and economic exchange with the city than for those which are socially and economically isolated.

A methodological issue often arises in defining a community. A village, a township, a province, or the whole nation may be treated as a community, depending upon the perspective of the study and the nature of the investigation. In this study we have chosen a village as the operational definition of a community. A village in Bangladesh is a distinct geographical area with a distinct name given it by the local people and used by the census authority and by the civil

administration. Although a village is composed of many separate families, it has certain social and economic characteristics which make it a complete social unit (Bertocci, 1969; Mukherjee, 1971). A village provides a common socio-cultural environment for its residents and facilitates informal communication and interaction. But at the same time it also allows formation and development of such social groups as samaj and bari, and of different occupational classes within the overall environmental setting of the village.

We have described a village in Bangladesh in some detail just to show how it meets the criteria recommended by the recent United Nations/UNFPA Expert Group Meeting in Istanbul for definition of a community in the study of socio-economic determinants of fertility behaviour. According to this recommendation, 'community should imply a social system that is limited in space, large enough to allow for a sustained system of social production and exchange (and for the development of social classes and groups, with their implied system of social contact and role enforcement) but not so large as to diffuse the structure of role enforcement' (United Nations, 1979).

The characteristics of the village defined from the perspective of Freedman's conceptual framework may be called 'stimulating factors', inasmuch as they appear to provide stimulants to and constraints on individuals' contraceptive acceptance. It seems plausible to hypothesize that these stimulating factors become only a potential resource if the couples do not find some favourable opinion or support from their primary social group (such as the family) responsible for the enforcement of individual roles through the allocation of social rewards or sanctions.

One primary social group that has received continued emphasis in most of the sociological studies of fertility behaviour is the family. It is argued that both corporate kinship groups (clans and organized lineages) and extended families (both the residential and kin network variety) motivate and support early and near universal marriage and high marital fertility. On the other hand, societies that emphasize the independent nuclear or stem family and its economic independence will tend to have lower fertility. Where contraception is not widely practised, later age at marriage and greater incidence of celibacy may function to produce lower fertility [7]. On the basis of these propositions, many demographers, particularly the transition theorists referred to earlier, tried to distinguish contemporary as well as preindustrial societies as being characterized by an extended family system, in contrast to the now-industrialized societies characterized by the nuclear family system.

In this study we have chosen the bari as the primary social group. From its definition given in the preceding section, it should be apparent that a bari in Bangladesh contains most of the theoretical attributes of an extended family or family of 'mutual obligations', (Caldwell, 1982). The practical implications of using the bari as a unit of observation have already been discussed in Chapter 1. For women of our study area, as well as in other parts of Bangladesh, diffusion of family planning knowledge and practice through friends and peers which, in the family planning literature, is considered to be very important (Bogue, 1962; Rogers, 1973), is limited within the

[7] For a comprehensive review of these propositions, see, among others: Caldwell 1982; Freedman, 1961-1962.

confines of their baris because of the custom of purdha mentioned earlier.

Another concept which we wish to follow in this study has been introduced by family planning diffusion researchers; it centres on the concept of field worker's credibility. From the point of view of the Matlab project, as mentioned in the introductory chapter, the fundamental objective of the female village worker's (FVW) activities is to ensure that any existent demand for contraceptive services is met and to increase that demand by educating and informing the eligible women. This implies that a FVW needs to perform the following four functions:

- (1) to provide information to the client population about the availability of contraceptive services;
- (2) to persuade clients to accept a method of contraception;
- (3) to provide contraceptive services to the client; and
- (4) to facilitate access to services provided in the subcentre and the Matlab headquarters clinic.

Among these four functions, the last two constitute the relatively less challenging part of the FVW's task, while the first two functions are all important and constitute the most arduous part of the task. The provision of contraceptive services and facilitation of access are studied along with village characteristics, following Freedman's model for community-level data. The information and persuasion functions are, however, complex and cannot be studied adequately within the framework of this model. For the study of this latter part of the FVW's task, reliance is placed on Rogers' family planning diffusion model (Rogers, 1973).

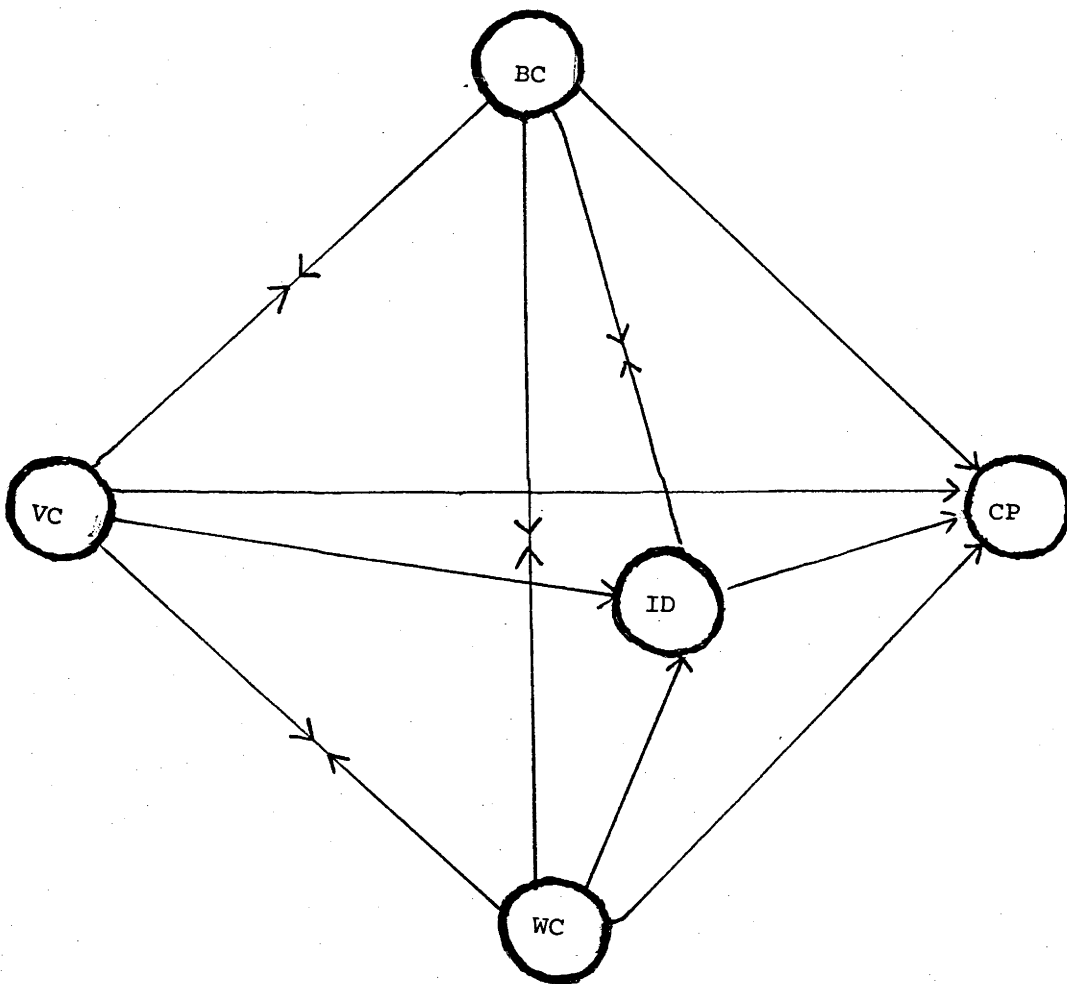
The classical diffusion model originated in the 1940s from studies by rural sociologists of the spread of agricultural innovations in Mid-West^{ern} U.S. (Solo and Rogers, 1972). The model describes the process by which an innovation (defined as an idea, practice, or object perceived as new by an individual) is communicated via certain channels over time to members of a social system. The model thus identifies four key elements central to the investigation of diffusion: (1) an innovation, (2) its communication via certain channels, (3) over a period of time, (4) to members of a social system (Rogers, 1973). Rogers modified the classical model for its application in family planning communication research and introduced a new additional concept - the change agent aide defined earlier.

In our study we have chosen the FVW as a change agent aide and conceptualized the problem within the conceptual framework of Rogers' two hypotheses: (1) Effectiveness of a change agent aide depends upon his (her) credibility, defined by the degree to which the agent is perceived trustworthy and competent to the client (p50); and (2) For maximum communication effectiveness, a change agent aide should be homophilous with his (her) clients on variables relevant to the situation, but he (she) may be heterophilous on irrelevant variables, and on technical competence (p401). Homophily is the degree to which a source-receiver pair is similar in certain attributes, such as beliefs, education, or social status. Heterophily is the mirror opposite (p56). The operational definition of variables representing credibility and communication effectiveness of change agent aide, in this study the FVW, is given in Chapter 5.

To sum up, what emerges from a discussion of our hypotheses concerning the observed areal variation in contraceptive practice in the Matlab MCH-FP project and a review of some current approaches to the study of fertility behaviour is that contraceptive practice by an individual is affected by a number of factors, which can be represented at four broad levels of aggregation: (1) characteristics of village; (2) credibility of FWV; (3) characteristics of bari; and (4) individual disposition, defined by his or her personal, social, economic and demographic characteristics. The relationship between individual contraceptive practice and each of these four levels of aggregation is presented diagrammatically in Figure 2.1. We also argue that these four levels of aggregation are interlinked and contribute directly or indirectly to individual decisions for or against contraception. We further argue that the observed areal variation in contraceptive practice in the Matlab MCH-FP project can be attributed to a combination of differences at these four levels of aggregation in different villages.

FIGURE 2.1

Analytical Framework Illustrating Hypothetical Relationship
Among Major Determinants of Areal Variation in
Contraceptive Practice in the Matlab MCH-FP Project.



VC = Village characteristics

WC = Worker (FVW) credibility

BC = Bari characteristics

ID = Individual disposition

CP = Contraceptive practice

CHAPTER 3

DATA AND METHODOLOGY

3.1 STUDY DESIGN

The overall design of the study can be defined as survey research with both descriptive and explanatory components. During the six months of my field work in Matlab (March to August, 1982), we conducted five major surveys. These are: (1) Village characteristics survey; (2) FVW survey; (3) Bari characteristics survey; (4) Eligible women survey; and (5) Comparison area contraceptive use-prevalence survey. Each survey used a questionnaire, adequately pre-tested, which varied from semi-structured, open-ended to structured, closed-ended type, depending on the nature of the enquiry. The information collected through the surveys was complemented by information collected through field observation and maintenance of field notes, and supplementary materials from the Matlab MCH-FP service records and data from the ICDDR,B census and vital registration system. Table 3.1 presents a brief description of our five major surveys, including a list of the major supplementary data sources. Details are presented in the subsequent section of this chapter.

It would be appropriate to mention here that while this chapter is aimed primarily at describing the actual surveys undertaken in Matlab this time, and much of the thesis involves the presentation of results from these surveys, my experience of living and working in the study area has substantially influenced the way in which I have

TABLE 3.1

Summary of Data Collected in the DAVCP¹ Study, Matlab, 1982

Source	Date of data collection	Sample Size	Total interviews	Remarks
A. Surveys				
1. Village characteristics survey	a) March-April, '82	All 70 villages of MCH-FP area	69	One village being the <u>thana</u> headquarters was excluded from the survey.
	b) July-August, '82	All 79 villages of the comparison area	79	-
2. FVW survey	March-April, '82	All 80 FVWs of the MCH-FP area	77	Three newly recruited FVWs were excluded from the survey.
3. Eligible Women survey	April-June, '82	All 998 eligible women from 6 FVWs' working units	940	Fifty eight women were absent from home at the time of survey.
4. <u>Bari</u> Characteristics survey	April-June, '82	All <u>baris</u> of 998 eligible women mentioned above	178 <u>baris</u> of 940 eligible women interviewed	Information was collected by interviewing household heads, or, in their absence, some senior members of the households.
5. Comparison Area Contraceptive Use-prevalence survey	July-August, '82	All 14912 eligible women of the comparison area	12928	1984 women were absent from home at the time of the survey.

¹ Determinants of Areal Variation in Contraceptive Practice

TABLE 3.1 (continued)

Source	Date of data collection	Sample Size	Total interviews	Remarks
B. Supplementary Data				
1. Matlab MCH-FP Service Statistics	Once every fortnight.	All eligible women of 70 villages	All eligible women present at home.	This is a longitudinal data collection system beginning in January 1978.
2. Matlab Demographic Surveillance System (D.S.S.)	Once a month	All households of the ICDDR,B field research area in Matlab	All households.	This is a longitudinal vital registration system which has been operating in the area since 1966.
3. ICDDR,B 1974 Census.	April-June, '74	All households of the ICDDR,B field research area in Matlab	All households.	The census updated all information collected by the D.S.S. and conducted a survey on socio-economic characteristics of the households.

interpreted the data. I have been associated with the Matlab contraceptive distribution project from its beginning in 1975, first as a manager of the project and then as a scientific staff member. I lived in the Matlab study area for about three years during the period 1975 to 1978 and again for six months during the field work of the present study in 1982. Personal observation and field notes provided material to illuminate what the survey may have failed to capture.

3.2 DATA COLLECTION

Once the field pre-test and revision of major survey questionnaires were completed we began our field work in full earnest. The surveys were divided into two phases. The first phase included the village characteristics survey and FWV survey. The second phase included the bari characteristics survey, eligible women survey and comparison area contraceptive use-prevalence survey. The phasing was done for better logistical supports in the field. Also, the experience gained in the first phase served as a guide to problem areas and difficulties in the second phase which was relatively more complex, involving in-depth inquiries. In this section we will briefly describe all the major surveys, including their sample size and data collection procedures.

3.2.1 Village Characteristics Survey: The purpose of this survey was to collect information on the socio-economic conditions and developmental infrastructure of each village covered by the survey. Some information, like religious composition, occupation and educational status of the village population were available from the ICDDR,B 1974 census (to be discussed later). We thus developed a

questionnaire to collect only the information that was not available from the 1974 census or from the on-going longitudinal demographic surveillance system in Matlab (to be described later). We will not describe here in detail the context of the questionnaire. The actual interview schedule is found in Appendix 1.

The survey was conducted in two phases. In the MCH-Fp area it was conducted during March and April, 1982. Due to shortage of personnel and logistical difficulties the survey in comparison area had to be postponed till July, 1982.

For the MCH-FP area survey two senior health assistants of the ICDDR,B were given one day's training on the questionnaire and procedure of data collection. The senior health assistants were matriculate (10th grade) males having over ten years of experience in conducting demographic surveillance and other epidemiological studies and surveys. Both of them were well familiar with the area and its people. It took four weeks for them to tour the 70 villages of the MCH-FP area collecting information from knowledgeable persons in the villages. The knowledgeable persons included school teachers (20%), ICDDR,B resident workers (30%), village leaders (35%) and Union Council members [1] (15%). In most cases one respondent was sufficient to provide all information asked by the interviewer about the village.

[1] The Union Council is an elected body for about 10,000 adult voters, distributed over a number of villages. Each village elects one or more representatives, one for every 1,000 inhabitants.

The same data collection procedures were followed in the 79 comparison area villages. The only difference was that this time we utilized six health assistants of the demographic surveillance system. The health assistants collected information in the course of their monthly home visits in the area. Their work was co-ordinated by one of the senior health assistants who conducted the survey in the MCH-FP area. The rationale for conducting the comparison area survey was to substantiate and complement the findings relating to observed inter-village variation in contraceptive use prevalence rates in the MCH-FP area and the effect of village characteristics on the variation.

3.2.2 FVW Survey: The survey was conducted during March and April, 1982. A questionnaire was developed asking the FVWs about their personal characteristics (age, parity, level of education, occupation of husband, etc.), co-operation from family and samaj members for their work, attitude toward different contraceptives and personal use, etc. The actual questionnaire is found in Appendix 2. The questionnaire was pre-tested among six FVWs of the comparison area.

The survey covered all the 80 FVWs of the MCH-FP area. However, three FVWs were reported to have joined the project very recently and as such were excluded from the survey. The survey was administered by the study investigator himself. As mentioned in the first chapter, the FVWs attend fortnightly subcentre meetings in a batch of 20. We distributed the questionnaire among the FVWs in the meeting and asked them to write their answers in our presence. Actually we read out and explained the questions one by one while the FVWs recorded their answers. Since the FVWs had previous experience of filling up survey questionnaires and service statistics forms no-one complained about

difficulty in understanding the questions or recording the answers. Generally it took one hour to complete the questionnaire.

3.2.3 Eligible Women Survey: This was our largest survey involving more complex and in-depth inquiries. Owing to the time constraints and severe logistical difficulties of conducting field work, we restricted the survey to a few villages of the MCH-FP area. These constraints caused a number of problems in choosing a statistically representative sample design. The major problems were:

1. Villages of the MCH-FP area differ in size and so have different number of FVWs. The distribution of the 70 MCH-FP villages according to the number of FVWs was as follows:

No. of villages having more than one FVW per village = 50

No. of villages having one FVW per village = 12

No. of villages having part FVW per village = 8

2. For in-depth analysis, it is appropriate to sample villages that are extremely high or low on the use-prevalence continuum in order to emphasize differences.

3. With a small number of villages in the sample it will be difficult to ascertain worker contribution to observed areal variation in contraceptive practices net of the influence of village characteristics.

We, therefore, employed purposive sampling for our eligible women survey. To avoid bias due to differential village size, we chose FVWs' working areas as our sampling unit. One FVW unit comprises about 1,000 population. We first ranked the FVW units according to their contraceptive use-prevalence rates in September, 1981. The use-prevalence rate of an FVW unit is defined as the percentage of

married women of reproductive age (usually 15-44 years) of that unit who have been using or reported to have used a method of birth control in two weeks in September 1981. The contraceptive use-prevalence data were available from the service records of the project (to be described later). The reason for choosing the use-prevalence data of September, 1981 was that the service statistics of that month were checked and validated in the field by an independent team of evaluators. The evaluation was conducted to ensure that the observed stable use-prevalence rate was not the result of over reporting by some FVWs. The evaluation team detected some discrepancies in the area of one FVW only. This was mainly due to a confusion on the part of the FVW in understanding the definition of programme drop-out. The data were corrected accordingly before finalization of the use-prevalence statistics of that month.

The use-prevalence rates of September, 1981 by FVW units ranged from 18 to 61 per cent. From the top quartile we randomly selected two FVW units. One unit fell in village Dighaldi and another in Village Torkey. Dighaldi had six FVW units and Torkey had three FVW units. Then from each of these two villages we selected one FVW unit having the lowest use-prevalence rate in that village as a control unit [2]. Incidentally, one control unit fell in the bottom quartile of the contraceptive use-prevalence rate continuum and one in the middle quartile. Next we randomly selected one FVW unit from the

[2] The selection of a control unit from the same village was considered to have the advantage of controlling for the effect of village characteristics in ascertaining worker effect. For this reason we excluded 20 villages where one FVW was assigned to one or more than one village. Thus we were left with 50 villages from which we should select the FVW units.

bottom quartile. It was village Narayanpur having two FVWs. We selected the second FVW unit of the village as a control unit and this fell in the middle quartile.

This sampling procedure thus allowed us to select six FVW units from three villages as follows. All the eligible women residing in the selected six FVW units constituted the ultimate study population for our eligible women survey.

High use-prev. rate (51-61%)	Medium use-prev. rate (40-50%)	Medium-to-low use-prev.rate (29-39%)	Low use-prev. rate (18-28%)
Dighaldi (51.5%)	X	X	Dighaldi (22.9%)
Torkey (55.7%)	X	Torkey (32.9%)	X
X	X	Narayanpur (28%)	Narayanpur (18%)

The survey began in April, 1982. Six female interviewers were hired locally in Matlab. All of them had a college education - one had a Master's degree, three were graduates and two had completed intermediate level (12th grade). All were between 22 and 30 years of age. Four were married and two unmarried. All the interviewers had extensive experience with village life, four came from the Matlab

study area and two from the neighbouring thana (county). However, none had any experience in interviewing. We conducted an intensive one-week training programme for all interviewers. In the first day we acquainted the interviewers with the major objectives of the study and familiarized them with the Matlab project and the services it renders to the community. The next two days were devoted to training on the questionnaire and the concepts involved in the interview. The last three days of the training included at least seven trial interviews. Two female health assistants of the ICDDR,B who had about six years of experience in conducting surveys in the Matlab area and who did pre-testing of the questionnaire of this survey worked as guides of the newly recruited interviewers in the field. Based on the experience of the field trial interviews we developed an instruction manual which served as an interviewer guide during the formal interviewing.

Two types of questionnaires were developed for the survey. One was designed as an individual eligible woman questionnaire and the other as a household questionnaire. The individual questionnaire was designed to collect information on personal background of the respondent, her pregnancy history, knowledge about contraceptives and their use, aspiration for education of children, husband-wife communication and decision-making authority in her family, and her exposure to the outside world. The full questionnaire is found in Appendix 3. The household questionnaire was designed to collect information on socio-economic characteristics and status of the household, including leadership characteristics of the household. The actual questionnaire is given in Appendix 4.

The basic set of questions was in a way similar to the World Fertility Survey and other family planning KAP surveys. The questionnaires were written and revised so often, however, that their final form had become distinct. Questions were originally written in English, translated into Bengali, and revised at several stages through field testing so as to correspond closely to local usage and the intended meaning.

One of the features of the individual questionnaire was to ask important questions in a way that would facilitate internal consistency checks within the questionnaire and between the questionnaire and other data sources, such as the demographic surveillance system (DSS) and the service statistics records of the MCH-FP project. Thus, for example, age and parity information for each eligible woman were available from the DSS and her reproductive status and contraceptive use status from the FVW's field register and the service statistics records of the MCH-FP project.

Before the beginning of the survey we prepared a list of all eligible women of the sample villages. The information was available from the FVW's field registers. Each FVW maintains a register containing a list of all eligible women in her area, a list of all contraceptive users by methods, and a list of all pregnant women with the date of last menstruation and the date on which tetanus toxoid immunization was given. The information is updated continuously and verified by the supervisory staff of the project. The identification of an eligible woman includes her name and ICDDR,B census number. The census number provides identification of family, bari and village of each individual in the DSS area.

The three villages we selected for our survey of eligible women were distributed over a wide area. Two were approachable by speed boat and one by jeep. The six female interviewers were divided into three teams, each team to cover one village. The team was headed by a team leader. All the three team leaders were male senior health assistants of the ICDDR,B; two of them worked in the village characteristics survey. The team leaders were familiar with the procedure of identification of the correct household and the right person from the ICDDR,B census records. They were also familiar with the study villages.

All the interviews were conducted between April and June, 1982. The female interviewers interviewed eligible women while the team leaders completed household questionnaires either by interviewing the head of the household or, in his absence, some senior member of the household. In all, 940 eligible women were interviewed, and the response rate was 94 per cent (Table 3.1). In about 20 per cent of cases we made up to three visits for a successful interview. Fifty eight women were reported to be away from home and there was no certainty of their return within the period of survey. Most of these women were reported to have gone to their parents' house for delivery and some to have gone to live with their husbands working in a town or city. There was no refusal of interview, partly because of good rapport of the ICDDR,B with the community and partly because the women of this area are familiar with various surveys conducted in the area in the past.

On the average, it took 50 minutes to interview an eligible woman and 25 minutes to complete the household questionnaire. Whenever possible, each woman was interviewed privately. However, it was often impossible to secure complete privacy, particularly among those women who tended to live in large households or women who had small children.

3.2.4 Bari Survey: The purpose of the bari survey was to collect information on socio-economic status of a bari, including characteristics of its leadership and internal solidarity. The questionnaire is given in Appendix 5. The basic information was extracted from the household questionnaires. The 940 eligible women we interviewed were distributed among 178 baris. Following the eligible women survey, the team leaders completed the bari questionnaires in the office. The baris were identified and linked to the households with the help of the ICDDR,B census records which maintained an unique identification number for each household and name of its bari head.

3.2.5 Comparison Area Contraceptive Use-prevalence Survey: The survey collected information from all eligible women of the Matlab comparison area about their status of contraceptive use, name of the method used and source of contraception. A short and simple questionnaire was developed (Appendix 6). The interviews were conducted by thirty FVWs of the comparison area in the course of their weekly home visits for collection of data on vital events. The FVWs were given one day's training on the questionnaire and procedure of data collection. Their work was supervised by the DSS health assistants who at that time were conducting the village characteristics survey in the area.

The survey was conducted between July and August, 1982. A list of all eligible women of the comparison area was available from an earlier research work. The list was prepared between November and December, 1981 with the objective of conducting a family planning KAP survey in the area. That survey was, however, postponed for technical reasons. We updated this list during our survey. The updating involved: (1) inclusion of new eligible women who entered the area through marriage or migration; (2) exclusion of women from the list who had died or migrated out, or women who had lost their eligibility status due to a change in their marital status, eg., divorced, widowed, etc.

In all, there were 14,912 eligible women residing in the 79 villages of the comparison area and of them 12,928 could be interviewed. The response rate was 87 per cent. Due to the time constraints and preoccupation of the FVWs with other tasks we were not able to try to contact the absentees of the first round visit by repeating the visits.

3.3 Supplementary Data Sources: Having discussed at some length the procedures of data collection of our five major surveys conducted between March and August 1982, it seems appropriate to give a brief description of the major data sources from which we obtained our supplementary materials. These are: (1) The Matlab MCH-FP service statistics records; (2) The Matlab Demographic Surveillance System (DSS); and (3) The ICDDR,B 1974 census.

3.3.1 Matlab MCH-FP Service Statistics Records: We have utilized this data source [3] for calculation of contraceptive use-prevalence rates by village and FVW. We also used this data source for preparing the list of respondents for our eligible women survey.

The service statistics of the Matlab MCH-FP project are prepared from a register known as FVW's field register. Each FVW maintains a register containing the following information:

1) a list of all eligible women in the project area prepared in the beginning from the ICDDR,B census records. Thereafter the list is updated by the FVWs in the field.

2) a list of all contraceptive users by type of method. The date of acceptance and the date of discontinuation or of method switch are recorded, giving reasons for change.

3) a list of all pregnant women giving the date of last menstruation and the date on which tetanus toxoid immunization was provided. The date of delivery and outcome are also recorded.

From the register hand tallies of contraceptive acceptors, current users and dropouts are produced by method and calendar month. Recently, a coding form has been developed by the project for continuous updating of reproductive status, breast-feeding, contraception or eligibility status of each woman. A coding assistant attends the fortnightly subcentre meetings and completes the coding forms for those women whose status has been recorded to have changed in the FVW's field register. The completed coding forms are then sent

[3] For a detailed description see Rahman (1983).

to Dhaka for computer data entry and longitudinal file building.

The quality of the service statistics reported by the FVWs is ensured through a built-in system of intensive supervision and field checks. Periodic evaluation by an independent team of evaluators further strengthens the quality of data.

3.3.2 Matlab Demographic Surveillance System (DSS): We have made extensive use of this data source for demographic information about our study population. The DSS is essentially a vital registration system with intensive search for events. The system dates back to 1966 and was an adjunct to the Cholera Surveillance System. Detailed description of the DSS appeared in several previous publications (Aziz, 1977; ICDDR,B, 1978; D'Souza, 1981).

Under the old programme, the ICDDR,B hired a woman to hunt out births, deaths, migration as well as cases of severe diarrhoea within each village. These women, called LVWs or Dais, were normally old and illiterate. The LVWs were replaced by literate FVWs in late 1977 in the MCH-FP area and in the middle of 1978 in the comparison area. The FVWs reported any event they found to the field assistant, recently redesignated as health assistant, who actually registered the event.

The central control over the system is the Family Census Record based initially on the ICDDR,B 1974 census. Copies of this are found in Dhaka, Matlab, and within each bari of the study area. For each family in the bari, and each individual within each family, the Family Census Record records the name, age, sex and identification number. During the monthly visit, the health assistant inquires about any changes in family composition. Since the baris are relatively small

and distinctly demarcated, the information is relatively easy to gather. Furthermore, the FVWs keep note of events they found during their routine home visits, fortnightly in the MCH-FP area and weekly in the comparison area. The health assistant fills out a vital events report (birth, death, migration), enters the events in the Family Census Record Card and signs the card. This provides an administrative check. Three times a year, each household is visited by the senior health assistant, who checks for missed events and the record of the health assistant's visit.

Every two weeks, the health assistant turns in the event records, which are checked by two coding clerks. Incorrect or incomplete forms are returned to the health assistant to be corrected in the field. Each month, the event forms are sent to Dhaka for coding, punching and processing. A computer print-out is returned from Dhaka to the field, so that checks can be made there to prevent misplaced, lost or doubled counted forms or events.

The Matlab DSS is claimed to be of unique quality. Close field work, including several cross-checks, has allowed the DSS to achieve remarkably good quality data.

3.3.3 ICDDR,B 1974 Census: As mentioned earlier, we have collected some selected information on village socio-economic characteristics (religious composition, education and occupation) from this data source. The census was conducted in the entire study area of Matlab during April and June 1974. Sixty seven census workers including six supervisors administered the survey. A two-day training course was organized for the census workers, including field practice. A detailed description of the census appeared in Aziz (1979).

For the purpose of the census, the study population of each village was listed according to family and bari. In the census form, every village was identified by name and a unique number was assigned to it. Every family and every individual living in the family were recorded. Every person's name, age, sex marital status and relationship to the head of the family were recorded. The bari was identified by its name in the census.

Socio-economic information for each family was recorded in a separate form. This included: number of years of education for each member aged 5+, primary and secondary occupations of the members aged 10+, information on 'modernity' of the family (radio, watch, remittance, etc.), dimensions of each dwelling unit and material used for the dwelling roof. Additional information on the number of cows, number and types of boats, size and type of construction material of dwellings was collected as an estimate of capital wealth.

3.4 DATA PROCESSING

3.4.1 Field Editing: The purpose of field editing was to check that all relevant questions had been completed properly and make sense. My main function in the field was to supervise interviewing and to check the completed schedules daily. If inconsistencies were found in the recording of response then the interviewer was expected to explain the inconsistency and correct it where necessary. On occasions it was possible to suspect that a respondent was supplying inconsistent responses to the interviewer and so a call back was arranged to check the situation.

During the survey of eligible women it became impossible for one person to check all completed questionnaires daily - about 25 to 30 individual schedules and 15 to 20 household schedules everyday. Luckily, an ICDDR,B field research officer was able to assist me in co-ordination of field work and checking of completed questionnaires. He had a long experience in conducting field surveys and participated in all stages of my study, from pre-testing to data collection. Our field work followed a basic daily routine, which included evening sessions between the interviewers and ourselves concerning the day's data collection. The procedure of daily inspection and discussion of schedules was, in addition to being a check for accuracy, an opportunity for us to remain close to the data even though we ourselves did not conduct interviews. After reading through each schedule, we could ask the interviewer for more detailed information about responses, and discuss each interview in general. Specific questions or omissions which could not be corrected by the interviewer without a return visit were written on a slip which was affixed to the schedule. This was then given to the interviewer to take back to the field for clarification.

Continuous daily field editing by myself also helped to maintain a fairly high level of accuracy and competence by the interviewers. Because they knew their schedules were being constantly checked there was very little attempt to fabricate responses. Possibly the fact that the field editing was being done by me also sustained some measure of motivation since their efforts were immediately examined and criticized or appreciated.

3.4.2 Coding: all coding was done in the field. A detailed code book was prepared for each survey. Village and FVW schedules were coded by the field research officer and myself, while the eligible women survey schedules were coded by a team of coders. The coder team initially consisted of the two female health assistants who did the pre-testing of the questionnaires and participated in the initial interviews as guides of the newly recruited interviewers. They were given two days' training on coding instructions, including one day's practice.

The coding of eligible women survey schedules and household schedules began from the second week of the survey. This allowed us to detect further inconsistencies which we failed to detect at the time of editing, and facilitated verification of inconsistencies in the field where necessary. Once the field interviews had been finished, the four best female interviewers joined the coders' team. The research officer and myself used to check the completeness of coding of each schedule after the end of the day's work. However, after about two weeks when the coders became well-trained and when we could detect almost no mistake in coding we decided to check a 25 per cent sample of the schedules. Coding of supplementary data and comparison area contraceptive use-prevalence survey schedules was done by the field research officer and two senior health assistants who worked as team leaders in the eligible women survey.

3.4.3 Computerization of Data and Editing: Once the coding of the data had been completed they were transferred to Dhaka for computer entry. We transferred the data into the ICDDR,B S-34 computer. The data entry was done by a trained data-entry assistant under the supervision of a statistical officer working on a temporary basis for

our study.

Range editing using a generalized software package (UNEDIT) was done first to be sure the range of codes entered for each variable was within acceptable limits. Variables found to be outside the limit were checked, corrected, sometimes by going through the original questionnaires, and the range edit was reapplied until after a number of runs the data set appeared to be 'cleaned' of errors. Logic edit was then applied to the data set. This was essentially an extension of field editing where, dates, ages, numbers and characteristics were cross checked to detect inconsistencies between two or more answers or identifying characteristics. For example, age of a respondent should not be less than her age at marriage, woman reported to have never used contraceptives should not have certain codes recorded in those questions relating to methods used, or number of boys and girls should add to the total number of children in these questions requiring answers to family size.

CHAPTER 4

INTER-VILLAGE VARIATIONS

4.1 INTRODUCTION

The village communities are little republics, having nearly everything they want within themselves, and almost independent of any foreign relations. They seem to last where nothing else last. Dynasty after dynasty tumbles down; revolution succeeds revolution; Hindu, Pathan, Moghul, Mahratta, Sikh, English, all are masters in turn, but the village communities remain the same. (Sir Charles Metcalfe, Quoted in Bertocci, 1969).

Although this notion dominated much of what was written about villages in Bangladesh during the British colonial period, the concept of the village as a self-contained and isolated community has come to be considerably modified since 1947 and the beginning of systematic enquiry into village life. In fact, as argued earlier, history, geography, and economy have contributed to give different socio-economic infrastructures to different villages. In this chapter we show how the villages of the Matlab MCH-FP project differ in their socio-economic infrastructure and examine whether this difference contributes to differences in the level of contraceptive use.

Following Freedman (1974), we may discern two types of data to define village socio-economic infrastructure. The first type includes variables which may be called 'aggregate', meaning that measurements are based on the aggregation of individual characteristics. The literacy rate of a village is one illustration. The second type includes variables which may be called 'structural', meaning that measurements can be made only from village characteristics, not from

individuals. Examples are the presence or absence of a school or hospital, or the distance from the village to the nearest bus stop.

In the present analysis we have chosen three aggregate level variables as proxy indicators of village social and economic conditions. These are: religion, literacy and occupation of household heads. Besides their sociological implications, these three variables have demonstrated a strong association with couples' reproductive behaviour in many earlier studies on determinants of fertility in Bangladesh (Ratcliffe et al., 1968; Stoeckel and Chowdhury, 1973; Chowdhury, 1977; Alauddin, 1979; Rahman et al., 1980).

The reason for choosing the characteristics of the head of a household instead of its members lies in the fact that the characteristics of the head tend to exert relatively greater influence on the behaviour of other members of the household in general and on the social and economic conditions of the household, in particular. Also, the socio-economic conditions of a household represented by the characteristics of its head implies that the household has been experiencing this condition for a relatively longer duration.

There may be a question about the appropriateness of using aggregates of individual characteristics to represent village level characteristics. We would, however, argue that although these variables (religion, literacy and occupation) operate at family or individual level, our observations in the field suggest that the concentration of people who share these characteristics in a village produces a distinct socio-economic environment.

Our structural variables include: 1) existence of selected public institutions (primary school, junior or senior high school, government rural health centre or dispensary) and services (post office, market with a bank, launch ghat) in the immediate vicinity of the village; 2) existence of village developmental programmes in the village; and 3) intensity of family planning services in the village.

The existence of a primary school in the immediate vicinity of a village is defined by the location of the school within or adjacent to the village. Given the transportation problems in Matlab and the fact that most of its villages remain submerged under water during much of the year, it is unlikely that parents will send their children to a school which is not located near to their baris. The existence of other public institutions and services is defined by location of these institutions or services within half-an-hour's travel time from the village as reported by knowledgeable persons in the village.

The definition of village development programme in our study is guided by the way the Government of Bangladesh conceptualizes planning of its development programmes in different fields at the village level, namely, the improvement of agriculture, the organization of women and youth, etc. In recent years, the hypothesis that joint efforts in both rural development and population planning programmes rather than in population planning programmes alone are likely to reduce fertility significantly has been widely accepted in Bangladesh. There are several projects which began during the late 1970s to test the hypothesis, such as village swanirvar (self-reliance) programmes, village co-operatives, rural mothers' clubs, women's functional literacy programmes, etc. A common objective of these programmes is

to promote civic and corporate responsibility among the villagers and assist them in the development of an integrated community life. Many of these projects are yet awaiting evaluation. Some of the studies (Huda, 1980; Alauddin, 1979; Dixon, 1978, cited in Javillonar et al., 1979; Mia, 1978) provided mixed but encouraging findings to show that, in general, rural development programmes have demographic effects in the desired direction.

During our village characteristics survey we came across five such development programmes in our study area. These are: Farmers' Co-operatives, Fishermen's Co-operatives, Women's Co-operatives, Youth Clubs and Adult Education Programmes. The farmers' co-operative distributes water-lift pumps, seeds and fertilizers, while the fishermen's co-operative distributes boats and fishing equipment among its members. The women's co-operative runs traditional cottage industries such as weaving and rice husking. The youth club is formed to organize sports and indoor games for local youths and to participate in village developmental activities such as construction of roads and canal digging. The adult education programme is run by local educated volunteers and school teachers with the objective of removing illiteracy from the community. All these programmes receive financial assistance from the Government and are attached to relevant Ministries of the Government for administration and supervision.

One development variable, the fishermen's co-operative, has been dropped from the final analysis because of its restricted potential demand in a few fishing communities only. An additional variable that we have included under the village development programmes is the availability of a Union Council member in the village (for definition

see footnote in Chapter 3). The Union Council member looks after the progress of all development programmes in his area, including family planning.

Our third structural variable is the intensity of family planning services defined by the distance of a village from the nearest service centre and the number of family planning workers available in the village to provide services at the doorsteps of the people.

As mentioned in the introductory chapter, family planning services in the Matlab MCH-FP project area are provided by both the Government family planning programme and the ICDDR,B. For a population of one union (about 15,000 - 20,000 people) the Government has one family welfare centre (FWC) to provide IUD services, injectable contraceptives, menstrual regulation services and other conventional contraceptives such as oral pills and condoms. For door-to-door distribution of contraceptives the Government employs locally recruited, literate, young female workers known as family welfare assistants (FWA). One FWA is responsible for serving the population of one ward (about 6,000 people).

In addition to the Government FWCs and FWAs in the MCH-FP area, there are four ICDDR,B subcentres, each one to cover a population of 20,000; and 80 FVWs, each one to serve a population of about 1,000. We have discussed the procedures of delivery of services by the subcentres and FVWs in detail in the introductory chapter. We have excluded availability of FVWs from the analysis because all the villages have one FVW per village of approximately one thousand population.

The distance of a village from the nearest FWC or ICDDR,B subcentre is measured in terms of time taken to reach the centre as reported by the knowledgeable persons in the village (school teachers, ICDDR,B resident workers, village leaders and union council members). Earlier studies in Bangladesh have identified distance as a major constraint on utilization of services provided by static health centres in rural areas (Feldman et al., 1981; Rahman et al., 1982). Studies done elsewhere (Fawcett, et al., 1967; Parsons, 1974) have demonstrated the effects of geographical proximity to clinics on family planning acceptance rates. Given the transportation problems in our study area and the fact that it is mostly females [1] who are the recipients of the services offered by the FWCs and ICDDR,B subcentres, we restricted our definition of availability of a service centre to one hour's travel distance from the village. In this decision we were guided by the suggestions of our FVWs and supported by informal discussion with village women.

Our final analysis of the village social and economic infrastructure and contraceptive use-prevalence rates thus includes 16 independent and one dependent variables. The 16 independent variables may be categorized as follows:

Village social and economic condition

1. Religion of household heads
2. Occupation of household heads
3. Literacy of household heads

[1] Except for condoms and vasectomy which are not so popular in the area (shown in Chapter 8, Table 8.1), all are female contraceptive methods.

Existence of selected public institutions and services

4. Primary school within or adjacent to the village.
5. Junior or senior high school within half-an-hour's travel distance from the village.
6. Government rural health centre or dispensary within half-an-hour's travel distance from the village.
7. Post office within half-an-hour's travel distance from the village.
8. Market with bank within half-an-hour's travel distance from the village.
9. Launch ghat within half-an-hour's travel distance from the village.

Village development programmes

10. Farmer's co-operative
11. Women's co-operative
12. Youth club
13. Adult education programme
14. Union Council member

Intensity of family planning services

15. Availability of a FWC/ICDDR,B subcentre within one hour's travel distance.
16. Availability of a FWA in the village.

The dependent variable is the contraceptive use-prevalence rate defined as the percentage of married women of reproductive age (usually 15-44 years, but women aged over 44, whose fecundity was evidenced by regular menstrual periods, were also included) of a village or group of villages who at the time of data collection reported using a method of contraception or having done so in the past two weeks.

In the subsequent sections of this chapter we present our findings concerning the variation of the villages with regard to the above mentioned 16 independent variables, followed by an examination of the association of these variables with village contraceptive use-prevalence rates. The chapter concludes with a summary and discussion of the findings.

4.2 VARIATIONS IN SOCIO-ECONOMIC INFRASTRUCTURE AMONG VILLAGES

4.2.1 Socio-economic conditions: Table 4.1 shows the percentage distribution of 69 villages of the Matlab MCH-FP area according to religion, occupation and literacy of household heads. One village where the Matlab thana headquarters is located and which contains many health facilities and services which are usually not available in other villages has been excluded from the analysis.

What emerges from the findings in Table 4.1 is that a great majority of the villages do not differ in social and economic conditions. Most of the households belong to the Muslim community and almost every household is engaged in agriculture in some way: as owner-cultivators, share-croppers, agricultural labourers or members of the village community who provide services to cultivators. In about two-thirds of the villages the proportion of literate household heads ranges between 30 and 49 per cent of the total household heads. Only in one-fourth of the villages does the proportion of literate household heads exceed 50 per cent.

TABLE 4.1

Percentage Distribution of villages According to
Religion, Occupation and Literacy of Household
Heads, Matlab MCH-FP Project

Characteristics	Percentage (N=69)
RELIGION	
Majority Muslims	84.1
Majority Hindus	15.9
Total	100.0
OCCUPATION	
Majority agriculture	92.8
Majority fishing	7.2
Total	100.0
PROPORTION IN BUSINESS OR URBAN JOBS	
< 10 per cent	21.8
11-20 per cent	47.8
21-30 per cent	18.8
> 31 per cent	11.6
Total	100.0
LITERACY	
< 30 per cent	8.7
30-39 per cent	30.5
40-49 per cent	36.2
50-59 per cent	15.9
> 60 per cent	8.7
Total	100.0

In a few villages Hindus and fishing households appear to form a majority. Some unique social customs such as untouchability and prohibition of slaughtering of cows have resulted in Hindus having preference for living in contiguous residential areas. Fishing was once exclusively a Hindu lower class occupation. As productive employment has become more difficult to obtain and real agricultural wages have declined, many poor Muslims have come to disregard their previous aversion to fishing. They now compete with the Hindus for the produce of the waterways.

In some villages there is a degree of occupational specialization which includes mostly Hindu service class occupations such as barbers, washermen, cobblers, weavers, blacksmiths, etc. But given the strong orientation of village life towards agriculture it is perhaps not surprising that the range of occupations seen in the villages is less than might be encountered in the urban environment. However, due to a decline of the agricultural economy in recent years there has occurred a transition of occupational pattern in some villages. More people nowadays are trying to earn their livelihood or augment their income by trade, mostly in local markets, or by urban jobs in towns and cities. This is evidenced by the findings in Table 4.1 which show that almost every village has some household heads engaged in trade or urban jobs, although their proportion varies markedly from village to village.

4.2.2 Public Institutions and Services: Every village of the Matlab MCH-FP area has a primary school and, all except four villages have a junior or senior high school within one hour's travel distance from the villages. However, if we restrict the definition of their

availability to the immediate vicinity of the village or adjacent to the village, about one-third of the villages will have no primary school within or adjacent to the villages and over one-fourth will have no junior or senior high school within half-an-hour's travel distance (Table 4.2).

Nearly 40 per cent of the villages have a Government rural health centre or dispensary in their immediate vicinity. A vast majority of the villages have a post office and more than half the villages have a market with banking facilities within half-an-hour's travel distance.

As mentioned earlier, most of the villages of Matlab are not served by paved roads and many of them are completely isolated during the monsoon which in some years continues for six to seven months. Consequently, during much of the year the villages have little contact with the outside world. This isolation strengthens their dependence upon fellow villagers and family for companionship, information and provision of the necessities of life. Fortunately, a few motorized passenger launches, though plying irregularly, provide transport between distant villages and the Matlab thana headquarters and other large towns. About two-thirds of the villages have a launch ghat within half-an-hour's travel distance (Table 4.2).

4.2.3 Village Development Programmes: The most notable difference among the villages is observed in the availability of selected village development programmes. This is mainly due to a difference in resources and local initiative that arose during the recent Government attempts at village development. The most frequently available development programmes are farmer's co-operatives and youth clubs;

TABLE 4.2

Percentage Distribution of Villages According to
Availability of Selected Public Institutions, Services and
Village Development Programmes, Matlab MCH-FP Project

Variables	Per 100 Villages
PUBLIC INSTITUTIONS	
Primary school within/adjacent to the village	69.6
Junior or senior high school within half-an-hour's travel distance	72.5
Government rural health centre/dispensary within half-an-hour's travel distance	39.1
SERVICES	
Post office within half-an-hour's travel distance	84.0
Market with bank within half-an-hour's travel distance	56.5
Launch ghat within half-an-hour's travel distance	66.7
DEVELOPMENT PROGRAMMES	
Farmers' co-operative	60.9
Women's co-operative	7.3
Youth club	47.8
Adult education programme	5.8
Union Council member	59.4

Source: Village Characteristics Sruvey, 1982.

while women's co-operatives and adult education programmes are restricted to a few villages (Table 4.2). Almost one in six villages has no Union Council member.

4.2.4 Intensity of Family Planning Services: Table 4.3 shows that for all but eight villages there is an ICDDR,B subcentre within one hour's travel distance. In addition, nearly 40 per cent of the villages have a Government FWC within one hour's travel distance. Forty two per cent of the villages have a government FWA, in addition to one ICDDR,B FVW per 1,000 population.

Contraceptives, usually condoms and oral pills, are also available from some shops in local markets. Oral pills are often prescribed and sold by local physicians for treatment of menstrual problems. However, our earlier studies in the area show that the use of condoms and oral pills available from local markets as fertility regulation methods is very limited (Huber et al., 1979); accordingly we have not included this source of supply in our analysis.

TABLE 4.3

Percentage Distribution of Villages by Accessibility
to Family Planning Services, Matlab, MCH-FP Project

Accessibility to Family Planning services	Percentage (N=69)

Distance from FWC	
< 0.5 hour's travel time	24.6
1 " "	14.5
> 2 " "	60.9

	100.0
Distance form ICDDR,B Subcentre	
< 0.5 hour's travel time	63.8
1 " "	24.6
> 2 " "	11.6

	100.0
FWA within the Area	
Available	42.0
Not available	58.0

	100.0

Source: Village Characteristics Survey, 1982

4.3 RELATION BETWEEN VILLAGE SOCIO-ECONOMIC INFRASTRUCTURE AND CONTRACEPTIVE USE-PREVALENCE RATES

4.3.1 Village Socio-Economic Conditions and Contraceptive Use-prevalence Rates: Table 4.4 presents village contraceptive use-prevalence rates by religion, occupation and literacy of household heads. Hindu majority villages appear to have slightly higher use-prevalence rates than Muslim majority villages. This is consistent with the findings of some earlier studies which show that contraceptive use is more common among Hindus than among Muslims. The Bangladesh Fertility Survey (Bangladesh, 1978), for example, found a contraceptive use-prevalence rate of 7.5 per cent for Muslims and 10.8 per cent for non-Muslims. Similarly, Stoeckel and Chowdhury (1973) found in their survey in Comilla District, Bangladesh, that over four times as many Hindus as Muslims were currently using contraceptives.

One argument made by these earlier studies for higher use-rate among Hindus is that Hindus have a higher literacy rate. The apparent difference according to religious affiliation as found in the study by Stoeckel and Chowdhury, for example, partly disappeared when social class and education were taken into consideration. Our findings in Table 4.5, however, show that except in one village which mostly consists of fishing families, higher use-prevalence persists in all Hindu majority villages even after controlling for village literacy rates.

Our observation in the field concerning higher use-rate among Hindus suggests that the Hindu women of Matlab are comparatively more exposed to outside interventions than the Muslim women. Due to a

TABLE 4.4

Village Contraceptive Use-Prevalence Rates by Religion,
Literacy and Occupation of Household Heads,
Matlab MCH-FP Project

Characteristics of Household Heads	No. of Villages	No. of Eligible Women	Percentage of Current Users
RELIGION			
Majority Muslims	58	12284	33.7
Majority Hindus	11	1696	36.1
LITERACY			
< 30 per cent literate	6	871	28.7
30-39 " "	21	3863	33.0
40-49 " "	25	7245	33.7
50-59 " "	11	1343	38.4
≥ 60 " "	6	658	40.6
OCCUPATION			
Majority agriculture	64	13300	34.6
Majority fishing	5	680	27.1
PROPORTION IN BUSINESS OR			
URBAN JOBS			
≤ 10 per cent	15	2469	34.5
11-20 per cent	33	7872	33.4
21-30 per cent	13	2369	34.1
≥ 31 per cent	8	1270	35.7

Source: 1) ICDDR,B 1974 Census
2) MCH-FP Service Records, July 1982.

TABLE 4.5

Village Contraceptive Use-Prevalence Rates by Religion and Occupation of Household Heads: Controlling for Literacy of Household Heads, Matlab MCH-FP Project

Religion and Occupation	Literacy (percentage of literate heads)											
	<30			30-49			50-59			≥60		
	No. of Villages	No. of Eligible Women	Percentage of Current Users	No. of Villages	No. of Eligible Women	Percentage of Current Users	No. of Villages	No. of Eligible Women	Percentage of Current Users	No. of Villages	No. of Eligible Women	Percentage of Current Users
<u>Religion</u>												
Majority Muslims	5	850	33.2	39	9789	32.6	8	987	34.1	6	658	40.6
Majority Hindus	1	21	5.0	7	1319	33.5	3	356	47.5	-	-	-
<u>Occupation</u>												
Majority Agriculture	5	850	29.3	42	10449	33.0	11	1343	37.7	6	658	40.6
Majority Fishing	1	21	5.0	4	659	27.8	-	-	-	-	-	-

Source: 1) ICDDR,B 1974 Census

2) MCH-FP Service Records, July 1982

relaxation of Purdha among Hindus, a Hindu woman enjoys greater freedom of movement outside her bari than a Muslim woman. Secondly, the range of contacts outside the village are comparatively more extensive among Hindu women. This is because Hindu families tend to make and maintain ties in other areas based on caste connections. These connections are needed primarily for marriage bonds.

A marked difference is observed in contraceptive use-prevalence rates between agricultural and fishing communities. Fishing communities are comparatively smaller in size and have lower use-prevalence rates. This observation holds true even when we control for village religion (Table 4.6) and literacy (Table 4.5).

Many factors seem to be responsible for lower contraceptive use-prevalence rates among fishing communities. One reason may be that, unlike agricultural families, fishing families need not bother about subdivision of their landed property among many children. The fishing families in Matlab have no individual or permanent rights on fishing grounds. They catch fish in rivers and, in some cases, other bodies of water to which they are granted temporary lease by the Government. Secondly, the lower practice rates among fishing communities may reflect a fatalistic outlook towards life. This is quite understandable given the fact that a fisherman is dependent upon the mercy of nature for his livelihood and every day he remembers his luck for a successful catch. Moreover, his son can be a useful assistant even before the age of seven years.

No marked difference is observed in village contraceptive use-prevalence rates according to difference in the proportion of household heads engaged in business or urban job. Our earlier

TABLE 4.6

Village Contraceptive Use-Prevalence Rates by Occupation of Household Heads: Controlling for Religion, Matlab MCH-FP Project

Occupation	Religion (Percentage of Muslims)											
	\$25			26-50			51-75			76-100		
	No. of Villages	No. of Eligible Women	Percentage of Current Users	No. of Villages	No. of Eligible Women	Percentage of Current Users	No. of Villages	No. of Eligible Women	Percentage of Current Users	No. of Villages	No. of Eligible Women	Percentage of Current Users
Majority Agriculture	5	960	40.6	3	409	32.8	4	609	31.8	52	11322	34.0
Majority Fishing	3	327	26.9	-	-	-	2	353	27.2	-	-	-

Source: 1) ICDDR,B 1974 Census
 2) MCH-FP Service Records, July 1982

analysis of individual level data showed a higher use rate among this group of individuals (Rahman et al., 1980; Bhatia et al., 1982). One explanation may be that the number of household heads engaged in business or urban jobs in a village is relatively so small that the use of contraceptives by the individual families of these household heads is unlikely to influence the overall use-prevalence rate for the village. Also, given the strong orientation of village life towards agriculture it is unlikely that the behaviour of a few families in the village will dramatically change the values and life style of others.

Education is an important dimension of modernization. It permits people to enlarge their horizon and their expectations. Their aspiration for themselves and their children may lead them to a transformed perspective on reproduction. This interpretation made by Misra et al. (1982) about observed relationship between education and contraceptive use in Uttar Pradesh, India appears to receive support from our findings on the relation between village literacy rates and contraceptive use-prevalence. As can be seen from Table 4.4, the contraceptive use-prevalence rate consistently increases from 28.7 per cent in the villages where less than 30 per cent of household heads are literate to 40.6 per cent in the villages with 60 per cent or more literate household heads. This observation holds true even when we control for village religion and occupation (Table 4.5).

4.3.2 Availability of Public Institutions and Services and Village Contraceptive Use-Prevalence Rates: Availability of most of the public institutions (junior or senior high schools, government rural health centre or dispensary) and services (post office, market with banking facilities) in the immediate vicinity of the village appears to show an unexpected pattern of variation in its relationship with village contraceptive use-prevalence rates (Table 4.7). Only availability of primary schools and launch ghats shows some variation in village contraceptive use-prevalence rates in the expected direction.

One explanation for this unexpected finding may be that the mere existence of a school or health centre or market in the immediate vicinity of a village may not guarantee the development of the village. Most of these institutions and services were established by the Government or by Zamindars in the old days. Development of villages due to availability of these institutions and services depends upon their utilization by the villagers. An examination of village literacy rates as represented by literacy of household heads and existence of a high school within half-an-hour's travel distance from the village fails to show any relationship between the two (Table 4.8). Rather it tends to support a most common saying, 'prodiper neach ondhoker' (darkness lies beneath the light).

TABLE 4.7

Village Contraceptive Use-Prevalence Rates by Availability
of Selected Public Institutions and Services, Matlab MCH-FP Project

Variables	Present			Absent		
	No. of Vilages	No. of Eligible Women	Percentage of Current Users	No. of Villages	No. of Eligible Women	Percentage of Current Users
PUBLIC INSTITUTIONS						
Primary school within/adjacent to the vilage	48	11483	34.2	21	2497	32.5
High school within 1/2 hr. travel distance	50	9764	33.3	19	4216	35.4
Govt. rural helath centre or dispensary within 1/2 hr. travel distance	27	5320	34.4	42	8660	33.6
SERVICES						
Post office within 1/2 hr. travel distance	58	11063	33.4	11	2917	36.0
Market with bank within 1/2 hr. travel distance	39	7650	32.9	30	6330	35.1
Launch ghat within 1/2 hr. travel distance	46	8737	35.0	23	5243	32.1

Source: 1) Village Characteristics Survey, 1982
2) MCH-FP Service Records, July 1982

TABLE 4.8

Percentage Distribution of Villages by Availability of High Schools and Percentage of Literate Household Heads, Matlab MCH-FP Project

Percentage of literate household heads	High Schools	
	Available %	Not Available %
< 30	66.7	33.3
30-49	70.0	30.0
40-49	53.8	46.2
50-59	63.6	36.4
≥ 60	66.7	33.3

Source: 1) ICDDR,B 1974 Census
2) Village Characteristics Survey, 1982.

4.3.3 Village Development Programmes and Contraceptive Use-Prevalence

Rates: Table 4.9 presents village contraceptive use-prevalence rates by availability of selected development programmes. Except farmer's co-operative and availability of a Union Council member in the village which show little variation in the expected direction, all the development programmes appear to show an unexpected pattern of variation in their relationship with village contraceptive use-prevalence rates.

The inconsistent and contradictory pattern of association between village development programmes and contraceptive use-prevalence rates tends to suggest that these programmes have no real association with contraceptive behaviour of the villagers. This is quite understandable given the fact that unlike some pilot projects in other parts of the country mentioned earlier, none of these development programmes in Matlab includes family planning education or services in its activities. All are single-purpose programmes and have been undertaken by the villagers for their immediate economic gain. For example, unlike the 'Mothers' clubs' in some other parts of the country which have usually attracted women from literate or well-to-do families, women's co-operatives in Matlab are composed of women of low social class like weavers or poor women who earn their livelihood by husking rice for other families. The main objective of these co-operatives is to receive financial assistance from the Government. Our observation in the field suggests a complete absence of the Government philosophy behind these programmes, ie., promotion of civic and corporate responsibility among the villagers and development of an integrated community life. More importantly, it seems too early to expect a discernible impact of these programmes on contraceptive

TABLE 4.9

Village Contraceptive Use-Prevalence Rates by Availability of Selected Development Programmes and Accessibility to Family Planning Services, Matlab MCH-FP Project

Variables	Available			Not Available		
	No. of Villages	No. of Eligible Women	Percentage of Current Users	No. of Villages	No. of Eligible Women	Percentage of Current Users
<u>Development Programmes</u>						
Farmers' co-operative	42	9639	34.1	27	4341	33.5
Women's co-operative	5	1604	30.5	64	12376	34.4
Youths' club	33	5959	33.7	36	8021	34.1
Adult education programme	4	994	27.4	65	12986	34.4
Union council member	37	10212	34.0	32	3768	33.7
<u>Family Planning Services</u>						
ICDDR,B Sub centre/ FWC within 1 hr. distance	61	12238	34.0	8	1742	33.5
Govt. FWA	29	7915	34.1	40	6065	33.5

Source: 1) Village Characteristics Survey, 1982
2) MCH-FP Service Records, July 1982.

behaviour indirectly through improvement of social and economic conditions and aspirations of the villagers.

4.3.4 Intensity of Family Planning Services and village Contraceptive Use-Prevalence Rates: Table 4.9 shows relationship between village contraceptive use-prevalence rates and intensity of family planning services in the village. No marked difference is observed in village contraceptive use-prevalence rates according to the availability of an ICDDR,B subcentre or Government FWC within one-hour's travel distance from the village or availability of a Government FWA in the village.

Two plausible explanations for a lack of association between village contraceptive use-prevalence rates and availability of a subcentre or FWC and Government FWA are : (1) that over 87 per cent of the villages are located within one-hour's travel distance from the ICDDR,B subcentres; (2) that the MCH-FP area villages have one worker per village of approximately one thousand population to provide a wide range of contraceptives at the doorsteps of the villagers and thus there is little scope for the Government FWA to provide further services in these villages.

4.4 SUMMARY AND DISCUSSION

Our analysis of village social and economic conditions defined by religion, occupation and literacy of household heads and village contraceptive use-prevalence rates showed that: villages with a majority of Hindu families have slightly higher use-prevalence rates than Muslim-majority villages, fishing communities have lower use-prevalence rates than agricultural communities and villages with 50 per cent or more literate household heads have higher use-prevalence rates than the villages with a lower proportion of literate household heads.

Except for one variable i.e., availability of a launch ghat in the immediate vicinity of the village, no variables categorized under public institutions (primary school, junior or senior high school and government rural health centre or dispensary) and services (post office and market with banking facilities) appear to have any relationship with village contraceptive use-prevalence rates. One plausible explanation may be that mere existence of a facility or services in a village does not necessarily indicate innovativeness of the people of that village or guarantee its utilization by the villagers. An examination of availability of a high school within half-an-hour's travel distance from the village and its literacy rate failed to show any association between the two.

Villages having a launch ghat within half-an-hour's travel distance have comparatively higher use-prevalence rates. An examination of distance of a village from a launch ghat and proportion of household heads engaged in business or urban jobs did not support

the expected relationship between the two. One probable explanation for slightly higher use-prevalence rates in these villages, as suggested by our observation in the field, is that the headquarters level supervisors give comparatively more visits to these villages than the villages which are less accessible due to the transportation problem.

Village development programmes appear to show either little variation or, in some cases, unexpected patterns of variation in their relationship with village contraceptive use-prevalence rates. This may suggest either no influence of these programmes on innovative behaviour of the villagers or that it is too early to expect a discernible impact of these programmes on contraceptive behaviour indirectly through improvement of socio-economic conditions and aspiration of the villagers.

Proximity of the village to ICDDR,B subcentres or Government FWCs, or addition of a Government FWA does not appear to make any marked difference in the contraceptive use-prevalence rate of the village. One reason may be that the accessibility of the villages to the ICDDR,B subcentres is reasonably uniform as over 87 per cent of the villages have a subcentre within one hour's travel distance. Secondly, one ICDDR,B female village worker per village of approximately one thousand population may have optimized the availability of services at the doorsteps of the villagers, thus leaving little scope for Government FWAs to provide further services in these villages. Another observation in the field is that the Government FWAs are not so active in our study area. This is quite understandable given the fact that the number of contraceptive users

that are recruited each month by the ICDDR,B FVWs from the assigned villages of these Government FWAs far exceeds the target fixed by the national family planning programme. Thus there seems to be little urgency among the Government FWAs to work for increasing the number of acceptors in their assigned villages.

An analysis of some selected village characteristics and contraceptive use-prevalence rates in the comparison area tends to support most of our findings for the MCH-FP area (Table 4.10). An exception is noted in the case of Hindu majority villages which, unlike MCH-FP area villages, have slightly lower use-prevalence rates. This is mainly for the reason that out of seven Hindu majority villages four are fishing communities which, as mentioned earlier, have consistently lower use-prevalence rates. This tends to support the assertion made by Notestein (1963) that 'the major influence of religion on reproductive behaviour often lies outside the strict theological field'. In fact, the Biblical admonition 'be fruitful, and multiply, and replenish the earth', is a typical concept also espoused by both Islam and Hinduism. So if there exists any difference between the two communities in practice of contraceptives it should be found in other factors such as mobility of women and their contact with outside interventions, not in their religious belief.

In the comparison area, availability of a Government FWC within half-an-hour's travel distance from the village or availability of a Government FWA in the village appears to have increased the use-prevalence rate by about one-third. Improvement in transportation is another programme-amenable variable which appears to have

TABLE 4.10

Village Contraceptive Use-Prevalence Rates by Selected Characteristics of the Village, Matlab Comparison Area

Characteristics	No. of villages	No. of eligible women	Percentage of current users
<u>Religion</u>			
Majority Muslims	72	12116	7.6
Majority Hindus	7	868	7.3
<u>Occupation</u>			
Majority agriculture	73	12474	7.7
Majority fishing	6	510	4.5
<u>Literacy</u>			
< 30 percent	5	762	6.2
30-39	40	6735	7.3
40-49	21	3685	7.5
50-59	10	1622	8.3
≥60	3	180	11.7
<u>Distance from FWC</u>			
≤ 1 hour	38	7414	8.8
> 2 hours	41	5570	6.0
<u>FWA within the Area</u>			
Available	25	5571	9.0
Not available	54	7413	6.5
<u>Distance from launch ghat</u>			
< ½ hr.	40	6364	8.0
1 hr.	24	4445	7.8
> 2 hrs.	15	2145	5.9

Source: 1) ICDDR,B 1974 census;
 2) Village Characteristics Survey, 1982;
 3) Comparison Area Contraceptive Use-Prevalence Survey, 1982.

considerable potential in raising the present use-prevalence rate.

In short, we find that although some variables representing village socio-economic infrastructure in the MCH-FP area showed some association with village contraceptive use-prevalence rates in the expected direction, no variable or combination of variables seems to be able to explain any significant amount of the observed inter-village variation in contraceptive use-prevalence rates. A rank correlation test among some quantifiable variables (religious composition, occupation, literacy and distance of the village from launch ghats) reveals that only the village literacy rate defined by the proportion of literate household heads has some significant relationship with village use-prevalence rates (Table 4.11). This is not surprising given our observation from the findings presented in this chapter that the great majority of the villages appear to be composed of undifferentiated or little differentiated Muslim agricultural families. Presence of a few families having their household heads engaged in non-agricultural pursuits, or existence of some public institutions and services or availability of a few development programmes in some villages seems to have little or no impact on village life which is strongly oriented towards agriculture.

Lack of a significant association between village socio-economic infrastructure and its use-prevalence rate may raise a question about adequacy of the variables included in this analysis to define the village socio-economic infrastructure. Landholding, income and female education, for example, may be better or complementary indicators of village socio-economic conditions. However, an earlier study (Islam and Becker, 1981) shows that the literacy of a household head is the

TABLE 4.11

Kendall Correlation Coefficients for Village Contraceptive Use-Prevalence Rates by Selected Characteristics of the Village, Matlab MCH-FP project

Characteristics	Value of 'r'	Level of significance
% of Muslim household heads	-.052	.274
% of household heads as service employees or business-men	.021	.408
% of literate household heads	.149	.053
Distance of the village from the nearest launch ghat	-.101	.155

Source: 1) Village Characteristics Survey, 1982
2) ICDDR,B 1974 Census

best indicator of socio-economic condition of a family in the Matlab area. Nevertheless, the contribution of some of these variables to the observed areal variation in contraceptive practices, if any, can be examined from the data of our eligible women survey to be presented in Chapter 8.

CHAPTER 5

INTER-WORKER VARIATIONS

5.1 INTRODUCTION

In the preceding chapter we have shown that the accessibility of the villages of the Matlab MCH-FP project to family planning services is reasonably uniform and the number of villages showing some variation in contraceptive use-prevalence rates due to a difference in their socio-economic infrastructure is small. The question arises: what does then account for the observed areal variation in contraceptive practices? This brings us to our second hypothesis mentioned in Chapter 2 that the female village workers (FVW) differ in their effectiveness. The data in Table 5.1 show that as many as 17.5 per cent of the FVW units reached a contraceptive use-prevalence rate of above 40 per cent by 1981, while more than 16 per cent still remained at 25 per cent or below.

The effectiveness of a FVW as mentioned earlier largely depends upon her two important attributes. First, her competence credibility, usually earned through training, professional skill and experience. Secondly, her acceptance and influence in the community, defined by her relation with the clients, trustworthiness, personal adoption of the innovation she is promoting and some individual characteristics such as age, marital status, etc., which give her authority and help her to communicate effectively with the clients.

TABLE 5.1

Percentage Distribution of 80 FVWs of the Matlab MCH-FP Project by Contraceptive Use-Prevalence Rates in Their Work Units in September '80 and September '81

Contraceptive use-prevalence rates	Percentage of FVWs	
	Sept. '80	Sept. '81
< 20	7.5	3.8
21-25	16.2	12.5
26-30	20.0	28.7
31-35	28.7	26.2
36-40	8.8	11.3
41-45	8.8	3.8
46-50	3.8	7.5
51-55	3.8	3.8
56-60	1.2	1.2
>60	1.2	1.2
Total	100.0	100.0

Source: Matlab MCH-FP Service Records

TABLE 5.2

Percentage Distribution of 77* FVWs of the Matlab MCH-FP Project
by Length of Their Service as FVW and Previous Job Experience

<u>Length of service as FVW:</u>	<u>Percentage</u>
< 6 months	1.3
< 4 years	1.3
4-5 years	97.4
	<hr/>
	100.0
	<hr/>
<u>Previous job experience:</u>	
ICDDR,B dai	2.6
U.C. member	1.3
School teacher	1.3
Clerk	1.3
Work in a pharmaceutical company	1.3
No job experience	92.2
	<hr/>
	100.0
	<hr/>

Source: FVW Survey, 1982

Note: 3 FVWs reported to have joined the service only very recently have been excluded from the analysis in the present and subsequent tables.

An investigation of competence credibility of the FVWs does not appear to be of much importance in our study. Over 97 per cent of the FVWs have been working in the project for a period of almost the same duration, four to five years, and over 92 per cent of them have had no previous work experience other than that of a house wife (Table 5.2). The training of the FVWs was conducted by a team of the same trainers and in the same period of time. In a test given after six months of training the FVWs obtained a very satisfactory and consistent score in their knowledge about the subjects taught, the mean score being 88.8 per cent with a deviation of only 8.1 (Osteria et al., 1979). We may thus hypothesize that most of the variation in the effectiveness of the FVW is the result of a variation in her acceptance and influence in the community. Our main objective in this chapter is to describe some selected characteristics of the FVWs reflecting their acceptance and influence in the community and examine how a difference in these characteristics relates to a difference in the effectiveness of the FVWs.

5.2 DEFINITION OF VARIABLES

In our study of the acceptance and influence of the FVWs in their communities we have taken into consideration two types of their credentials. The first type relates to the criteria determined by the project at the time of the recruitment of the FVWs and includes age, education, family size, personal experience of contraceptive use and social status of the family. The second type relates to the credentials which emerged as the FVWs began their field work and includes support from family and bari members for the work of the FVW and attitude of the FVW towards her work. For brevity and simplicity

of presentation we may group all these variables under the following headings: 1) individual characteristics; 2) socio-economic status of the family; 3) support from family and influential referents; and 4) attitude towards own profession.

Individual Characteristics

One important consideration of the project at the time of recruitment of the FVWs was that they should represent the village women who are actively engaged in the role of housewife, raising children, caring for the bari and other people within it. To satisfy this requirement the project fixed the following criteria.

1. Age - an FVW should not be too young or too old. Programme experience suggested that emotional maturity is correlated with age. Also of significance was that the need of observing purdha decreases with age. However, our experience with the first programme, the CDP, suggests that older women have other problems such as inability to work hard because of age and difficulty in assimilating the content of training and retaining it over a period of time (Rahman et al., 1979).

2. Marital status - The FVW should be currently married to be able to talk at an equal level with the potential clients. Also this lessens the likelihood of her leaving the village after marrying a person from other area. This possibility is a serious problem in the government family planning programme as was noted in the previous chapter.

3. Children - The FWW should be a mother. Having children seems to help in her work since her own experience assists her in relating to the economic values of planning one's family size. However, she should not have a family larger than that of her client population. Also if she has small children she should have someone in the family to take care of them when she goes out for field work.

In addition to these three criteria, the project decided on three other criteria to ensure the acceptance and influence of the FWWs in their communities. These are:

4. Education - when record-keeping is required of the field worker, the ability to read and write legibly are undoubtedly indispensable. Literacy is equally important for assimilating the content of training and retaining it over a period of time. But even more important is the fact that education of a woman in rural Bangladesh is a general indication of the social status of her family. It is likely that educated girls come from relatively high prestige families in which there has been the tradition of educating girls as well as boys. Our experience with the CDP suggests that a village woman is less likely to believe and adopt suggestions coming from a socially 'inferior' woman whom she perceives as being less knowledgeable than herself (Rahman et al., 1979))

The project fixed the minimum educational qualification for a FWW at seven years of schooling. Besides the proven ability to read and write competently, another factor which motivated the project to fix the minimum educational qualification at this level was that class six and seven are taught in a high school. High schools in rural areas are usually located in a thana headquarters or big market town. Two

years of education for a girl in a high school indicates her greater mobility outside the narrow confinement of her bari as well as her wider exposure to the outside world in comparison to her peers who did not get the chance of continuing beyond the primary school, which is usually located within the village.

5. Personal Experience of Contraceptive Use : It goes without saying that the personal adoption of the innovation a worker is promoting increase her credibility to the potential clients. The project tried to ascertain the personal use of contraceptives by the FVWs at the time of recruitment either going through the contraceptive use history records for eligible women of the study area or by asking them directly at the time of the interview. The project required the FVWs to be using some of the effective methods of contraception so that they would not become pregnant soon after recruitment, thus increasing the turnover of the staff.

6. Residential Status - Experience of some relatively successful family planning programmes elsewhere, e.g., in Korea and Taiwan, suggests that an indigenous resident worker is more effective in promoting an intervention in the community than an outsider (Cernada and Huang, 1968). One of the criteria chosen by the project for eligibility for the position of a FVW was that the candidate should be a resident of the area of her work. Besides the question of familiarity with the area and its people, avoiding the problems of transport and of independent movement for a woman in an unknown village was considered important enough to restrict the residential status of a FVW within the boundry of her working unit.

Socio-Economic Status of the Family

One hypothesis of the Matlab project is that a worker who comes from a respectable family in the village will be more effective than a worker who comes from a family of relatively inferior social status. This hypothesis is based on the experience of the project gained from utilization of poor and low social status female village workers for distribution of contraceptives during the first phase of the programme. Women coming from low social status families were not able to command the respect and confidence of the potential contraceptive acceptors (Rahman et al., 1979).

As mentioned earlier, education of a woman is often an important indicator of the social status of her family. There are, however, other factors as well which determine the status of a family. The traditional criteria for status of a family in the village are: 1) prestigious occupation; 2) ownership of land; 3) education; and 4) representation of the family in village leadership. Also important is a complete family, i.e., husband, wife, children and extended kin, all living together. A family that can feed and care for its widows, divorced daughters and young unmarried kin has higher status than the families that are unable to provide economically for the kin beyond the nuclear family (McCarthy, 1967). In other words, families which are poor economically are poor also in terms of kinship ties, an important criterion of influence of the family in the village social and political matters.

In our study we have defined education and occupation of the FVW's family by that of her husband. Within the family, a woman has a position and status of her own. But in the village her status is

basically determined by that of her father, and after marriage, of her husband. Ownership of land is defined by possession of total cultivable land by the family, while representation of the family in village leadership is defined by the relationship of the FVW with Union Council chairman or member and village matabbar (head man). It may be mentioned here that in former times village leadership was associated with the traditional prestige and power of zamindars (landlords). With abolition of the zamindar system the Government has introduced a new type of formal leadership in the villages. These leaders are the elected members and chairman of Union Council or local self government. They are responsible for the execution of the government rural works programmes and act as links between villagers and officials of different government departments. Besides these formal leaders, a number of informal leaders, locally known as matabbars , are found in every village. Their responsibility is to uphold the achar bichar (custom and adjudication) of the members of their lineage and samaj (social group). Wealth, education and membership of a numerous lineage group are necessary pre-requisites for a person to become a leader in the village.

We have not included family type in our study of the FVW's social status. All the FVWs fulfil at least the minimum, i.e., they are married and live with their husband and children. However, we have included in our study the strength of the FVW's own samaj in the village defined by the number of its members. Our hypothesis is that the larger the size of the samaj of a FVW the higher will be the contraceptive use-prevalence rate in her village.

Support from Family and Influential Referents

In the beginning of the programme, some FVWs reported having encountered opposition from their family and influential relatives to their work, particularly their independent movement in the village. Two FVWs gave up the job within three months of their joining because their family members, including husband in one case and father-in-law in another, did not like them to work outside their own baris. In the case of other FVWs the movement in the village appeared to become legitimized to a large extent by their regular contribution to family income. Although the opposition gradually subsided there appeared to develop an ambivalent attitude towards work among some FVWs resulting in absenteeism, taking extended leave and frequent work avoidance. The support of family members and influential referents thus became an important factor in keeping the morale of the FVW high.

In our study we have defined the support from family and influential referents by - 1) whether the FVW receives help for her work from the husband, and if so, the type of help received; and 2) perceived opinion of mother-in-law, father-in-law and bari head about the work of the FVW.

Attitude toward Own Profession

Within the traditional society of rural Bangladesh, religious, institutional, social and economic factors tend to coalesce in what manifests itself as a largely hetero-social world. That is, there are so few areas outside the home in which men and women have legitimate interacting roles, that the men's world is quite exclusive of the women's. This separation is enhanced by the system of purdha

mentioned earlier. The Matlab project for the first time provided an opportunity to the educated village women of the area to join what is primarily a man's organization and to work outside the home. There are very few FVWs who have had previous experience in talking with men or working in the village outside their own baris. It is one of the functions that the FVWs have to learn, and it presents difficulties. However, it is just this type of situation where diverse interest in and attitude towards the new responsibility develops.

In our study we have defined the attitude of the FVW towards her profession by - 1) whether the FVW considers her work as a good work for a village woman and what are the reasons for this consideration; 2) whether she intends to stay in this job for the next five years, if not, what is the reason?

As mentioned earlier, information on individual characteristics of the FVW, socio-economic status of her family, support from family and influential referents to her work, and her own attitude towards her profession were collected through a survey conducted among 77 FVWs of the MCH-FP area. We also asked the immediate supervisors of the FVWs (that is, the lady paramedics, in-charge of the subcentres, and male senior health assistants who provide day-to-day supervision and support to FVWs' work in the field) to give us a list of the five best and five worst FVWs of their respective areas along with the reasons why they consider them to be best or worst. In the subsequent sections, however, we will present the findings of our survey only. Information provided by the supervisors will be used to gain additional insight for interpretation of the survey findings.

5.3 VARIATION IN INDIVIDUAL CHARACTERISTICS

Table 5.3 shows the distribution of FVWs according to selected individual characteristics. As can be seen from the table there are no young unmarried girls, and no old women among the FVWs. Most of them are in their twenties, that is at an age at which women bear the greatest responsibility in the family life. Approximately half of the FVWs are between 21 and 25 years of age and one-third between 26 and 30 years. Only about 14 per cent of the FVWs are above 30 years of age.

In general, the FVWs seem devoted to a smaller family size than the average village women. A great majority of the FVWs have a family of between one and three children, the average number of children being 2.7. Over 40 per cent of the FVWs have a breastfeeding child, mostly of age two years or younger. One interesting observation is that very few FVWs have children between four and five years of age. This is quite understandable given the fact that the project discouraged the FVWs from having children in the first year of the programme which involved extensive training. Since most of the FVWs were young and naturally interested in having more children we observe a heaping in births in the third year of the project when there were no new training or addition of new interventions.

Since so many FVWs have young children it is interesting to know how they organize care for these children when they go out for work. Table 5.4 shows that nearly 39 per cent of the FVWs leave their children in the care of their mothers-in-law, which is an expected role of the grandmother in the family. Over one-tenth of the FVWs leave their children with their own mothers, which implies that these

TABLE 5.3

Percentage Distribution of FVWs of Matlab MCH-FP Project
by Selected Individual Characteristics

Characteristics	Per 100 FVWs
<u>Age:</u>	
≤ 20 years	3.9
21-25 "	49.3
26-30 "	32.5
31-35 "	6.5
≥ 36 "	7.8
	100.0 (N=77)
	\bar{x} = 26.3 years
<u>No. of Living Children:</u>	
None	2.6
1	13.0
2	40.2
3	26.0
4	5.2
5	7.8
>5	5.2
	100.0 (N = 77)
	\bar{x} = 2.7
<u>Age of Youngest Child:</u>	
≤1 year	13.3
2 years	30.7
3 "	9.3
4 "	2.7
5 "	2.7
6 "	17.3
≥7 "	24.0
	100.0 (N = 75)

cont'd

TABLE 5.3 (contd)

<u>Characteristics</u>	<u>Per 100 FVWs</u>	
<u>Breastfeeding of Youngest Child:</u>		
Breastfeeding		44.0
Not breastfeeding		56.0
		<u>100.0 (N = 75)</u>
<u>Use of Contraceptives:</u>		
	<u>Ever Used</u>	<u>Currently Using</u>
IUD	35.0	31.1
Oral pill	26.0	20.8
Condoms	14.3	11.7
Injectable	13.0	7.8
Ligation	5.2	5.2
Other traditional	5.2	3.9
None	1.3	19.5
	<u>100.0</u>	<u>100.0</u>
	(N = 77)	(N = 77)
<u>Duration of Residence in the Village of Work:</u>		
Since childhood		23.4
Since marriage		61.0
Since working as FVW		6.5
Does not live in the village of work		9.1
		<u>100.0 (N = 77)</u>
<u>Level of Education:</u>		
Class VI-VII		26.0
Class VIII-IX		45.4
S.S.C. or above		28.6
		<u>100.0 (N = 77)</u>

Source: FVW Survey, 1982

TABLE 5.4

Percentage Distribution of FVWs of Matlab MCH-FP Project by Persons Who Take Care of Their Children When They Go Out to Work

Care Taker	Per 100 FVWs (N = 75*)
FVW's mother	10.6
Mother-in-law	38.7
Sister/sister-in-law	5.3
Wife of brother-in-law	2.7
Husband	2.7
Servant	20.0
No need	20.0
Total	100.0

Source: FVW Survey, 1982.

Note: * 2 FVWs without children have been excluded from the analysis.

FVWs are living either in their parents' families or in the village where their parents live. Another one-tenth of the FVWs rely on other relatives and family members, including husband, sisters-in-law and wives of brothers-in-law. These are usually the families where FVWs have no mothers-in-law or where the mother-in-law is too old to control young children.

One interesting finding in Table 5.4 is that no FVW mentioned their elder daughters taking care of the younger children, which is an expected role of young girls in rural families (Rahman, 1978; Cain, 1977a). One probable explanation may be that the elder daughters go to school when the FVW goes out to work. As mentioned earlier, most of the FVWs appear to come from families in which there has been a tradition of educating girls as well as boys. Also, as they belong to relatively high income families in the village they can afford to employ some one to take care of their children, particularly when no senior female member is available in the house. Thus we find that as much as one-fifth of the FVWs have engaged servants, usually maid-servants, to take care of their children during their absence from home.

One major disadvantage a FVW suffers if she has a young child is the need to arrange breastfeeding for the child when the FVW goes out for work. Our discussion with some FVWs and observation in the field suggest that most of these FVWs take a break in their work after two or three hours, come back home to feed the child and then return to work again. In a few cases we were told that the child is given breastmilk by the wife of the FVW's brother-in-law. It may be mentioned here that there is no religious or social stigma against a

child being given milk by his or her parent's sister or by the wife of his or her parent's brother. However, if a child sucks the breastmilk of a woman other than its mother, when it grows up it cannot marry the daughter or the son of that woman.

Except for one FVW who is a young wife with no living children, all the FVWs appear to have used some method of contraception at one time or other in their life. About four-fifths of the FVWs reported using contraception at the time of the survey. Among the methods currently used by the FVWs the most popular one seems to be IUD, followed by oral pill and condoms. DMPA injection and tubectomy which are the two most popular methods among the client population (see Table 8.1, Chapter 8) are used only by the small number of FVWs. Low use of tubectomy among the FVWs is quite understandable given the fact that most of them are young and have not attained their desired family size. As regards lower use rate of DMPA injection, the reason given by the FVWs in our discussion with them at the subcentre meeting was that if any side-effect occurs from the injection one may have to suffer for three to six months, depending upon the dose she has taken. Injectables are popular among the client population because they do not like the daily bother associated with some methods such as oral pills. In the case of the IUD, we observe a consistency between what the FVWs preach and what they practise in their lives. The FVWs have been recently encouraged to promote IUD services and the result of this effort has been encouraging. In a short period the IUD has become the third ranking among the methods used by the client population (See Table 8.1, Chapter 8).

Nearly 85 per cent of the FVWs have lived in the villages where they work either since their childhood or since their marriage. A small number of FVWs moved into their working village after joining the service, while another small proportion of them come to work from the neighbouring villages.

Except for two FVWs who reported having only six years of schooling, all the FVWs meet the minimum educational requirement, seven years of schooling (Table 5.3). In fact, about three-fourths of the FVWs have more than the minimum educational requirement. A sizable proportion of the FVWs reported having passed SSC (secondary school certificate or tenth grade), including one FVW who had passed HSC (higher secondary school certificate or twelfth grade).

5.4 VARIATION IN SOCIO-ECONOMIC STATUS OF THE FAMILY

Table 5.5 shows the distribution of FVWs according to the socio-economic characteristics of their families. As can be expected, all the FVWs have educated husbands. However, there exists a wide range of variation in the level of their education. Nearly 17 per cent of the husbands have a Bachelor or Master degree in arts, science or commerce, while nearly half of the husbands did not continue their study beyond high school. About one-quarter of the husbands reported having passed SSC and more than one-third have passed HSC.

TABLE 5.5

Percentage Distribution of FVWs of Matlab MCH-FP Project by Selected Socio-Economic Characteristics of Their Families

Characteristics	Per 100 FVWs	
<u>Level of Education of Husbands:</u>		
Primary or below	5.2	
Class VI-VII	1.3	
Class VIII-IX	15.6	
S.S.C. (Secondary school certificate)	23.4	
H.S.C. (Higher secondary school certificate)	37.6	
Bachelor or Master of Science/Arts/Commerce	16.9	
	100.0	(N=77)
<u>Occupation of Husbands:</u>		
Service	35.1	
School teacher	18.2	
Business	22.0	
Cultivation	2.6	
Fishing	2.6	
Other	1.3	
Unemployed	18.2	
	100.0	(N=77)
<u>Possession of Land by Family:</u>		
No land	6.5	
< 2 acres	33.8	
2-3 acres	40.2	
4-5 acres	10.4	
> 5 acres	9.1	
	100.0	(N=77)
<u>Leadership Status of <u>Bari</u> and <u>Samaj</u> Member:</u>		
	<u>From <u>Bari</u></u>	<u>From <u>Samaj</u></u>
Union Council Chairman	6.5	13.0
Union Council Member	10.4	32.5
Village <u>Matabbar</u>	33.8	36.4
<u>Numerical Strength of Own <u>Samaj</u>:</u>		
Less than half of the village total population	10.4	
About half " " " " "	14.3	
More than half " " " " "	25.9	
No fraction in the village	27.3	
Does not live in this village	9.1	
No answer or could not specify	13.0	
	100.0	(N=77)

Source: FVW Survey, 1982.

A great majority of the husbands are engaged in non-agricultural pursuits such as service in an office, teaching, government health and family planning work and business. Only two are engaged in cultivation and two are fishermen. Nearly one-fifth of the husbands were unemployed, which indicates non-availability of a suitable white collar job for these educated persons as well as a lack of interest in accepting their parents' occupations which are mostly agriculture.

Since the economy of rural Matlab is overwhelmingly oriented towards agriculture, the ownership and control of land is an important indicator of status and power in the village. The findings in Table 5.5 clearly show that the FVWs come from relatively affluent families of the area, having an amount of 2.5 acres of cultivable land on the average. As mentioned earlier, according to the 1974 ICDDR,B census an average landowning family in Matlab owned about 0.7 acres of cultivable land. About 20 per cent of the families were absolutely landless. In contrast, only five FVWs (6.5 per cent) reported that their families did not own any cultivable land. Among them three FVWs have recently been separated from their parents-in-law and have not yet received their share of the family land, while two FVWs are Hindus and their families appear to have no interest in purchasing land as most of their relatives have migrated to India.

As mentioned earlier, another important traditional criterion for status of a family in the village is the representation of the family in village leadership. Wealth, education and membership of a numerous lineage group or samaj are usually the necessary pre-requisites for a person to become a leader in the village. The samaj is primarily a religious association, though its function may differ from one village

to nother. In a village there may be one or more than one samaj, depending upon internal solidarity among different lineage groups in the village. The main function of the samaj is social control. But as Bertocci (1969) observed, a latent function of the samaj is formally to channel political relations between the prestigious families and the group they represent when those relations are thrown into open conflict.

From Table 5.5 it is evident that about two-thirds of the FVWs' families have a formal leader, a Union Council chairman or member, or an informal leader, a village matabbar, either from their own bari or their own samaj. In the villages where there are more than one samaj a large number of the FVWs' families appear to belong to the numerically stronger samaj.

5.5 VARIATION IN SUPPORT FROM FAMILY AND INFLUENTIAL REFERENTS

At the time of recruitment of the FVWs, one candidate was selected who had only six years of education, as no suitable candidate was available from that village. She was a relatively older woman and appeared to have read no books or magazines since she had left school. Her husband, however, is a school teacher and he promised to help his wife in maintaining records till she became competent to do it herself. A few days after her appointment we learned that the husband had stopped his private coaching of students and instead started teaching his wife at home in the evening. That FVW is now one of our successful workers.

However, every FVW is not as fortunate as that FVW in having a husband like the school teacher. As can be seen from Table 5.6 about half of the FVWs do not get any help from their husbands in their work. The kinds of help which the other FVWs reported getting from their husbands included: motivation of potential clients' husbands, encouragement for good work and punctuality, assistance in record keeping and other direct support such as accompanying the FVW in the field when she needs to visit a client at odd times of the day, giving supplies to the clients in her absence and hiring a country boat for her work during the monsoon.

One interesting question may be why about half of the FVWs' husbands do not help their wives when the latter's work provides a regular source of income to the family. More importantly, a large number of FVWs appear either not to discuss their work with their husbands or do so only occasionally. On further probing we discovered that most of these husbands either do not stay at home regularly because they work away from home (as in the case of many service employees) or they do not enjoy discussing their wif's work when they return home after the day's work in the office or shops.

TABLE 5.6

Percentage Distribution of FVWs of Matlab MCH-FP Project by Discussion about Their Work with Their Husbands, Kinds of Help They Receive From Their Husbands and Attitude of Influential Referents Towards Their Work

				Per 100 FVWs
<u>Discussion with husband:</u>				
Does not discuss				14.3
Occasionally discuss				31.2
Often discuss				<u>54.5</u>
Total				<u>100.0 (N=77)</u>
<u>Kind of help from husband:</u>				
Does not help				48.0
Helps in motivating males				24.7
Encourages for punctuality in work				6.5
Assists in record keeping				6.5
Gives encouragement to keep morale high				3.9
Accompanies in the field in odd time or in problematic <u>bari</u>				3.9
Other (gives supplies to clients, hires boat, etc.)				<u>6.5</u>
Total				<u>100.0 (N=77)</u>
<u>Attitude of Influential Referents:</u>	<u>Father-in-law</u>	<u>Mother-in-law</u>	<u>Bari Head</u>	
	(N=33*)	(N=58*)	(N=77)	
Gives encouragement	57.6	43.1	44.2	
Expresses no opinion	42.4	50.0	45.4	
Dislikes FVW's work	-	5.2	6.5	
No answer	-	<u>1.7</u>	<u>3.9</u>	
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	

Note: * Others are dead

Source: FVW Survey, 1982

The findings in Table 5.6 do not support our apprehension about the extent of disapproval of the FVWs' work by their influential referents. Only three FVWs reported that their mothers-in-law disliked their work and six reported disapproval by their bari heads. However, a large number of mothers-in-law, fathers-in-law and bari heads appear to keep their opinion about the FVWs' work reserved and do not provide any encouragement to the FVWs. This is not surprising given the fact as mentioned earlier that the movement of a woman outside the bari is a reflection on the status of her family. Nevertheless, the opposition engendered by the FVWs leaving the bari is balanced by the fact of their getting paid for going out of the bari. In fact, they are earning salaries for improvement of the position of their families that were previously non-existent, and the salary has the effect of assuaging the dire predictions of those who disapprove of women leaving the bari and working.

5.6 VARIATION IN ATTITUDE TOWARDS OWN PROFESSION

No FVW said that her work was not good work for village women despite the fact that many of them complained about difficulties of working in the village and some encountered direct oppositions from their families and relatives at the beginning of the programme.

As to why they consider it a good work for women, over three-fifths reported that it is a social work, about one-third suggested that it brings benefit to the family and over one-fourth reported that it provides scope for learning more (Table 5.7). It may

TABLE 5.7

Percentage Distribution of FVWs of Matlab MCH-FP Project by Reasons for Considering FVW's Job a Good Work for a Village Woman and Their Intention to Give up the Present Job in Next Five Years

	Per 100 FVWs
<u>Reason for Considering FVW Job a Good Work</u>	
Social work	62.3
Benefit to own family	33.8
Scope for learning more	26.0
Scope for utilization of one's own education	3.9
Makes one self-dependent	2.6
Blessing of people	2.6
Well-paid work with relatively less education	1.3
Other	1.3
Total	<u>133.8*</u>
<u>Intention to Give Up the Present Job</u>	
Yes, if better job is available	19.5
Intend to continue	<u>80.5</u>
Total	<u>100.0 (N=77)</u>

Source: FVW Survey, 1982

Note: * Total exceeds 100 as some FVWs mentioned more than one reason.

be mentioned here that at the time of their recruitment most of the FVWs told us that they wanted this job because it might take partial pressure off their financial need as well as provide a possible alternative for utilization of their hard earned education. During the course of their work with other women in the village there appears to have developed among most of the FVWs an attitude associating their activity with social work.

Over four-fifths of the FVWs reported that they had no plans for giving up their present job in the next five years. Those who reported that they might give up the present job made this possibility contingent on getting a better job. Given the narrowness of their world and the limited opportunity within it, the liking for the present job becomes understandably important, if for no other reason than that it is the only alternative available for them.

5.7 RELATION BETWEEN INDIVIDUAL CHARACTERISTICS OF FVWs AND CONTRACEPTIVE USE-PREVALENCE RATES

In the following sections we will examine the relationship between the characteristics of the FVWs described in the preceding sections and contraceptive use-prevalence rates in the villages of their work. The definition of a village in this analysis is restricted to the working unit of a FVW which as mentioned earlier corresponds to a village of approximately one thousand population. This implies that in some cases a FVW unit will correspond exactly to a village, in some cases a fraction of a village and in other cases more than one village or fractions of villages, depending upon the size of the villages.

Table 5.8 presents village contraceptive use-prevalence rates by selected individual characteristics of the FVWs. It is evident that the FVWs who are comparatively senior in terms of age and number of living children have higher use-prevalence rates in their villages than the junior FVWs.

A number of factors seem to account for the comparatively higher success of the senior FVWs. Some of these factors relate to the effective communication of the senior FVWs with the client population. In the village, there is a problem of being 'shy' and having 'shame'. Shyness is defined in terms of age, sex and kinship relation in connection with the interaction and communication of a woman with the members of her bari and other villagers. The senior FVWs appear to be comparatively better integrated with the majority of the client population in terms of age-grade and life experience. They are able to talk on an equal level with eligible women as well as with

TABLE 5.8

Village Contraceptive Use-Prevalence Rates by Selected Individual Characteristics of FVWs, Matlab MCH-FP Project

Characteristics	No. of FVWs	No. of eligible women	Percentage of current users
<u>Age:</u>			
< 25 years	41	7167	32.1
26-30 "	25	4472	35.9
> 31 "	11	1948	39.1
	<u>77</u>	<u>13587</u>	<u>34.4</u>
<u>No. of Living Children:</u>			
< 2	12	2256	33.2
2-3	51	8939	33.4
4-5	10	1704	38.7
> 5	4	688	39.5
	<u>77</u>	<u>13587</u>	<u>34.4</u>
<u>Age of Youngest Child:</u>			
< 2 years	33	5813	31.6
3-4 "	9	1552	33.1
> 5 "	33	5885	37.0
	<u>75*</u>	<u>13250</u>	<u>34.2</u>
<u>Care-takers of Children:</u>			
Mother-in-law	29	5344	32.5
Mother	8	1437	31.4
Other relatives	8	1371	30.7
Servant	15	2418	37.5
No need	15	2680	37.7
	<u>75*</u>	<u>13250</u>	<u>34.2</u>
<u>Level of Education:</u>			
Class VI-VII	20	3776	33.9
Class VIII-IX	35	5883	35.7
S.S.C. and above	22	3928	32.7
	<u>77</u>	<u>13587</u>	<u>34.4</u>
<u>Personal Use of Contraceptives:</u>			
Currently using	61	10564	34.8
Used in past	15	2818	33.4
Never used	1	205	26.8
	<u>77</u>	<u>13587</u>	<u>34.4</u>

TABLE 5.8 (continued)

Characteristics	No. of FWWs	No. of eli- gible women	Percentage of current users
<u>Duration of Residence:</u>			
Since childhood	18	2980	35.1
Since marriage	47	8447	35.2
Since working as FWV	5	895	27.4
Does not live in the village of work	<u>7</u>	<u>1265</u>	<u>32.1</u>
	77	13587	34.4

Source: 1) FWV Survey, 1982 and 2) MCH-FP Service Records, July 1982.

Note: * 2 FWVs with no living children have been excluded from the analysis.

mothers-in-law, the guardians of young wives, when necessary.

Another factor which also relates to the effective communication of the senior FVWs is the maturity they have attained through age and the experience they have gathered by having children which they can relate to the importance of planning one's family size in course of discussion and persuasion of a client to accept contraception.

Another plausible explanation for higher success of this group of FVWs may be what McCarthy (1967) in her study in the same district termed 'centrality' of a woman in the family. By centrality is meant the relative responsibility and possible influence of a woman in her family. Traditionally, the oldest female member of the family is in charge of the women's duties and responsibilities. In a joint or extended family, it is usually the mother-in-law or the wife of the eldest brother-in-law who holds this position. In a nuclear family, there being no other with whom to share the household responsibilities, the wife carries the total burden. Her relationship with her husband in this sense becomes more direct than in joint or extended families and she may play some part in the decisions that are made regarding the family.

Most of the senior FVWs appear to qualify for the position of centrality in their families either because of their age or because of the absence of the mother-in-law from the family due to death or separation. The importance of centrality of a FVW in her family is further evidenced by the findings on care-takers of the FVWs' young children (Table 5.8). It shows that the FVWs who do not need a care-taker because their children have grown up or the FVWs who have servants in their house to take care of their children have higher

use-prevalence rates in their villages. An examination of age and presence of other relatives in the family reveals that most of the FVWs having servants in their houses are young wives (Table 5.9). But only one of them has a mother-in-law living with her family. In one case where the mother-in-law is still alive and living with the FVW, it appears that she is a widow, which should have resulted in a loss of her authority over the daughter-in-law (Aziz, 1979). Regular contribution to family income is another factor which may help these young FVWs to assume the position of centrality in their families. Employment of servants for taking care of children, an unusual instance in the village, is a clear indication of the authority of these FVWs in their household affairs.

One probable explanation for better performance by the FVWs having the position of centrality in their families seems to be that they have relatively greater freedom and definite authority in taking decisions about their work. Absence of mothers-in-law, as in the case of most of these FVWs, implies that they are free from many obligations and tensions that prevail in the joint or extended family, thereby allowing them to concentrate on their work as FVWs.

The age of the youngest child of the FVW appears to influence her performance (Table 5.8). One reason is that most of the FVWs with young children are young wives (Table 5.9), who as shown earlier have lower use-prevalence rates in their villages. Another reason is that most of the young children are of breastfeeding age, that is below three years. The reason why a FVW with a breastfed child cannot work efficiently is quite understandable. She cannot stay longer in the field leaving her child at home. She cannot take the child with her

TABLE 5.9

Relationship Among Selected Characteristics of FVWs, Matlab MCH-FP Project

1. <u>Age of youngest child</u> X		<u>Age of FVWs</u>				
		<u>≤ 25 yrs</u>	<u>26-30 yrs</u>	<u>≥ 31 yrs</u>		
< 2 yrs		65.9	24.0	-		
3-4 yrs		19.5	4.0	-		
≥ 5 yrs		9.7	72.0	100.0		
No children		4.9	-	-		
		<u>100.0</u>	<u>100.0</u>	<u>100.0</u>		
2. <u>Age of FVWs</u> X		<u>Level of Education</u>				
		<u>VI-VII</u>	<u>VII-IX</u>	<u>S.S.C. & Above</u>		
< 25 yrs		33.3	55.9	68.2		
26-30 yrs		33.3	32.3	31.8		
≥ 31 yrs		33.3	11.8	-		
		<u>99.9</u>	<u>100.0</u>	<u>100.0</u>		
3. <u>Education of FVWs</u> X		<u>Education of Husband</u>				
		<u>VII or less</u>	<u>VIII-IX</u>	<u>S.S.C.</u>	<u>H.S.C.</u>	<u>Graduation</u>
VI-VII		80.0	50.0	22.2	13.8	15.4
VIII-IX		20.0	50.0	55.6	41.4	46.2
S.S.C. & above		-	-	22.2	44.8	38.4
		<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
4. FVWs who have a servant to take care of their children or who do not need any care-taker, by their Age and whether Mothers-in-law live with them or not						
<u>Age of FVWs</u>		<u>Servants</u>		<u>No need</u>		
< 25 yrs		46.7		-		
26-30 yrs		46.7		60.0		
≥ 31 yrs		6.6		40.0		
		<u>100.0</u>		<u>100.0</u>		
<u>Whether Mother-in-law lives with FVW</u>						
Lives with FVW		6.7		33.6		
Does not live with FVW		53.3		13.1		
Not alive		40.0		53.3		
		<u>100.0</u>		<u>100.0</u>		

Source: FVW Survey, 1982

in the field because she has to carry contraceptive and medical supplies with her and has to fill out a number of records in the field. Also, besides a local belief that evil eye or evil spirit may cause harm to a small child if he or she is taken out of the bari, it does not look nice for a FVW to carry her child with her while going door-to-door in the village.

The FVWs who completed secondary or higher secondary school education appear to have lower use-prevalence rates than the FVWs who did not continue their study beyond ninth grade. One explanation for lower use-prevalence rates in the villages of higher educated FVWs is that they are comparatively younger (Table 5.9). Another observation in the field is that some of these FVWs were living with their husbands in towns and cities and came back to their home village after joining the service. Age and experience of city life may have created a problem of integration for these FVWs with their client population.

Since the overwhelming majority of the FVWs are current users of contraceptives it is difficult to make any definite inference about the contribution of FVWs' personal use of contraception to their differential effectiveness. However, it is clear that one FVW who has never used contraception has a poor use-prevalence rate in her village.

As can be expected, the FVWs who have been residing in the villages of their work either since childhood or since marriage and whose families are therefore likely to be relatively better known in the village have higher use-prevalence rates than the FVWs who moved into their working villages after joining the service or the FVWs who come to work from the neighbouring villages. The reason why there

should be a difference in the effectiveness, although very small, between the FVWs who moved into their working village after joining the service and the FVWs who come to work from the neighbouring village seems to be that the former group of FVWs were strangers to their client population when they first came to their working villages, while in the case of the latter group of FVWs there was at least some chance of their being acquainted with some families of the neighbouring villages earlier. The findings thus tend to support one of our hypotheses that family planning works better in a setting of confidence between the worker and the client, one important criterion of which is the familiarity between the two.

5.8 RELATION BETWEEN SOCIO-ECONOMIC STATUS OF FVWs' FAMILIES AND CONTRACEPTIVE USE-PREVALENCE RATES

Table 5.10 presents village contraceptive use-prevalence rates by selected social and economic characteristics of FVWs' families. It shows that the FVWs with higher educated husbands have slightly lower use-prevalence rates than the FVWs with comparatively less educated husbands. This may, however, be a reflection of the influence of the education of the FVWs themselves. The findings in Table 5.9 shows that the higher educated FVWs usually have higher educated husbands.

The FVWs whose husbands are school teachers or unemployed have higher use-prevalence rates than the FVWs whose husbands are engaged in other occupations. School teachers are usually respected in the village. It is possible that their wives also command the respect and confidence of village women. It is also possible that, like the unemployed husbands who have time to help their wives

Village Contraceptive Use-Prevalence Rates by Selected Socio-Economic Characteristics of FVWs' Families, Matlab MCH-FP Project

Socio-economic characteristics	No. of FVWs	No. of eligible women	Percentage of current users
<u>Education of Husband:</u>			
Class IX or less	17	2999	34.2
S.S.C.	18	3303	35.9
H.S.C. and above	42	7285	33.7
	<u>77</u>	<u>13587</u>	<u>34.4</u>
<u>Occupation of Husband:</u>			
Service	27	4867	32.0
School teachers	14	2359	37.6
Business	17	3035	32.6
Other occupations	5	953	33.1
Unemployed	14	2373	36.9
	<u>77</u>	<u>13587</u>	<u>34.4</u>
<u>Possession of Land by Family:</u>			
Less than 2 acres	31	5557	34.2
2-3 acres	31	5391	33.4
4 or more acres	15	2639	36.7
	<u>77</u>	<u>13587</u>	<u>34.4</u>
<u>Leadership Status:</u>			
Union Council Member from:			
<u>Bari</u>	13	2306	31.2
<u>Samaj</u>	35	6235	37.9
None	29	5046	31.5
	<u>77</u>	<u>13587</u>	<u>34.4</u>
Village <u>Matabbar</u> from:			
<u>Bari</u>	26	4639	34.4
<u>Samaj</u>	28	4818	35.6
None	23	4130	32.8
	<u>77</u>	<u>13587</u>	<u>34.4</u>
<u>Strength of Samaj:</u>			
Less than half of the village total population	14	2630	31.3
About half total population	8	1364	36.0
Half or more total population	18	3002	37.8
No fraction in the village	20	3633	33.9
	<u>60*</u>	<u>10629</u>	<u>34.5</u>

Source: 1) FVW Survey, 1982 and 2) MCH-FP Service Records, July 1982.

Note: * 17 FVWs who either did not live in the villages of their work or did not answer the question have been excluded from the analysis

in their work, the school teachers are usually available at home and help their wives in their work. This point will be elaborated further in a later section when we will discuss the influence of husbands' help in FVWs' work on contraceptive use-prevalence rates.

The FVWs whose families own four or more than four acres of cultivable land appear to have slightly higher use-prevalence rates than the other FVWs. One plausible explanation seems to be that the families having larger landholdings tend to be more powerful in terms of influence and patronage in the village (Arthur and McNicol, 1978; Bertocci, 1969). This, in turn, may help the FVWs from these families to recruit more acceptors from their larger patronage group in the village. This is also supported by the findings which show that the FVWs who belong to a numerically stronger samaj have higher use-prevalence rates than the other FVWs.

The FVWs who have a Union Council member or matabbar from their samaj, and thus indicate the strength of the samaj in the village, have higher use-prevalence rates than the other FVWs (Table 5.10). Interestingly, the FVWs who have a Union Council member from their own bari, and thus dominate the influence and power in the village, appear to have lower use-prevalence rates. One probable explanation may be that the FVWs from these baris are more careful about any opprobrium engendered by violating the custom of purdha. Our observation in the field suggests a general reluctance of some of these FVWs to move with any greater freedom or regularity in the villages. The status and power of the families of these FVWs may also influence the supervisors in taking any action against them in case of any negligence in their duty. After all, these are the families whose co-operation and

support is most needed in the case of undertaking a survey or initiating an intervention in the village.

5.9 RELATION BETWEEN CONTRACEPTIVE USE-PREVALENCE RATES AND SUPPORT FROM FVWs' FAMILIES AND INFLUENTIAL REFERENTS

Table 5.11 shows that the FVWs who receive encouragement for punctuality and good work from their husbands or the FVWs whose husbands give direct support to their work by accompanying them in the field when necessary, or by hiring a country boat for their work during the monsoon, have higher use-prevalence rates than the FVWs who do not get this type of help from their husbands.

The lower use-prevalence rates in the villages of the FVWs who reported that their husbands helped them by motivating the husbands of potential clients may indicate a strong male resistance to contraceptive use in these villages. It may also be possible that these FVWs, due to their young age, are less capable of communicating directly with the reluctant or ignorant husbands of their potential clients.

Encouragement from mothers-in-law, fathers-in-law or bari heads does not seem to make any difference in the effectiveness of the FVWs in terms of contraceptive use-prevalence in their villages. However, three FVWs who reported that their mothers-in-law did not like their work or the five FVWs who reported that their bari heads did not like their work have markedly lower use-prevalence rates. It may be noted from the table that the FVWs whose mothers-in-law are dead have higher use-prevalence rates. This further lends support to our hypothesis concerning the importance of centrality of a successful FVW in her family discussed earlier.

TABLE 5.11

Village Contraceptive Use-Prevalence Rates by Types of Help from Husbands and Encouragement from Influential Referents, Matlab MCH-FP Project

Variables	No. of FVWs	No. of Eligible women	Percentage of current users
<u>Types of Help from Husband:</u>			
Motivating male clients	19	3326	31.7
Encouragement for punctuality and good work	8	1339	45.8
Maintaining records	5	746	35.5
Accompanying her in the field when necessary	3	552	38.0
Hiring of boat, giving supplies in her absence, etc.	5	736	43.3
Does not help	37	6888	32.0
	<u>77</u>	<u>13587</u>	<u>34.0</u>
<u>Encouragement from Influential Referents*:</u>			
Mother-in-law:			
Encourages FVW	25	4685	33.4
Says nothing	29	5032	33.5
Dislikes her work	3	498	28.5
Not alive	19	3190	38.5
Father-in-law:			
Encourages	19	3497	33.6
Says nothing	14	2921	33.7
Not alive	44	7669	34.9
<u>Bari Head:</u>			
Encourages	34	6182	34.6
Says nothing	35	6074	34.5
Dislikes	5	886	29.8
<u>Intention to continue in Present job:</u>			
Intend to continue	62	10971	33.5
Will give up if better job is available	15	2616	38.2
	<u>77</u>	<u>13587</u>	<u>34.4</u>

Source: 1) FVW Survey, 1982 and 2) MCH-FP Service Records, July 1982.

Note: *Number of FVWs under different categories does not add up to 77 as some FVWs did not answer the question.

5.10 RELATION BETWEEN CONTRACEPTIVE USE-PREVALENCE RATES AND ATTITUDE OF FVWs TOWARDS OWN PROFESSION

As shown earlier, no FVW appears to disregard her work or intends to give it up unless a better one is available. The vast majority of the FVWs are satisfied with their present position for the reason mentioned earlier. However, a small proportion of the FVWs who expressed their ambition for a better job seem to have comparatively higher use-prevalence rates in their villages (Table 5.11). It may be mentioned here that the project has a provision of granting an annual increment of salary to the FVWs who show satisfactory performance in terms of punctuality in work and recruitment of contraceptive users. Also, there is an opening for promotion to higher positions for the FVWs with requisite qualifications and satisfactory performance. It is possible that the FVWs who have ambition for a higher job work hard to prove their efficiency in the hope of future promotion.

5.11 SUMMARY AND DISCUSSION

As mentioned in the introductory chapter, the Matlab MCH-FP project envisaged recruitment of a unified cadre of FVWs in order to minimize the variation in the performance of individual workers as observed during the CDP. A number of criteria relating to individual characteristics of the workers and socio-economic status of their families were determined by the project. The findings presented in this chapter show that the project was successful in matching the candidates on certain criteria such as marital status and personal use of contraception, while on other criteria it allowed some flexibility either due to an imprecise definition of the criterion, as in the case of age or number of children, or due to non-availability of a

candidate satisfying the criterion, as in the case of residence of the worker. Our analysis reveals that a difference in some of these criteria has contributed to a difference in the performance of the FVWs resulting in a variation in contraceptive use-prevalence rates among the villages.

Among the individual characteristics included in this analysis, age of a FVW appears to be the most important determinant of her effectiveness. The higher the age of an FVW the higher the use-prevalence rate in her area (Table 5.12). Her other demographic characteristics such as number of children and age of youngest child appear to mediate their influence on her effectiveness through her age; correlation coefficients between age of the FVW and number of her children and age of youngest child are .732 and .600 respectively.

Two important factors seem to account for the greater success of the older FVWs. The first one relates to their effective communication with the client population. This is mainly because of a comparatively better integration of the older FVWs with the majority of the client population in terms of age-grade, maturity and life experience. The second factor is the centrality of the older FVWs in their families which help them to take decisions about their work and to maintain punctuality in their work without much interference from other family members, particularly mother-in-law.

Among the characteristics defining the social status of the family of a FVW the most important factor having definite impact on her effectiveness is the numerical strength of her samaj. The larger the samaj of a FVW is, the higher is the use-prevalence rate of her area (Table 5.12). The numerical strength of a samaj of a FVW not

TABLE 5.12

Kendall Correlation Coefficients for Village Contraceptive Use-Prevalence Rates by Selected Characteristics of FVWs, Matlab MCH-FP Project

Characteristics	Value of γ	Level of Significance
Age of FVW	.219	.007
Strength of <u>Samaj</u>	.191	.027
No. of eligible women	-.175	.013
Level of education	-.075	.191

Source: FVW Survey, 1982

only indicates the strength of her kin group in the village, but also indicates the ability of her family or kin group to provide economically for the members of its patronage group beyond the kin. The findings thus tend to support our observation in the field that family planning works better in a setting of kin or patronage relationship between the worker and the client. .

Our findings suggest the importance of support and encouragement from the husband of a FVW for the success in her work. The FVWs who receive encouragement for punctuality and good work from their husbands or the FVWs whose husbands give direct support to their work by accompanying them in the field when necessary or by hiring a country boat for their work, have higher use-prevalence rates in their villages than the FVWs who do not get this type of help or support from their husbands.

One interesting question may be why about half of the FVWs' husbands do not help their wives (Table 5.6) when the latter's work provides a regular source of income to the family. One probable answer seems to be that some husbands have no time to help their wives, as in the case of most business-men, or they do not live at home, as in the case of many service workers. This is reflected in the findings in Table 5.10 which show that the FVWs whose husbands are school teachers and so usually available at home or whose husbands have no job and so have time to help their wives have higher use-prevalence rates than the FVWs whose husbands are engaged in other occupations.

No FVW appears to disregard her profession or considers it to be unsuitable work for village women. Given the narrowness of their world and the limited opportunities within it, very few FVWs expressed any intention of giving up their present job in the next five years. Those who do intend to give up the present job are ambitious for a better job or promotion which, in turn, appears to have made them more serious in their work to prove their efficiency for future advancement.

Another important factor which appears to influence the effectiveness of a FVW is the number of eligible women she needs to serve in her village. The mean number of eligible women that a FVW serves is 176 with a standard deviation of 27. It is observed that the smaller the number of eligible women in the area of a FVW, the higher the use-prevalence rate in her area (Table 5.12). In fact, the age of the FVWs and the number of eligible women in their areas explained about one-fifth of total variation in contraceptive use-prevalence rates among their working villages. Over half of the variation explained is attributed to the age of a FVW and less than half to the number of eligible women in her area (Table 5.13).

In short then, we find that the most important programme-amenable variables having considerable potential for raising the amount of contraceptive use are: age of a FVW, numerical strength of her samaj, and number of eligible women she has to serve. While the CDP suggested inefficiency of workers who are too old, the present study suggests inadequacy of workers who are too young. Given the limitation of getting sufficient candidates from a too narrow age range we propose an age-grade of workers ranging between 26 and 35

TABLE 5.13

Multiple Regression for Village Contraceptive Use-Prevalence Rates by Selected Characteristics of FVWs,
Matlab MCH-FP Project, 1982

Independent Variable	Multiple R	R square	R sq. change	Simple R	B	Beta
Age of FVW	0.318	0.101	0.101	0.318	0.535	0.289
No. of eligible women	0.438	0.192	0.091	-0.306	-0.996	-0.308
Level of education of FVW	0.443	0.196	0.004	-0.143	-0.505	-0.071
Constant					0.425	

Source: FVW Survey, 1982

years of age. The influence of the strength of the samaj of a FVW is contingent upon her recruitment from the village of her work. As regards number of eligible women to be served by a FVW, we have shown in the preceding chapter that mere addition of workers may not help increase the present number of contraceptive users to any significant extent. What seems more reasonable and practicable for the project is to re-distribute or re-adjust the number of eligible women among the workers of the adjacent units.

One factor which has important relevance to both the Matlab MCH-FP project and the national family planning programme is the educational qualification of the worker. Although statistically not significant, our findings (Table 5.8) suggest a relatively greater success of the FVWs with eight or nine years of schooling. More highly educated FVWs appear to be younger in age, a fact reducing their effectiveness. Also too much difference in the level of education between these FVWs and the client population suggests the problem of what Rogers (1973) termed 'heterophily'. The relaxation of the educational qualification of female field workers to eighth or ninth grade of education, which the national family planning programme has already started implementing in some districts where higher qualified candidates are not available, will definitely increase the number of candidates meeting other important criteria. However, a trend of lower use-prevalence rates among lower educated FVWs (Table 5.8) and our experience in the field suggest that the minimum qualification should not be fixed below seven or six years of schooling.

Another important factor for a successful worker is her husband's support of her work. A school teacher seems to be the most ideal person to help his wife in her work. In the village a school teacher is usually the most highly educated person living at home regularly. The chance of having an educated wife in the village is also higher for him. Besides being available at home to help his wife, his respect in the community seems to help his wife in commanding respect and confidence of other village women.

Due to a lack of sufficient variation in personal use of contraceptives by the workers and their residence in the villages of their work it is not possible to make any definite comment on the impact of these two variables on the effectiveness of the FVWs. However, the findings in Table 5.8 lend support to the importance of these two criteria fixed by the project.

Another important point that it seems appropriate to mention here is that a large number of FVWs reported that their husbands helped them in motivating the husbands of their potential clients. Our findings show a comparatively lower use-prevalence rate in the area of these FVWs, indicating a strong male resistance to contraceptive use in these villages. Thus one way of improving the effectiveness of the present programme seems to be to reach the male partners of the potential clients effectively. The present programme is heavily dependent on female workers, which is understandable given the emphasis of the programme on female family planning methods and the fact that men in rural areas are not so accessible. But given the problem of being 'shy' and having 'shame' mentioned earlier, an FVW, even an older one, does not find it easy, as our observation in the

field suggests, to inform the husband on family planning and often depends on the wife to do this part of her job. Failure to acknowledge male authority by approaching the family via the wife increases the possibility of male resistance to family planning; it can be interpreted as a challenge to male authority (Bogue, 1962).

The project has one male senior health assistant to provide supervision and support to 20 FWs. His responsibility also includes organization of group meetings with males and motivation of reluctant husbands as reported to him by the FWs. However, our observation in the field suggests that their meetings with males are neither regular nor systematic. This is also evident from the response of the FWs to a question during the survey regarding the measures to be taken by their immediate supervisors for increasing the number of contraceptive users in their area. The vast majority of the FWs emphasized the importance of meetings with males and motivation of husbands by the male senior health assistant (Table 5.14). Also to be noted from the findings in Table 5.14 is the importance given by FWs to more support for their work, follow-up and field visits by the female para-medic, in charge of the subcentre.

TABLE 5.14

Percentage Distribution of FVWs by Suggested Measures for Increasing the Number of Contraceptive Users, Matlab MCH-FP Project

Measures	Per 1.00 FVWs
<u>To be taken by Sub-centre</u>	
<u>Para-medics:</u>	
More follow-up	24.7
More field visits	24.7
Support to FVW's work	35.1
Good manner in the clinic	6.5
Other	9.0
	<u>100.0 (N=77)</u>
<u>To be taken by Sr. health</u>	
<u>assistants:</u>	
Meetings with males	36.4
Motivating husbands	35.0
Support to FVW's work	13.0
More field visits	10.4
Other	5.2
	<u>100.0 (N=77)</u>

Source: FVW Survey, 1982

CHAPTER 6

WITHIN-VILLAGE VARIATIONS

6.1 INTRODUCTION

As mentioned earlier, the villages of Matlab differ in size and that affects the allocation of FVWs. There are 25 service delivery units (or FVW units as we called them in the preceding chapter) that consist of more than one village or parts of more than one village. Table 6.1 shows that in a great majority of such cases there is a marked variation in contraceptive use-prevalence rates among the villages or parts of villages of the same service delivery unit.

By contrast, there are 24 villages which are so large as to necessitate having more than one FVW per village. Table 6.2 suggests a notable difference in contraceptive use-prevalence rates among many service delivery units of the same villages. The object of the present chapter is to identify the factors responsible for the observed within-unit or within-village variations in contraceptive use-prevalence.

We would argue that the factors which were observed to be associated with inter-village variations in contraceptive use-prevalence are also responsible for the observed within-unit or within-village variations. In the preceding two chapters a long list of variables representing the village socio-economic infrastructure and the credibility of the FVWs that were, a priori, considered to have a potential influence on the variations were examined. In this

TABLE 6.1

Difference in Contraceptive Use-Prevalence Rates Between Villages or Parts of Villages of the Same Service Delivery Unit, Matlab MCH-FP Project

SL. No. of FVW unit	No. of Current users per 100 eligible women		
	Higher use rate village	Lower use rate village	Difference
1	46	23	23
2	34	19	15
3	38	31	7
4	44	9	35
5	40	37	3
6	40	38	2
7	53	44	9
8	41	18	23
9	28	24	4
10	63	49	14
11	38	5	33
12	33	30	3
13	31	27	4
14	45	35	10
15	33	32	1
16	33	31	2
12	34	33	1
18	30	28	2
19	49	32	17
20	40	19	21
21	32	23	9
22	56	22	34
23	33	30	3
24	37	26	11
25	49	48	1

Source: Matlab MCH-FP Service Records, July 1982

TABLE 6.2

Difference in Contraceptive Use-Prevalence Rates Between High and Low Use-Prevalence Service Delivery Units of the Same Village, Matlab MCH-FP Project

SL. No. of village	No. of Current users per 100 eligible women		
	Higher use rate village	Lower use rate village	Difference
1	51	23	28
2	50	49	1
3	35	23	12
4	64	44	20
5	32	9	23
6	38	19	19
7	40	25	15
8	30	19	11
9	31	23	8
10	24	24	0
11	39	34	5
12	44	37	7
13	30	28	2
14	35	30	5
15	49	37	12
16	63	33	30
17	31	27	4
18	35	34	1
19	57	33	24
20	36	23	13
21	50	49	1
22	37	37	0
23	32	22	10
24	30	30	0

Source: Matlab MCH-FP Service Records, July 1982

chapter we shall first abstract the most central variables from the analysis of the preceding chapters, and then examine their influence on the observed within-unit or within-village variations. Thus this chapter will deal with a much more limited range of variables than those treated in the previous chapters, but will compensate for the narrower range by more in-depth treatment of some important determinants of worker performance.

6.2 CONTRAST BETWEEN BEST AND WORST SERVICE DELIVERY UNITS

In order to abstract the most central variables observed to be associated with inter-village variations in contraceptive use-prevalence we shall examine the ten best and ten worst service delivery units (in terms of contraceptive use-prevalence rates) in association with village and worker's characteristics. These 20 units are chosen from the overall 80 units of the project area. It is obvious that some of these 20 units consist of more than one village or parts of more than one village. However, an examination of the village characteristics included in this analysis shows that these villages or parts of villages differ only in literacy rates. In such cases we have defined the literacy rate of a services delivery unit by taking the average of the literacy rates for its component villages.

The selection of the village and worker's characteristics is made on the basis of their seeming association with village contraceptive use-prevalence rates observed in the preceding chapter. Each unit is given a score of one or zero for a positive or negative attribute of a characteristic respectively. The positive attribute of a characteristic indicates the positive association of that characteristic with the use-prevalence rate, while the negative

attribute indicates either no association or negative association. In all, we selected 13 characteristics. The positive or negative attributes of these characteristics are defined as follows:

CHARACTERISTICS	POSITIVE ATTRIBUTES (x)	NEGATIVE ATTRIBUTES (-)
<u>Village Characteristics:</u>		
Occupation of H/H heads	Majority agriculture	Majority fishing
Literacy of H/H heads	> 50 % literates	< 50 % literates
Religion of H/H heads	Majority Hindus	Majority Muslims
Communication facilities	Launch ghat within 1/2 hour travel distance	Not available within 1/2 hour travel distance
<u>FVW Characteristics:</u>		
No. of eligible women in the area	Equal or less than the average	Greater than the average
Age of FVW	> 26 years	< 26 years
Education of FVW	Less than SSC (Secondary school certificate)	SSC or above
Husband's occupation	School teacher or unemployed	Other occupation
UC member from own <u>samaj</u>	Yes (excluding from own <u>bari</u>)	No (or from own <u>bari</u>)
Numerical strength of own <u>samaj</u>	> 500 members	< 500 members
Help from husband	Yes	No
Higher job ambition	Yes	No
Residence in the village of work	Since childhood or marriage	Never lived in this village or moved into this village after joining the service

The scores obtained by each best and worst FVW are presented in Table 6.3. It shows that the positive attributes of the 13 selected characteristics are highly concentrated among the best FVWs. On the average, a best FVW obtained a score of 0.63 and 0.88 of the positive attributes of the village and worker characteristics respectively. The corresponding scores for a worst FVW are 0.40 and 0.27.

Contrast Between Ten Best and Ten Worst Service Delivery Units,

Matlab MCH-FP Project

Village Characteristics				FWV Characteristics										(14) Total scores
(1) Occupation	(2) Literacy	(3) Religion	(4) Communication	(5) Age of FWV	(6) Education of FWV	(7) Husband's occupation	(8) Leader from Samaj	(9) Strength of Samaj	(10) Help from husband	(11) Higher job ambition	(12) Residence in village	(13) No. of eligible women		
A	X	-	-	X	X	X	X	X	X	X	X	X	10	
B	X	-	-	X	X	-	X	X	X	X	X	X	9	
C	X	-	X	X	X	X	X	X	X	X	X	X	11	
D	X	X	X	X	-	X	X	X	X	-	X	-	10	
E	X	X	-	X	-	X	X	X	X	-	X	X	10	
F	X	X	X	X	X	X	-	X	X	-	X	-	10	
G	X	-	X	X	X	X	X	-	X	-	X	-	9	
H	X	X	X	X	X	X	X	-	X	-	X	X	11	
I	X	-	X	-	-	X	-	X	-	X	X	X	7	
J	X	-	X	X	-	-	-	X	X	-	X	X	7	
Total	10	5	4	6	6	8	7	8	9	4	10	8	94	
						<u>Best Unit</u>								
K	X	-	X	-	X	-	-	-	-	-	X	X	5	
L	X	-	X	-	-	X	-	-	-	-	X	-	4	
M	X	-	-	-	X	X	-	-	-	-	X	X	5	
N	X	-	X	X	-	X	-	-	-	-	X	-	4	
O	X	-	-	-	-	X	-	-	-	-	-	-	2	
P	X	-	-	-	X	-	X	-	-	-	X	-	4	
Q	X	-	-	-	-	-	-	-	-	-	X	X	3	
R	-	-	X	X	-	-	X	-	-	X	X	-	4	
S	X	X	X	-	-	X	-	-	-	-	-	X	5	
T	X	-	X	X	-	-	-	-	-	-	X	-	4	
Total	9	1	0	6	3	5	2	0	0	1	8	4	40	
						<u>Worst Unit</u>								

Source: FWV Survey, 1982

Note: 'x' and '-' denotes positive and negative attributes respectively of a characteristic defined in the text

Among the village characteristics only level of literacy and religion appear to make some difference between the two groups of FVWs. Since the vast majority of the villages have agriculture as their main economic pursuit, it is quite understandable why the dominant village occupation does not make any difference between the best and worst FVWs. Equality of the two groups of the FVWs in terms of village communication indicates the success of the project in removing barriers to accessibility of family planning services due to physical distance of the village or bad communication.

In contrast, the worker characteristics appear to make a significant difference between the best and worst FVWs. Age of the FVW, the numerical strength of her samaj and the help she receives from her husband are the most discriminating variables. Differences between the two groups in other characteristics are quite consistent but not very substantial.

6.3 WITHIN-UNIT VARIATIONS

Table 6.4 presents a comparison between the high and low use-prevalence villages of the same service delivery unit in terms of the literacy rate of the village and the status of residence of the FVW in the village. No other variables representing the village socio-economic infrastructure, namely, religion, occupation and communication, are included in the analysis because the high and low use-prevalence villages of the same service delivery unit do not differ in these characteristics.

TABLE 6.4

Distribution of High and Low Use-Prevalence Rate Villages of the Same Service Delivery Unit by Village Literacy Rate and Residence of FVW in the Village, Matlab MCH-FP Project

	High use- prevalence village	Low use- prevalence village
Residence of FVW + Higher literacy rate	7 (77.8)	2 (22.2)
" " " + Same " "	3 (75.0)	1 (25.0)
" " " + Low " "	3 (75.0)	1 (25.0)
FVW does not reside + Higher " "	4 (44.4)	5 (55.6)
" " " " + Same " "	5 (41.7)	7 (58.3)
" " " " + Low " "	3 (25.9)	9 (75.0)

Source: FVW Survey, 1982

Note: Figures in parenthesis denote percentage.

It is evident from Table 6.4 that the residence of the FVW in the village has greater influence on contraceptive use-prevalence than the literacy rate of the village. Admittedly, the FVW is more likely to be resident in that village of her unit that has a higher overall literacy ratio.

The influence of residence of the FVW on the village contraceptive use-prevalence rate tends to confirm our hypothesis concerning the importance of familiarity of the worker with the area of her work and its people. It also implies an advantage of working in a setting where the worker can utilize the influence of her family and samaj. The recruitment of the FVW from the village in which literacy is high is undoubtedly associated with the availability of literate females in that village. Given the possibility of equal access to educational facilities for all the villages within the area served by a given FVW (as the unit consists of only the adjacent neighbouring villages) there may be a question as to why these villages should differ in literacy rate. This question cannot be adequately answered on the basis of the data available from our village survey. However, it appears that the mere existence of a facility does not automatically lead people to use it. To send girls to school in the context of a traditional society requires initiative of some innovative families; how many such families can be found in a given area undoubtedly differs from village to village.

6.4 WITHIN-VILLAGE VARIATIONS

As noted from Table 6.2 there exist considerable variations in the performance of some FVWs working in the same villages. One plausible explanation may be that the attributes of the FVWs which

were observed to be associated with inter-village variations in contraceptive use-prevalence are also responsible for the observed within-village variations. To test this hypothesis we have summarized in Table 6.5 the contrasts between the high and low performance FVWs of the same village by selected characteristics, namely, the number of eligible women served by the FVW, status of her residence in the area, her age, education, strength of her own samaj and help from the husband. In order to obtain a better contrast we have included in this analysis only the villages where the high and low performance FVW differ in achieved use-prevalence by at least 10 points. The definition of characteristics presented in the table and procedures of scoring are the same as those used in Table 6.3.

As can be seen from Table 6.5, the high performance FVWs stand out distinctly from the low performance FVWs in three important attributes; age of the FVW, strength of her own samaj and help from the husband, but otherwise there is little consistent variation across the table taken as a whole. In some cases the low performance FVWs have obtained a higher average score than the high performance FVWs. This unexpected pattern suggests that there are some important missing variables in the analysis. We would argue that some of these missing variables could be found in the characteristics of baris and eligible women residing in the baris of the concerned FVW units. This question will be addressed in detail in the subsequent chapters.

Other important missing variables are suggested by our own observation in the field. They appear to relate to the two most central attributes of the FVW, namely, her reputation in the community and her dedication to work. Both the attributes are highly abstract

Characteristics

	SL. No. of village	Difference in use-prevalence rates between high and low performance FVW units	No. of eligible women	Residence in working village	Age of FVW	Education of FVW	Strength of own <u>sama</u> j	Help from husband	Total
1	H	30	-	X	X	X	X	X	5
	L		-	X	-	X	-	X	3
2	H	28	X	X	X	X	X	X	6
	L		-	X	-	X	-	-	2
3	H	13	X	X	X	X	X	X	6
	L		-	X	-	X	-	-	2
4	H	20	-	X	X	X	X	X	5
	L		X	X	X	X	X	X	6
5	H	23	X	X	X	X	X	X	6
	L		-	X	X	X	-	-	3
6	H	19	-	X	-	X	X	-	3
	L		X	X	X	X	-	X	5
7	H	15	X	X	X	X	-	-	4
	L		-	X	-	X	X	-	3
8	H	11	-	X	-	-	X	-	2
	L		X	X	-	X	X	-	4
9	H	12	-	X	X	X	X	X	5
	L		-	X	X	X	-	-	3
10	H	24	X	X	X	X	X	-	5
	L		-	-	-	X	-	-	1
11	H	13	X	X	-	X	X	-	4
	L		-	-	-	-	-	-	0
12	H	10	-	-	X	X	-	X	3
	L		X	-	-	X	-	X	3
Total	H		6	11	9	11	10	7	54
	L		4	9	4	10	4	4	35

Source: FVW Survey, 1982

in nature and we have no quantitative data necessary to measure the range of their variations among the FVWs. Instead, we will try to throw some light on the importance of these two attributes by citing a few typical examples from our case study material. Another plausible explanation for the observed inconsistent pattern of variations among the high and low performance FVWs may be that the distinction between the positive and negative attributes of particular characteristics was quite broad and no attempt was made to measure their intensity or relative importance. As we will discuss later, the importance of particular attributes differs from worker to worker.

Reputation refers to the public estimation of an individual's virtue or moral character. It is particularly important in rural areas, for, in the case of a woman, it refers to the abiding by, or the appearance of abiding by, the rules of the modesty code which serve to uphold one's own honour as well as the honour of one's family.

It should be obvious that reputation is not simply an abstract quality - it is also, most importantly, a quality that can be translated into action. Bailey (1971) notes: 'My reputation is one of the factors which control the ways I can interact with other people and manipulate them to gain whatever ends I have in view'. Following Bailey's definition, reputation has direct implications for acceptance and influence of a FVW in her area of work. The following example may clarify the point.

Case 1: An FVW whose private life has violated local customs

'X' is an FVW who works in a big village. There are five other FVWs working in the same village. X has the lowest use-prevalence rate. In terms of literacy rate, this is an average village. The major economy of the village is agriculture. It is one of the few fortunate villages that has a paved road as well as a launch ghat within half-an-hour's travel distance. The ICDDR,B subcentre is also not very far from the village. The highest performance FVW of the village achieved a use-prevalence rate in her area more than twice as high as that achieved by X in her unit.

X is married with one living child. She comes from a respectable family of the village where she works. She attended school up to class VIII, lives in the area where she works and is in good health. In other words, she satisfies all the criteria envisaged by the project for a successful FVW. Unfortunately, some incidents in her private life appear to have undermined her reputation in the village.

X's father was a public servant and worked mostly in big cities of the then West Pakistan where X was born and brought up. After the liberation of Bangladesh he retired from the Government service, came back to Bangladesh and joined a private office in a distant city. His family members now live in the village and he comes to visit them usually once in a month.

When X came to the village she was quite a pretty young girl of about 17 years age. While in West Pakistan she discontinued her studies during the War of Liberation of Bangladesh. She began her studies again in a High School in the Matlab headquarters, but did not continue for long. Her style of dress and deportment which she

learned in the city, and overall, her youth and good features attracted many young men of the village. Soon her cousin fell in love with her. They used to go to the cinema together in a nearby town and talk to each other in the presence of other people. Her mother did not strongly oppose it, probably because of her tolerance of the mixing of opposite sexes which grew in her during her long stay in big cities. However, their relatives and samaj did not tolerate their free mixing as it violated the moral code and went against the custom of being 'shy' and having 'shame'. Finally, the young couple satisfied their samaj members and saved the face of their families by getting married to each other.

About a year after marriage X joined the ICDDR,B as a FVW in 1977. But she could not become a successful FVW. Village women seemed not to have forgotten her love affair before marriage, and used to look at her with curiosity. She was still young and pretty, good-looking and could not escape from teasing by young men when she went out in the village. Consequently, she appeared to become particularly careful in her movements in the village and selective in communication with the client population.

In the meantime, trouble started at her home. Her mother-in-law did not like her going out in the village and being seen by others. The mother-in-law disliked her using powder or make-up which she learned in her parent's family. The relationship between X and her mother-in-law soured over time and unfortunately her husband took his mother's side. X demanded a divorce from her husband which was a violation of local custom.

A few months after her divorce from the first husband X married another young man from the neighbouring town. She did not go to her in-law's house, otherwise she would have lost her job. She has been living with her parents, which is considered a matter of discredit for a married woman. Her husband who is a petty businessman comes to visit her every week. They now have a child.

In my informal interviews with X she told me that most of these unexpected things in her life happened partly because of her ignorance about village ways and partly because her father was not living at home. In her opinion, if her father had been at home her first husband would not have been encouraged to come close to her before marriage nor would young men of the village have dared to tease her when she went out for work. To my question of whether she thought she could improve her present performance she replied in the affirmative and showed me her service records which revealed a trend of slight increase in the number of contraceptive users in her area over the past few months. She told me 'Everybody has some mishappening in her or his past life, but as time goes people forget it'. She continued, 'nobody teases me any more. Now I am a mother. I was shy before. Now I can talk at ease with any woman about contraception'.

Case 2: An FVW who became victim of a scandal

'Y' is an FVW working in a village of average soico-economic conditions. Until last year her performance was better than that of her counterpart working in another unit of the same village. This year the contraceptive use-prevalence rate in her area went down following a scandal in the area.

Y is married with two children. She accepted an IUD last year. She is very polite and co-operative with other staff and supervisors. Nobody from her village ever complained about her dealings with the clients.

One day her immediate male supervisor accompanied her in the field to check her work. On the way back from the field he expressed his sexual desire to the FVW and urged in vain for her to accept the proposal. The FVW told her husband about the approach made by the male supervisor. The husband made a written complaint to the Matlab office on the basis of which the supervisor was transferred to another area.

Unfortunately, the incident became known first to the relatives and neighbours of the FVW and then took the form of a scandal in the village through gossip and spread of rumours. In my informal interview the FVW told me that the incident disturbed her mental peace and she could not give proper attention to her work for quite some time. To my question whether she could work as effectively as before in her community, she maintained 'I am not guilty. I did not commit any sin. I cannot stop the mouth of these bad people who are spreading rumours. They are jealous of the prosperity of my family. But they will realize their fault some day. There are many good people in the village who do not believe the rumours and give support to my work'.

The above mentioned two FVWs are not representative of the whole group of FVWs, nor are these incidents common to the life of other FVWs. But the fact remains that any deviation in behaviour from the village norm or disregard for local custom on the part of a FVW or her

supervisor can degrade her reputation in the community.

Dedication to work: As shown in the preceding chapter, every FWW reported that she liked her profession. But this does not mean that everyone is equally dedicated to her work. There exists marked variation among the FWWs in their dedication to work. The following examples may provide some insight into the importance of this attribute of the FWWs and its variation among them.

Case 3: A dedicated FWW:

'P' has been working with the Matlab MCH-FP project since its beginning. The contraceptive use-prevalence rate in her area is above 60 per cent which is 20 points higher than that of another FWW working in another area of the same village. A comparison of the characteristics of P and her counterpart appears to favour the latter. However, our observation in the field and discussion with local supervisors indicates that P is more dedicated to her work than her counterpart.

P is a middle aged woman with two sons and no daughter. Both sons are grown up and study in a city college. P's husband is a teacher in a local High School. There are no other relatives living with P's family.

In my informal interviews with P she narrated how her interest in work grew and how she felt for her clients. 'I was a housewife in a conservative family. The status of my husband as a school teacher imposed many restrictions on my free movement in the neighbouring baris and limited my mixing with other women. When my two sons left home for education in the city I became very lonely. My husband is

busy in the school for the whole day. In the evening he goes to the houses of his students to give them coaching and usually does not return home before ten o'clock at night. For the last few years I was waiting for some sort of work which would keep me busy. [One usual solution of this problem is to bring a daughter-in-law in to the house and have a grandchild.] The ICDDR,B has fulfilled my long cherished desire by giving me the work of an FVW. It has given me the chance to serve people as well as expanding the horizon of my social network. We have no near relatives in this village. But now all have become my relatives. Besides going to them with my work, I go to their houses for social visits when I get time or feel bored in my own house, particularly on off-days.'

She continued: 'villagers love me and I love them too. I cannot have a good sleep if I come to know that a client of mine or her child has a problem. On many occasions I took my clients to the house of our lady doctor at night. My husband accompanied me on such occasions. The lady doctor sometimes expressed her annoyance. But I did not mind. Care for a client is a worship to me. If I help them God will help me.'

To my question whether she would continue serving the people if ICDDR,B closes the project she replied 'I cannot stop going to my clients. If ICDDR,B closes the project I will not be able to provide them with supplies. But I can continue giving them free advice on many things which I have learned from my training and which my clients usually do not know.'

Case 4: An FVW who appeared to lose her dedication to work

'Q' is an FVW whose performance was excellent in comparison with other FVWs working in the same village. This year a gradual decline in the number of contraceptive users in her area has been noted.

Q was a dedicated worker. Her supervisors told me that she was one of the few FVWs who not only brought contraceptive acceptors to the clinic but also brought children and, sometimes, relatives of the clients for treatment of various diseases. In the subcentre meetings she used to initiate proposals for more care to be provided to the clients and addition of treatments for other health problems.

In my informal interviews with Q I asked her what encouraged her to be so dedicated to her work. She replied: 'At the beginning I could not understand my work fully. My husband [who is also a staff member of the ICDDR,B] used to underestimate my ability. I was determined to prove my ability without seeking his help. I devoted my whole energy to my work. I realized that the success of my work depended not only on the support from the office, but also on my love and care for the clients. On many occasions I purchased medicines which were not available in the clinic from my own money and supplied them to the clients free. You will not find a single client of mine who does not address me as appa (sister) or Khalaumma (mother's sister) or in other terms of close relatives. I serve them and, in return, they bless my children.'

To my question why the number of users in her area was decreasing she replied 'I am tired. I worked very hard. I did not give proper attention to my children. All of them are now going to school. But I cannot give them proper coaching at home. My husband often expresses his dissatisfaction with my negligence of household duties. But what have I got from the office for my hard work? I am not getting my annual increment of salary. [It may be mentioned here that due to a change in the procedures of evaluation of work performance there was a delay by a few months in granting annual increment of salary to the deserving FVWs.] If other FVWs with such a poor number of users in their area can remain in their job why should I work so hard?'

The comments of Q suggest how increasing responsibility of an FVW in her house, or a delay by the office in rewarding her for good work can diminish her devotion to work. Another interesting thing which emerged from my discussion with local supervisors about Q was that she had become an elected representative of the FVWs to the Staff Welfare Association (SWA) of the Matlab project. This is an obvious threat to the supervisors who might otherwise take action against her for her recent negligence to duty. Given her political influence among her colleagues, it was likely that any action taken against her by the supervisors would create dissatisfaction among the other FVWs. Her political influence was further re-inforced by her husband being elected to a very important position in the executive committee of the SWA.

Differential effects: As argued earlier, the importance of a particular attribute may differ from worker to worker. But more importantly, it is also possible that an attribute which appears to

increase the effectiveness of an FVW in one situation may in fact diminish her effectiveness in another situation. The following example may clarify the point.

Case 5: An FVW with too many relatives in the village of her work

'M' is an FVW working in the village of her residence. In the same village works another FVW who comes from the neighbouring village. M has a lower use-prevalence rate in her area than the other FVW. A comparison between the two FVWs in selected characteristics reveals that both of them are young wives, neither has a level of education above class IX and the socio-economic conditions of their families are similar. The difference between them is that M has parents as well as in-laws residing in the village of her work, while the other FVW has no near relatives in that village. According to our earlier observations, we expected a higher use-prevalence rate in the area serviced by M because she had a large number of relatives and samaj members in the village.

when I discussed with M the reasons for the lower use-prevalence rate in her area she tried to blame the conservatism and illiteracy of her client population. Then I asked her why her counterpart in the same village had a higher use-prevalence rate. Her answer was very interesting: 'I was born and brought up in this village. Most of the clients are my relatives either on my parent's side or on my husband's side. My disadvantage is that I cannot talk freely with these women who are my senior relatives such as father's sister, father-in-law's sisters and the like. My counterpart has no such problems as she has no relative in this village.'

This frank answer of M clearly indicated the importance of the custom of being 'shy' and having 'shame' mentioned earlier. During our survey one of our interviewers refused to work in a given village because she had some relatives in that village whom she could not ask questions on family planning. The relaxation in this restriction, as we mentioned earlier, comes with age, particularly when a women's identity in the village is established by the name of her eldest child. When I was walking with M in her village I observed that in most baris women addressed her either by her name or by the term 'daughter of X's bari', clearly an indication of her juniority to these women either in terms of age or kinship. In contrast, in case of senior FVWs it was observed that the village women addressed them either by the name of their eldest child or by some kin terms such as sister or aunt.

What inferences we may draw from the above examples can best be summarised by a statement of Lorimer (1959) which says 'different factors sometimes act together in the same direction, whereas elsewhere their action tends to be opposed so that they are without influence on the final result'.

6.5 SUMMARY AND DISCUSSION

In the preceding two chapters we identified which variables representing the village socio-economic infrastructure and the credibility of the FVW account for the observed inter-village variations in contraceptive use-prevalence rates. In this chapter we have tried to integrate the findings of these two chapters and abstract the most central ones. The analysis suggests that much of the observed variations can be explained by a combination of factors,

but the age of the FVW, strength of her samaj and help from the husband tend to be the key factors. Variables representing the village socio-economic infrastructure have a relatively small influence on the observed variations. This is further confirmed by an examination of the influence of village literacy rate versus residence of the FVW in the village on its use-prevalence rate. It shows that the residence of an FVW has greater influence on the use-prevalence rate of the village than its literacy rate. However, it also reveals that the villages which have higher literacy rates have a greater chance of having the FVWs residing in them.

In this chapter we have shown that, in addition to inter-village variation, there exists a wide within-village variation in contraceptive use-prevalence rates. An examination of selected worker characteristics reveals that the same three factors which appeared to contribute to the observed inter-village variation in contraceptive use-prevalence, namely FVW's age, strength of samaj and help from the husband, account largely for the observed within-village variations. However, stark inconsistency was noted in a number of cases suggesting that some important variables may be missing from the analysis. We have argued that some of these variables can be found in the characteristics of baris and eligible women residing in the baris of the concerned FVWs, to be examined in detail in the subsequent chapters.

The other important missing variables appear to relate to the reputation of an FVW in her community and her dedication to work. Both these variables are highly abstract in nature and we have tried to understand their importance by examining some case study material.

Another important reason for the observed inconsistencies in the pattern of relation between worker characteristics and performance is that a particular variable which appears to increase the effectiveness of an FVW in a particular situation in fact may diminish her effectiveness in another situation. We have seen from our case study material how the strength of relatives of an FVW in her area of work, which was observed to be positively related to the success of a worker, can reduce her effectiveness due to a custom of being 'shy' and having 'shame' in communication with one's relatives.

What conclusions can we draw from this analysis? To begin with the variables representing the village socio-economic infrastructure do not show any marked influence on the observed inter-village variation in contraceptive use-prevalence rates. One plausible explanation seems to be that the variations in the variables are so small that random factors tend to dominate the relations. This is quite understandable given the fact that all of the villages included in this study are poor by any standards. The people who inhabit them are not used to the range of choices in life style which might be possible for people living in better conditions.

Although the broader socio-economic environment does not show marked influence on contraceptive use-prevalence rates, the local customs and values seem to constrain the effectiveness of the village-based workers. The custom of being 'shy' and having 'shame', modesty and adherence to social norms are crucial to the acceptance and influence of a worker in her community.

The programme can satisfy some of these community requirements by selecting the right workers with the right attributes such as age, strength of samaj, reputation of the worker and her family in the village, etc. Other important determinants of the effectiveness of the worker such as dedication to work and maintenance of a good character, for example, seem difficult for the programme to control. However, reward for good work, emphasis on good character in worker meetings, frequent visits by senior programme personnel in the area of poor performance workers may help to keep the morale of the workers high. In Matlab we have observed that the local supervisors usually take visitors and senior officials to the villages of good workers to show their work. If the visitors and senior officials were taken to the areas of poor performance workers it could give more credit to these workers in the eyes of the villagers, thereby enhancing their influence and acceptance in the community.

CHAPTER 7

INTER-BARI VARIATIONS7.1 INTRODUCTION

Thus far we have examined the variation in contraceptive practices using, in turn, the village and the service delivery unit as units of investigation. Table 7.1 reveals that a wide variation in contraceptive practice also exists at the level of the bari both within a given village and among the villages. The purpose of the present chapter is to identify whether the social, economic and demographic characteristics of the baris account for this inter-bari variation in contraceptive practice. A corollary objective of this chapter is to compare the six selected service delivery units with respect to the characteristics of their baris and examine their contributions to the observed inter-village or inter-unit variations in contraceptive use-prevalence rates.

The selection of the six service delivery units from three villages and the collection of information on the characteristics of 178 baris constituting these six units have been discussed in Chapter 3. This chapter begins with a general description of social, economic and demographic characteristics of these 178 baris and proceeds with an examination of the relationship between these characteristics and contraceptive practices among eligible women residing in these baris. The characteristics showing an association with contraceptive practices are then compared among the six service delivery units and, later, related to the analysis of variation in contraceptive use-prevalence rates.

TABLE 7.1

Distribution of Bari by Area and Contraceptive Use-Prevalence, Matlab MCH-FP Project

Percentage of Current Users	Number of Bari												
	Village 1			Village 2			Village 3			Total			
	Highest use- prev. unit	Lowest use- prev. unit	Highest use- prev. unit	Lowest use- prev. unit	Highest use- prev. unit	Lowest use- prev. unit	Highest use- prev. unit	Lowest use- prev. unit	Highest use- prev. unit	Lowest use- prev. unit	Highest use- prev. unit	Average use- prev unit	Lowest use- prev unit
0	-	4(16.0)	10(32.2)	10(43.5)	15(28.8)	6(26.1)	15(19.7)	14(25.0)	15(19.7)	14(25.0)	16(34.8)	16(34.8)	16(34.8)
< 25	2(8.3)	3(12.0)	6(19.4)	4(17.4)	3(5.8)	5(21.7)	5(6.6)	9(16.1)	5(6.6)	9(16.1)	9(19.6)	9(19.6)	9(19.6)
25-49	3(12.5)	8(32.0)	8(25.8)	5(21.7)	5(9.6)	6(26.1)	8(10.6)	16(28.6)	8(10.6)	16(28.6)	11(23.9)	11(23.9)	11(23.9)
50-74	13(54.2)	9(36.0)	4(12.9)	2(8.7)	17(32.7)	5(21.7)	30(39.5)	13(23.2)	30(39.5)	13(23.2)	7(15.2)	7(15.2)	7(15.2)
75-99	-	1(4.0)	-	-	3(5.8)	-	3(3.9)	1(1.8)	3(3.9)	1(1.8)	-	-	-
100	6(25.0)	-	3(9.7)	2(8.7)	9(17.3)	1(4.3)	15(19.7)	3(5.3)	15(19.7)	3(5.3)	3(6.5)	3(6.5)	3(6.5)
Total	24(100.0)	25(100.0)	31(100.0)	23(100.0)	52(100.0)	23(99.9)	76(100.0)	56(100.0)	76(100.0)	56(100.0)	46(100.0)	46(100.0)	46(100.0)
Mean use- prev. rate	55.8	34.0	30.1	22.7	46.2	25.3	50.7	32.0	50.7	32.0	24.1	24.1	24.1

Note: 1) Figures in parenthesis denote percentage .

2) The definition of "highest" and "lowest" use-prevalence units of a village is restricted to the comparison among the units of that village only

3) Under the column "Total": "Highest" unit comprises of the highest units of village 1 and village 3; "Average" unit comprises the lowest unit of village 1 and the highest unit of village 2; "Lowest" unit comprises the lowest units of village 2 and village 3.

Source: Bari Characteristics Survey, 1982.

7.2 SOCIAL, ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS OF BARIS

7.2.1 Settlement patterns:

There are two distinct types of settlement patterns of baris in the study area: the 'line' type and the 'scatter' type. The two types of settlement follow the topography, courses of rivers and crop areas, and the digging of tanks. The line type is usually found in the villages intersected by channels or branches of the nearby river. The baris are built alongside the banks of watercourses with orchards or gardens between the baris and fringing the bank of the stream. In the second type of settlement the baris are scattered in the open, each one surrounded by orchards or at least some trees. The baris are built on the banks of ponds, the earth from which is used to raise the bari site above flood level. The 'scatter' type settlement is more common than the 'line' type in the study area.

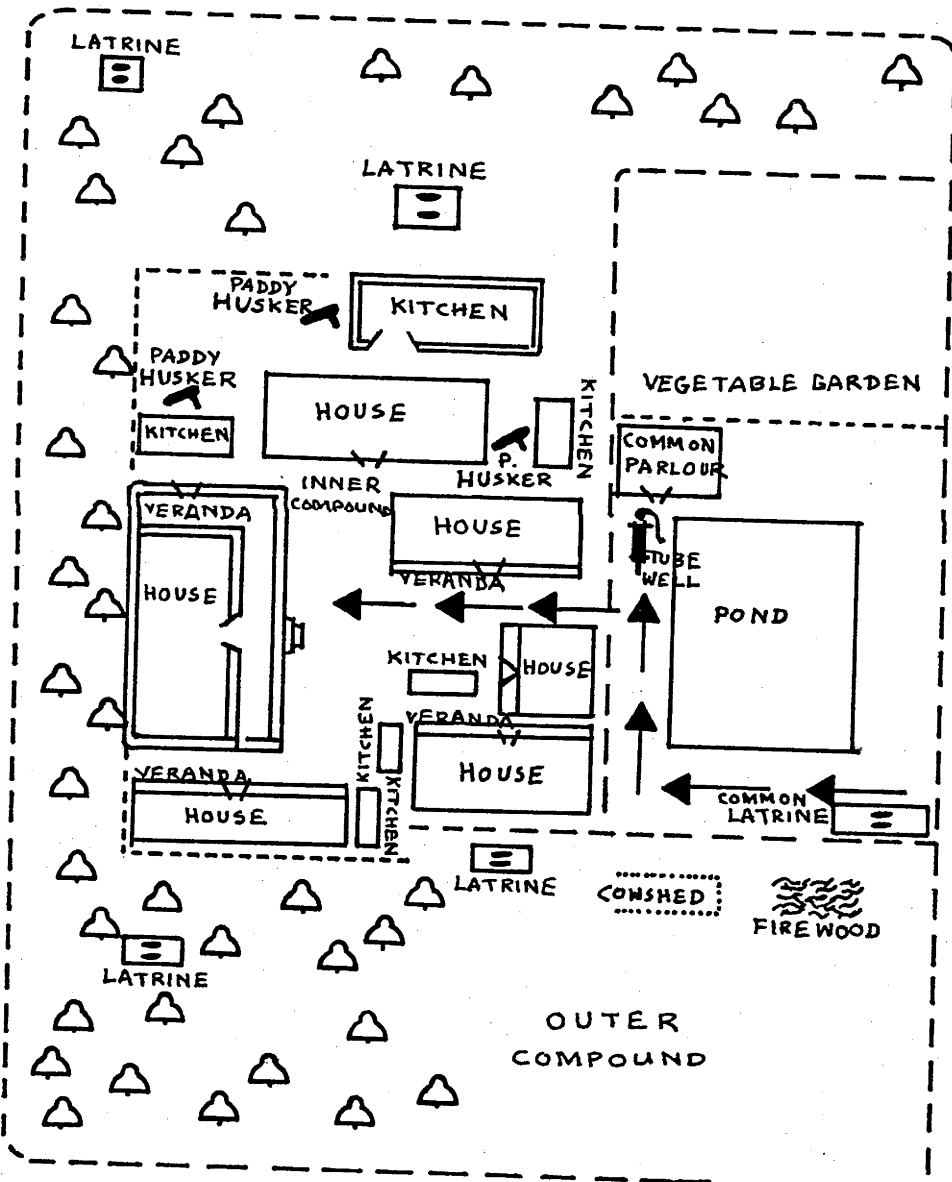
Of the three villages included in this analysis, Village 1 belongs to the 'line' type settlement. The baris are tightly arranged on either side of a deep channel joining the river Gumti mentioned in Chapter 1. A narrow pathway of marshy land is the usual line of demarcation between two baris. In contrast, Villages 2 and 3 belong to the 'scatter' type settlement, the baris in Village 3 being more scattered than the baris in Village 2. The demarcation between baris is distinct and they are often separated by large paddy fields. In terms of easy communication and movement within the village, the 'line' type settlement has advantages over the 'scatter' type. It follows that a field worker can complete his or her round more conveniently and in less time in a village with the 'line' type settlement than in a village with the 'scatter' type.

As in other villages of Matlab, a bari in the three sample villages generally comprises one or more separate houses, grouped around an open space. Some of the houses may be linked by a bamboo or jute stick fence, which can be extended to enclose a large compound. Often, and particularly in Muslim baris, the compound is divided into an inner part, where women maintain some privacy, and an outer part with cattle sheds, storage for paddy-straw and jute sticks, a vegetable garden, fruit trees and bamboo groves (See Figure 7.1).

Each household in a bari has at least a separate kitchen. In some baris the kitchen and the place for husking paddy are under one roof. Special store rooms and guest rooms are rare. Every nuclear family, consisting of parents and their unmarried children, usually has only one sleeping-cum-living room. Only about one-third of the households investigated in our study reported having an additional room which at night usually serves as a sleeping room for any adult male member of the family and during the day as a guest room. The majority of the baris have a simple latrine consisting of a screen of banana leaves or paddy-straw around a covered hole or the bank of a stream. Where no toilet arrangements are available villagers defecate in nearby bushes. About 40 per cent of the households in our survey have a tube-well in the bari. The remaining households depend for drinking-water on ponds and nearby channels. None of the households in the 178 baris has a bathroom. Both males and females bathe in ponds and nearby streams.

FIGURE 7.1

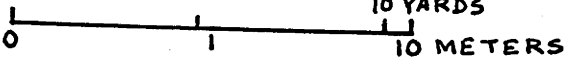
Plan of a Common Bari in Matlab



MUD ROAD

10 YARDS

10 METERS



7.2.2 Size and Composition of Baris:

Table 7.2 presents the size and composition of the 178 baris included in the study. On the average, a bari consisted of 37 persons living in 5 to 6 households. The smallest bari contained one household with 6 members and the largest bari contained 26 households with 184 members.

The size of a bari generally indicates how old the settlement is: the older the settlement of a bari, the larger its size. When a bari is found a tank is dug first and the earth is heaped until a platform is raised above the level of the surrounding marsh. Houses are then built on the top of the platform. With the increase in the number of bari members and the establishment of new households the available raised land of the bari becomes exhausted. Further expansion of the bari may continue if the members possess sufficient land adjacent to the bari. The ultimate size of the bari thus depends upon the size of its original territory and the ability of the original settlers and their descendants to acquire enough land adjacent to the bari.

However, there are many exceptions to the above observation. The most notable factors for such exceptions are personal ambition for a better planned bari, lack of internal solidarity among the bari members and availability of a bari that is less costly to develop. The first two factors are almost universal across the study area, while the last one is incidental and found only in a few villages or parts of villages. One example of this last factor is the differential size of baris between the two service delivery units of Village 3. Unit (a) has comparatively smaller size baris (see Table 7.8). Before the partition of the former British India into India and

TABLE 7.2

Percentage Distribution of 178 Sample Baris by Size and Composition,
Matlab MCH-FP Project.

Size and Composition		Per 100 <u>baris</u>
No. of households per <u>bari</u> :		
1-3		45.5
4-6		27.5
7-9		15.2
10 or more		11.8
Total		100.0
Mean	5.2	
Range	1-26	
Type of households per <u>bari</u> :		
Nuclear only		15.2
Extended only		11.8
Single + Nuclear		5.1
Single + Extended		1.6
Nuclear + Extended		47.2
Single + Nuclear + Extended		19.1
Total		100.0
No. of persons per <u>bari</u> :	37.2	
No. of eligible women per <u>bari</u> :		
1-2		29.2
3-4		25.2
5-6		16.3
7-8		10.1
9-10		9.6
11 and more		9.6
Total		100.0
Mean	5.4	
Range	1-29	

TABLE 7.2 (continued)

ize and Composition		Per 100 <u>baris</u>
No. of eligible women per bari currently using contraception:		
None using		25.3
1 using		25.3
2 using		21.3
3 using		12.4
4 using		7.9
5 using		3.9
6 and more		3.9
Total		100.0
Mean users	1.8	
Range	0-11	
No. of eligible women per <u>bari</u> currently pregnant:		
None		57.9
1		25.8
2		12.4
3 or more		3.9
Total		100.0
Mean pregnant	0.6	
Range	0-4	
Mean No. of women per <u>bari</u> at risk*	3.0	

Note:* Neither currently pregnant, nor using a method.

Source: Bari Characteristics Survey, 1982.

Pakistan this part of the village was mostly inhabited by Hindu families. After the partition most of these families migrated to India. The Muslim families of the neighbouring villages either occupied the vacant baris of the former Hindu families or purchased them at a nominal price. The result is that till now this part of the village has less crowded and smaller baris than other parts of the village.

The majority of the baris comprised the two types of households most common in Bangladesh - 1) the nuclear household, consisting of husband, wife, their unmarried children and, sometimes, unmarried relatives, and 2) the extended household, consisting of at least two married couples and their unmarried children, and/or other relatives. Only about one-eighth of the baris had no nuclear household and one-fifth had no extended household. A sizable proportion of the baris, about one-fourth, had at least one household without a currently married person. This type of household usually comprises a widow and her minor children. Only in rare instances would a single person live in a separate dwelling, cooking his or her own meals.

Since we are interested in the contraceptive usage in a bari we made an up-to-date list of all eligible women (as defined earlier) residing in the bari and collected information on whether they practise contraception from the FVW's field register. As can be seen from Table 7.2, there was no bari without an eligible woman. The smallest bari contained one eligible woman and the largest bari 29 eligible women. On the average, there were 5.4 eligible women per bari, of whom 0.6 were pregnant, 1.8 were using contraception and 3.0 were at risk, using no contraception.

7.2.3 Socio-Economic Characteristics of Baris:

Three variables have been used to define the socio-economic characteristics of a bari. These are: occupation of household head, literacy of the bari head, and proportion of children (7-14) attending school. The justification for the inclusion of these three variables in the analysis lies in the fact that we are interested in the overall socio-economic environment of the bari rather than in the measurement of its socio-economic condition in absolute terms.

Occupation has been recognised as an important criterion of socio-economic status of a bari since the beginning of the settlement in the area. Almost every bari in Matlab has a name. The name usually refers to the occupation held by the founder of the bari or its most successful members: for example, sarker (a clerk-manager), patoyari (revenue collector) or banik (trader). Aziz (1979) listed more than one hundred such occupation-related titles for both Muslim and Hindu baris in the study area. The custom of assigning names to identify baris suggests an interesting aspect of the prevailing cultural norms. The bari is both patriarchal and patrilocal. The system generally calls for the subordination of individual to group values. This is partly manifested in the fact that in the village a person is usually identified as belonging to a bari. The individual fully shares the reputation or ill fame of his/her bari. His behaviour reflects upon the bari of which he is a member. However, there is concurrently in the culture a strong legitimacy for individual achievement. This is evident from the occasional change of name of a bari consequent upon the attainment of some additional status by one of its members (such as if a bari member becomes a

member of local government, gets a high ranking job in government office or is recognised as a spiritual leader). Thus, for example, a Bepari (trader) bari may become known as Chairman bari with the appointment of a member of that bari as a chairman of the local Union Council.

Although a bari continues its identification by the occupation of its most successful or prominent ancestor the custom does not give rise to the kind of a hereditary occupational system found among some Hindu castes. In fact, as shown in Table 7.3, in about three-fourths of the baris of our sample the majority of household heads were engaged in only one kind of occupation, agriculture. In half of the remaining baris the majority of household heads were in service; while in a small number of baris most of the household heads were engaged in business or fishing, the latter being restricted to Hindu baris.

In short, it can be said that with regard to occupation our study baris present the features of a traditional homogeneous community with the majority of its baris depending on agriculture. While there are considerable differences between the rich and the poor with regard to landed property, as mentioned earlier, actual living standards vary much less widely. The well-to-do generally feel an obligation to redistribute a part of their income in ceremonial and casual hospitality. The rewards for such prestigious activity are almost entirely social and not, as a rule, financial. Until very recently there has been a marked reluctance on the part of the wealthy individuals to adopt a strikingly ostentatious style of living, or to permit bari members to sink below a certain minimum level. However,

TABLE 7.3

Percentage Distribution of 178 Bari by Selected Social, Economic and Leadership Characteristics, Matlab MCH-FP Project.

Characteristics	Percentage
Occupation of household heads:	
Majority farming	74.1
Majority fishing	5.1
Majority business	8.4
Majority services	12.4
Total	100.0
Education of <u>bari</u> heads:	
No formal schooling	45.5
Some Primary	23.0
Primary completed	11.8
Some High School	12.4
High School Completed	5.1
Some College	1.1
Religious degree/diploma	1.1
Total	100.0
Proportion of children (7-14 years) attending schools:	
None	25.3
<25 percent	9.0
25-49 percent	16.3
50-74 percent	24.7
≥75 percent	24.7
Total	100.0
Common <u>Bari</u> Head:	
Yes	83.1
No	16.9
Total	100.0
Leadership characteristics of <u>bari</u> heads:	
Union Council Member	3.4
Village <u>Matabbar</u>	21.3
<u>Moulvi/Imam/Hazi</u>	9.0
None	66.3
Total	100.0

Source: Bari Characteristics Survey, 1982.

notable changes are now observed in the living style of certain baris, in particular those having some of their members in urban jobs or business in the big towns and cities. The changes can be noted in the possession of modern consumption items like radio, bicycle and, in some cases, television, and more prominently, in the dress and ornaments of the women of such baris. These baris, although small in number, reflect a community with an important segment of modern occupations; hence they appear to possess a relatively higher potential for their members to regulate their fertility.

Although the baris failed over time to adhere strictly to the ancestral occupations which had distinguished one from the other, they appear to maintain their distinctiveness in the tradition of educating their members. This is evident from the findings in Table 7.4 which shows that baris with literate heads send their children in greater proportion to school. Overall, nearly half of the bari heads did not attend any formal school, over one-third had some exposure to primary school, some had even attended secondary schools, but very few had gone beyond high school (Table 7.3). Similar differences are observed in the proportion of children (7-14 years) attending school. About one-fourth of the baris send all or most of their children of both sexes to school, while as many baris do not send a single child of either sex to school (Table 7.3). The remaining half of the baris also differ markedly in the proportions of children they send to school.

TABLE 7.4

Percentage Distribution of 171* Baris by Education of Bari Heads and Proportion of Children (7-14 years) Attending School, Matlab MCH-FP Project.

Proportion of children attending school	Education of Bari Heads		
	No formal schooling N = 79	Primary N = 61	Secondary+ N = 31
0	34.2	9.8	16.1
1-24 percent	13.9	8.2	-
25-49 percent	20.3	14.8	12.9
50-74 percent	21.5	31.1	25.8
75+ percent	10.1	36.1	45.2
Total	100.0	100.0	100.0

Note: * 7 baris have no children aged 7-14 years and have been excluded from the analysis

Source: Bari Characteristics Survey, 1982.

7.2.4 Leadership Characteristics of Bari Heads:

The harmonious ordering of bari affairs is an important condition for retaining the reputation of one's bari in the village. A normal amount of domestic friction is regarded tolerantly; but where prolonged and intense conflict exists between brothers, husband and wife, or, most importantly, son and parents, the reputation of the entire bari suffers. It is a truism to say that in a village everyone knows all about everyone else's affairs and that indiscreet gossip is a continuous part of village life. Any notable breach of proper conduct causes a scandal that severely damages a man's personal prestige as well as the reputation of his bari.

Almost without exception every bari has a leader or head who works as guardian of the mores of its members and mitigates quarrels and conflicts of interest among them. The within-bari leadership is strongly hierarchical and is based primarily on genealogical rank and age, although personal qualities and reputation also effect actual influence. The main source of power of a bari head comes from the respect he commands from the bari members. Although there is considerable variation among the baris in the degree of respect accorded to the heads, the ideal itself is universally recognized and people condemn any blatant violation of it.

In most cases a bari head is simply an elderly member of the bari. In some cases his leadership may extend up to the village level, such as a village matabbar or a Union Council member. In other cases his leadership may extend to religious activities, such as imam (one who leads prayer), moulvi (religious scholar) or hazi (one who has performed the pilgrimage to Macca). Among the heads of our study

baris, more than two-thirds appear to belong to the first category of heads; about one-fourth have leadership qualities that make them important in the village or the union context and the remaining few belong to the last category of religious leaders (Table 7.3).

It is a common complaint of the field workers and researchers that most of the individual efforts at innovation have been opposed or frustrated by the conservative attitude of the bari heads. This is quite understandable given the fact that the bari head is a gate-keeper of the tradition of his ancestors. However, it is also important that he should have in mind the well-being of his bari members. The ultimate position of the bari head in such a situation thus appears to depend upon his evaluation of the risks and benefits of acceptance of the innovation, in terms of both material gains and of ideological implications. If he is a religious leader he may consider, for example, the acceptance of contraception by his bari members a risk, as he may see it as being against religion and what he often preaches to the members of his community. By contrast, a Union Council member who has been exposed to various development programmes and modern ideas in the course of the conduct of his political responsibilities may consider beneficial the acceptance of contraception by his bari members. The point to be made is that the acceptance of contraception by the members of a bari is influenced by the leadership characteristics of the bari head. As eager as they are to promote their own well-being, and in spite of the fact that the acceptance of contraception may be clearly conceived as being in their own interest, the potential acceptors can be quickly discouraged by the impact of strong opposition from their bari head.

7.3 CHARACTERISTICS OF BARIS AND CONTRACEPTIVE USE-PREVALENCE

In the preceding sections of this chapter we have tried to give a general description of social, economic and demographic characteristics of the 178 baris in our study. What emerges from this description is that the baris differ in their size, composition, socio-economic environment and leadership characteristics. In the following sections an attempt will be made to see whether these differences affect the variation in contraceptive use-prevalence among the baris. More specifically, we will examine whether the characteristics of the baris discussed in the preceding sections have any association with contraceptive usage among eligible women in the baris. Since the age of a woman is observed to be related to her use of contraception (to be discussed in the following chapter) and since there is a possibility of clustering of relatively young or old women in certain baris we present an age-standardised contraceptive use-prevalence rate for each category of women grouped according to different social, economic and demographic characteristics of their baris.

7.3.1 Size of Bari and Contraceptive Use-Prevalence:

The number of households in a bari has been taken to represent the size of that bari. Table 7.5 shows a consistent decrease in contraceptive use-prevalence with an increase in the number of households in a bari.

Many factors seem to explain the reason for a lower use-prevalence in larger size baris. One factor is the preponderance of unsatisfied users in large size baris. This is apparent from the

TABLE 7.5

Contraceptive Use-Prevalence By Selected Social, Economic and Demographic Characteristics of Bari, Matlab MCH-FP Project.

Characteristics of Bari	Age (in years)											Age-standard- dised use rate (11)
	<25 No. of women (1)	No of users (2)	25-34 No of women (3)	No of users (4)	35-44 No of women (5)	No of users (6)	45+ No of women (7)	No of users (8)	Total No of women (9)	No of users (10)		
<u>No. of households/Bari:</u>												
1-3	64	23.4	57	54.4	56	51.8	8	25.0	185	41.6	41.8	
4-6	91	18.7	80	35.0	71	50.7	15	33.3	257	33.5	33.9	
7-9	68	16.2	91	36.3	47	51.1	6	50.0	212	33.5	33.8	
10+	104	17.3	98	36.7	78	38.5	6	50.0	286	30.4	30.9	
Total	327	18.7	326	39.3	252	47.2	35	37.1	940	34.1	-	
<u>Occupation of H/H heads:</u>												
Majority agriculture	253	19.0	242	36.0	193	44.6	23	30.4	711	32.1	32.2	
Majority fishing	34	8.8	26	30.8	16	50.0	3	66.7	79	26.6	29.6	
Majority business	17	29.4	18	61.1	18	55.6	6	16.7	59	45.8	46.9	
Majority service	23	21.7	40	55.0	25	60.0	3	100.0	91	49.5	46.4	
Total	327	18.7	326	39.3	252	47.2	35	37.1	940	34.1	-	
<u>Education of Bari Heads:</u>												
No formal schooling	147	15.6	150	39.3	115	40.0	22	31.8	434	31.1	31.0	
Primary school	147	17.0	126	34.9	104	50.0	11	36.4	388	32.2	32.8	
Secondary school+	33	39.4	50	50.0	33	63.6	2	100.0	118	51.7	51.8	
Total	327	18.7	326	39.3	252	47.2	35	37.1	940	34.1	-	

TABLE 7.5 (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Proportion of children attending school:											
0	51	25.5	27	51.9	34	44.1	3	33.3	115	37.4	40.0
<25 percent	38	21.1	37	35.1	22	54.5	7	14.3	104	32.7	34.7
25-49 percent	74	13.5	77	36.0	50	54.0	5	60.0	206	29.1	30.5
50-74 percent	84	13.1	94	34.0	67	40.3	7	42.9	252	29.0	28.8
75+ percent	73	24.7	88	53.4	78	48.7	13	38.5	252	42.9	41.7
Total	320	18.8	323	39.0	251	47.4	35	37.1	929*	34.2	-
Leadership Characteristics of Bari Heads:											
Union Council Member	14	35.7	14	50.0	11	45.5	1	100.0	40	45.0	45.7
Village matabbar	76	21.1	92	42.4	77	54.5	6	50.0	251	39.8	38.5
Religious leaders	60	8.3	58	25.9	42	35.7	5	0.0	165	21.2	21.4
None of the above	177	19.8	162	41.3	122	46.7	23	39.1	484	34.7	35.2
Total	327	18.7	326	39.3	252	47.2	35	37.1	940	34.1	-

Note: The analysis includes 940 eligible women from the 178 sample baris interviewed during the survey. 15 women were absent during the survey and have been excluded from the analysis

Source: 1) Bari Characteristics Survey, 1982; 2) Eligible Women Survey, 1982.

* 11 women come from the baris with no children of age 7-14 years and have been excluded from the analysis

steady increase in the percentage of eligible women reporting that a majority of users from their baris maintained an unfavourable attitude towards use of contraceptives because of their personal experience of side-effects. In the baris with 1-3 households 17 per cent of eligible women reported such answers, in contrast to 27 per cent in baris with 4-6 households, 56 per cent in baris with 7-9 households and 71 per cent in baris with 10 or more households (not shown in the table). It may also be mentioned here that a recent preliminary analysis documented a very high discontinuation rate for the two most popular methods in the study area, DMPA injections and IUD. About 45 per cent of DMPA users and 50 per cent of IUD users had either abandoned all use of contraceptives or switched to other methods within 18 months of initiation of use because of side-effects (Akbar et al., 1982).

The size of a bari thus works as a multiplier in spreading rumours. In Chapter 2 we have mentioned how the decision by a woman to discontinue use of contraception because of real or alleged side-effects of the method leads to other women of the bari following her example. Another great disadvantage of having an un-satisfied user in the bari, as suggested by the findings in Table 7.6, is that her negative attitude towards contraception discourages other women of the bari from initiating use. We have observed in the field how an originally supportive husband or mother-in-law can turn against such use if any side-effect of the method emerges. Instances are not rare when a wife is reported to be beaten by her husband because of her temporary inability to work hard due to physical weakness resulting from the side-effects of the contraceptive.

TABLE 7.6

Contraceptive Use-Prevalence by Opinion of Users in the Bari and Perceived Attitude of the Bari Head Towards Contraception, Matlab MCH-FP Project.

	No of respondents	Percentage of Users
<u>Opinion of other users in the Bari:</u>		
Favourable	491	47.0
Against	92	14.0
Some favour, some against	55	29.0
Don't know	3	-
Not applicable (no user in the Bari)	<u>299</u>	<u>20.4</u>
Total	940	34.1
<u>Attitude of Bari head:</u>		
Favourable	331	52.8
Against	<u>609</u>	<u>28.1</u>
Total	940	34.1
<u>Common Bari Head</u>		
Yes	624	37.5
No	<u>296</u>	<u>29.6</u>
Total	940	34.1

Source: Eligible Women Survey, 1982.

Another reason for a lower use-prevalence among large size baris, as suggested by our observation in the field, is the inconvenience for the work of a FVW. Most of the large size baris have some children and young unmarried girls around. When a FVW enters the bari they follow her out of curiosity, often making it difficult both for the FVW and the client to maintain a generally free and relaxed atmosphere for conversation. But probably the most crucial factor is the presence of some older women, which is also a more common situation in large size baris. The local custom requires that the senior female members of the bari should speak first to an outside woman. Even a thirty-year-old daughter-in-law is just not able to speak out with any authority, let alone make controversial statements or decision, if her mother-in-law is also present in the discussion.

Another factor for a lower use-prevalence among large size baris is the lack of internal solidarity and group cohesiveness. As mentioned earlier, acceptance of contraception is often the result of following other members of the bari. When one woman of a bari starts using contraceptives several other of the bari follow her. However, this may not be the case in a bari where suspicion and conflict prevail among its members. The conflict and suspicion which are more common among the members of a large size bari arise mainly from quarrels about the use of common facilities, and, more importantly, inability of the bari head to hold things together. The latter point is well substantiated by the findings of our survey which show that the eligible women from about 17 per cent of the baris reported that their bari had more than one head. An examination of the size of these baris reveals that most of them comprise a large number of households, the average being 10 households per bari. The findings in

Table 7.6 show that the baris with no common heads have a markedly lower use-prevalence rate than the baris with common heads.

7.3.2 Socio-Economic Characteristics of Baris and Contraceptive Use-Prevalence

As discussed earlier, the socio-economic characteristics of a bari have been defined by the occupation of the head of the household of that bari, the literacy of its head and the proportion of children (7-14 years) attending school. In the case of baris where respondents mentioned more than one bari head, we have chosen the education of that one whose name was mentioned by the majority of the respondents.

As can be seen from Table 7.5, the baris, with a majority of their household heads engaged in service jobs or business have a higher use-prevalence rate. The baris of the farmers and fishermen have considerably lower use-prevalence rates, the latter having the lowest one. This observation holds true even when we control for education of bari heads, although at higher level of education the difference seems to be minimal (Table 7.7). The reasons for this differential use-prevalence among different occupational groups have been explained in detail in Chapter 4 and in an earlier section of this chapter. There may be a question of whether the observed difference in use-prevalence is an artifact of the difference in bari size among the different occupational groups. However, an examination of the bari size among the aforesaid four occupational groups reveals that the baris of agricultural household heads and those employed in service have the same average size of 5.1 households per bari, those of businessmen 5.4 households per bari and, if we exclude one extreme

Characteristics	Education of <u>Bari</u> Head				Total
	No formal schooling	Primary school	Secondary school+	Secondary school+	
<u>Occupation of H/H Heads:</u>					
Majority agriculture	29.7 (310)	29.6 (321)	51.3 (80)	32.1 (711)	
Majority fishing	23.6 (55)	30.0 (20)	50.0 (4)	26.6 (79)	
Majority business	37.5 (8)	47.5 (40)	45.5 (11)	45.8 (59)	
Majority service	44.3 (61)	71.4 (7)	56.5 (23)	49.5 (91)	
Total	31.1 (434)	32.2 (388)	51.7 (118)	34.1 (940)	
<u>Leadership Characteristics of Bari Heads:</u>					
Union Council member		44.7 (38)	50.0 (2)	45.0 (40)	
Village Matabbar	31.1 (103)	37.2 (78)	55.7 (70)	39.8 (251)	
Religious Leaders	15.4 (26)	22.3 (139)	-	21.2 (165)	
None of the above	32.5 (305)	36.1 (133)	45.7 (46)	34.7 (484)	
Total	31.1 (434)	32.2 (388)	51.7 (118)	34.1 (940)	

Note: Figures in parentheses denote total number of eligible women
 Source: Bari Characteristics Survey, 1982.

size bari which has 26 households, those of fishermen 5.6 households per bari (not shown in the table).

The level of education of the bari head shows a consistent relationship with the prevalence of contraceptive use in that bari. The higher the level of education of the bari head, the higher the level of contraceptive use in the bari. One interesting point to be noted from the distribution of the number of eligible women among these baris is that the baris of the better educated heads are comparatively small. Given the small size of the sample it is difficult to examine the independent contribution of size and level of education of head to the differential use-prevalence rates. However, it is clear that the baris which are at a disadvantage in terms of size are also disadvantaged in terms of education of their heads.

The relationship between the proportion of children of a bari attending school and the contraceptive use-prevalence rate in the bari shows an interesting U-shaped pattern. The baris that do not send any of their children to school and those that send over three-fourths of their children to school have higher use-prevalence rates than other baris. Table 7.4 reveals that over 70 per cent of the baris that do not send any children to school have illiterate household heads; hence contradicting our earlier observation. Given the availability of a free primary school in each of the three study villages and the fact that during the survey almost all eligible women from these villages expressed their desire to give at least some primary school education to their children, the non-attendance of school by children of these baris may indicate the inability of the parents to free their children from work. An earlier study in the area observed that almost

every boy and every girl by age 12 enter the household labour force (Rahman, 1978). An examination of our individual level survey data (to be presented in the following chapter) shows a preponderance of agricultural labourers in these baris.

The pattern of relationship between socio-economic characteristics of baris represented by proportion of children attending school and contraceptive use-prevalence tends to support the observation made by Freedman et al. (1980) in Indonesia. They found a curvilinear relationship between standard of living and contraceptive use with relatively higher use rates among those with the lowest and highest living standard. They argued that modernization had increased contraception among higher status groups; while Malthusian pressure coupled with the pressure of constituted authority had increased contraceptive use among the poor. In our study area there has not been evident any pressure of constituted authority on the poor to accept contraception. However, given the high status of local FVWs in the villages and the strength of their samaj it is not unlikely that the poor cannot resist the forceful presentation of the need for contraception by these FVWs as a potential solution to their hardship. Also the very limited resources of the poor families for supporting additional children may make the arguments of the FVWs appear plausible.

7.3.3 Leadership Characteristics of Bari Heads and Contraceptive Use-Prevalence

As expected, the baris of Union Council members have a higher use-prevalence rate (45.7%), followed by the baris of matabbars (38.5%) (Table 7.5). The baris of religious leaders have the lowest

use-prevalence rate (21.4%). The same observation holds true even when we control for education of bari heads (Table 7.7). The higher use rate among the baris of Union Council members with some primary education suggests the importance of their exposure to the outside world, while the higher use rate among the baris of matabbars with secondary school or higher education suggests the importance of education for modification of outlook of these leaders who otherwise are usually conservative. It may be mentioned here that we have not observed any organised opposition to family planning from religious leaders in our study area, neither has any such opposition been noticed at the national level (probably because it is a government sponsored programme). However this finding suggests that there is some opposition from or at least reluctance on the part of the religious leaders that may, however, have been confined to their own baris rather than disseminated more widely.

Given the above observation, a question may arise: how important is the opinion of a bari head for acceptance of contraception by a member of that bari? The findings in Table 7.6 suggest that a favourable attitude of the bari head towards contraception has the potentiality of doubling the use-prevalence rate compared with what can be expected if he has a negative attitude. This point is even more important considering that over one-third of both users and non-users of contraceptives from the study baris reported that it was mandatory for them to seek the permission of their bari heads before they accepted contraception.

7.4 CONTRAST BETWEEN HIGHEST AND LOWEST USE-PREVALENCE SERVICE DELIVERY UNITS

Table 7.8 presents a contrast between the highest and lowest use-prevalence service delivery units of the same village by selected social, economic and demographic characteristics of baris. Whether we define the size of a bari by the number of its households, by total population, or by number of eligible women residing in it, the highest use-prevalence unit of a village appears to comprise considerably smaller-size baris. An exception is noted in the case of Village 1 where the highest use-prevalence unit appears not to differ from the lowest use-prevalence unit and, in fact, it has an average bari size considerably larger than that of the highest use-prevalence units of the other two villages. This deserves attention and explanation.

As mentioned earlier, internal conflicts and jealousy among the members and lack of a congenial atmosphere for family planning work are important constraints on attaining a higher use-prevalence in large baris. However, in terms of diffusion of knowledge and social legitimacy of contraceptive use the large baris possess certain definite advantages, the realization of which depends upon the maintenance of a pool of satisfied users in the bari. This is apparent from the findings presented at the end of Table 7.8 which show that the highest use-prevalence unit of Village 1 has a comparatively smaller percentage of baris with dissatisfied users.

As may be expected, the highest use-prevalence unit of a village comprises a comparatively higher proportion of baris with household heads employed in service, and fewer baris of fishermen, better

TABLE 7.8 (continued)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Proportion of children in school (%):									
None	8.3	36.0	6.5	26.1	42.4	17.4	31.6	19.6	21.7
25 percent	4.2	20.0	12.9	8.7	3.8	8.7	3.9	16.1	8.7
25-49 percent	12.5	16.0	16.1	17.4	11.5	26.1	11.8	16.1	21.8
50-74 percent	25.0	12.0	19.4	34.8	26.9	34.8	26.4	16.1	34.8
≥ 75 percent	50.0	16.0	45.1	13.0	15.4	13.0	26.3	32.1	13.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Leadership characteristics of bari heads (%):									
Village Matabbar (including U.C. member)	50.0	32.0	25.8	21.7	15.3	13.0	26.3	26.8	17.3
Imam/Moulvi/Hazi	-	8.0	12.9	17.4	-	26.1	-	10.7	21.8
None	50.0	60.0	61.3	60.9	84.7	60.9	73.7	62.5	60.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
% of <u>baris</u> with dissatisfied users									
% of eligible women reporting disapproval of their <u>bari</u> heads for use of contraceptives.	20.1	28.0	35.5	39.1	21.2	60.1	20.7	31.9	49.6
	44.6	58.6	66.1	76.9	53.5	84.9	49.3	62.5	81.0

Note: 1) The definition of "highest" and "lowest" service delivery unit within a village is restricted to the comparison among the units of that village only.

2) Under the column "Total": "Highest" unit comprises of the highest units of village 1 and village 3; "Average" unit comprises the lowest unit of village 1 and the highest unit of village 2; "Lowest" unit comprises the lowest units of village 2 and village 3.

* More than 50 per cent.

Source: Bari Characteristics Survey, 1982.

educated bari heads and greater proportion of children attending school. As regards leadership characteristics, the lowest use-prevalence unit comprises a considerably higher proportion of conservative leaders. The highest use-prevalence unit has a lower proportion of bari heads disapproving contraception in comparison to the lowest use-prevalence unit.

It is of course necessary to avoid making too much of the distributions in Table 7.8 because the marginals are for the most part very small, but there appears to be reasonable evidence that higher or lower use-prevalence in different service delivery units of different villages is not the result of the influence of the same factor(s). Thus, for example, modernization rather than Malthusian pressure may be an important factor facilitating promotion of contraceptive use in the highest use-prevalence unit of Village 1 as indicated by a relatively higher proportion of baris sending most of their children to school; while in the highest use-prevalence unit of Village 3, the latter factor seems to be more important as indicated by a relatively higher proportion of baris being unable to send any of their children to school.

7.5 SUMMARY AND DISCUSSION

All the 178 baris of our three study villages are organised according to the same principle of residential unity of patrilineal members. However, considerable differences appear to exist among them with regard to settlement patterns, size and composition, socio-economic and leadership characteristics, and the degree of cohesion and solidarity. Variation is evident, of course, not only among the villages and service delivery units but among different

baris of the same village and of the same service delivery unit.

Our analysis suggests that in general the use-prevalence is higher among small-size baris. Lack of congenial atmosphere for family planning work and relatively higher possibility of having some dissatisfied user in the bari are the two most important constraints on the level of contraceptive use in large-size baris.

A curvilinear relationship between socio-economic characteristics of baris and contraceptive use-prevalence is observed with relatively higher use rates among the baris of the highest and lowest socio-economic status. The impact of modernization seems to have increased contraception among the former group of baris, while Malthusian pressure, coupled with forceful presentation of the case for contraception by FWs, may have increased contraceptive use among the latter group.

The examination of leadership characteristics of bari head and contraceptive use-prevalence confirms the expected pattern. At the top of the continuum of use-prevalence rates are the baris of modern leaders (Union Council members), at the middle are the baris of village matabbars, followed by commoners, and at the bottom are the baris of conservative leaders (imam, moulvi and hazi).

What programme implications can we draw from these findings? Clearly, certain bari characteristics (size and level of education of bari heads, for example) are consistently related to practice of contraception by eligible women of the bari. The importance of this fact for programme purposes is difficult to specify. It probably lies primarily in the area of the planning of social and economic

development of the villages. However, there are other findings which deserve special attention.

One important observation of this study is that the presence of a satisfied user in a bari has the potentiality of raising its use-prevalence rate over threefold in comparison to what we can expect if the bari has a dissatisfied user. More importantly, with a satisfied user in a bari the size of the bari appears to become advantageous with regard to diffusion of knowledge and social legitimacy of contraceptive use instead of being disadvantageous as mentioned earlier. This suggests that proper care and attention to current acceptors rather than excessive emphasis on new recruitment has greater potentiality for raising the overall use-prevalence rate in the area.

Another important observation is that about one-third of the eligible women reported disapproval of contraception by their bari heads. The findings suggest that the possibility of using contraception by eligible women of a bari may double if their bari heads support it. The reason for disapproval of contraception by a bari head may partly be found, as suggested by this analysis, in his traditional or conservative attitude, partly in his lack of knowledge about contraceptives and partly, and more importantly as suggested by our observation in the field, the neglect by the workers to seek permission from and consult with the head before starting work among eligible women of the bari. The first factor is not easily amenable to programme modification. But the second and third factors are directly operational variables and the programme can modify its present strategy or develop a special one for the purpose.

Our examination of the contrast between the highest and lowest use-prevalence service delivery units of the same village in selected social, economic and demographic characteristics of baris suggests a definite contribution by these characteristics to the observed inter-village and within-village variation in contraceptive use-prevalence. However, the amount of variation in bari characteristics does not appear to be large enough to explain the variation to a significant extent. Nevertheless, we recognise the contribution of differential characteristics of baris to the observed areal variation in contraceptive use prevalence and this will be discussed in detail in Chapter 9.

CHAPTER 8

VARIATIONS IN CONTRACEPTIVE USE BY CHARACTERISTICS
OF INDIVIDUAL RESPONDENTS8.1 INTRODUCTION

As argued earlier, cultural and social values and norms provide the standards for behaviour within which the individual has some room for decision making; within these constraints, decisions are conditioned by the individual's social, economic and demographic situation.

In the preceding chapter we described the social, economic and demographic characteristics of baris in our sample and examined contribution of these characteristics to the observed variation in contraceptive use among eligible women. The variables included in the analysis were basically ascribed variables relating to aggregates rather than individuals. This chapter examines individual characteristics of the eligible women which may be relevant for an analysis of social, economic and demographic differentials in the adoption of modern contraceptives.

The analysis includes five demographic and five socio-economic variables. These are: 1) demographic variables - age of the respondents, number of living children, number of living sons, breastfeeding of the youngest child and experience of child death; 2) socio-economic variables - education of husband and wife, occupation of the husband, presence of husband at home, wife's urban experience

and frequency of her listening to the radio. The variables are standard to most fertility surveys since they lend themselves to relatively easy objective scrutiny in the interview situation.

The chapter begins with a description of how the 940 eligible women interviewed during the survey are distributed on the above listed variables, and examines the relationship between contraceptive use and each of these variables. In order to determine the net contribution of the individual variables, a multivariate analysis is then carried out using log-linear modified multiple regression models (Goodman, 1978). Because of the exploratory nature of the analysis and the fact that the dependent variables are categorical, this model is better suited for our purpose than alternative models. The underlying theory is described in Nedler and Wedderburn (1972); the calculations were executed by means of the computer package GLIM. Lastly, the contrast is shown between the service delivery units with the highest and lowest acceptance levels in the three study villages in the light of those individual characteristics that have shown significant relationship with contraceptive use. The chapter concludes with the summary and discussion of the major findings.

As mentioned in Chapter 3, the survey collected information on a variety of socio-psychological and family variables in addition to those mentioned above: knowledge of contraceptive methods, attitude of influential referent towards contraception, perceived utility of children, husband - wife communication, and decision-making authority in the family. Since most of these variables are qualitative and basically abstract in nature they are not included in the multivariate analysis.

Also, some of these variables showed little variations - thus violating the assumption of variance in the bivariate as well as multivariate distribution of the data. For example, except for one woman, every respondent could correctly tell the name of at least one modern contraceptive method and over 88 per cent appeared to possess some knowledge about its use. The findings on these variables are, however, used for description and interpretation of the findings of the multivariate analysis as and where appropriate.

Before proceeding to the presentation of demographic and socio-economic differentials in contraceptive use it seems appropriate to give a brief description of the contraceptive use-prevalence among eligible women of the sample baris. Over 34 per cent of eligible women reported current use of contraception (Table 8.1). This is quite consistent with the over all use-prevalence in the whole project area. As may be expected, all except five women reported using modern methods, mostly DMPA injection or tubal ligation, followed by IUD and oral pill. Very few respondents reported use of male methods. The traditional methods were used by only a few: safe period (four women) and Kabiraji or indigenous herbal medicine (one woman).

In this context, it is worth looking at the characteristics of non-users, especially with respect to the major reasons for their not using modern contraceptives. The most prominent reason, stated by nearly one-third of all non-users, is the disapproval of husband, or mother-in-law or both, followed by the desire to have more children. About one out of ten of the non-users reported that they did not feel the need for contraception, probably because some of them might have reached secondary sterility or their husband did not stay regularly at

TABLE 8.1

Distribution of Current Users from Sample Baris By
Methods Used and Non-Users By Reasons of Their Non-Use
Matlab MCH-FP Project, 1982.

	No. of Women	Number per 100 Women
<u>Methods Used</u>		
Condom	5	1.6
Oral pill	32	10.0
DMPA injection	108	33.6
IUD	64	19.9
Tube ligation	104	32.4
Vasectomy	2	0.6
Other modern methods	1	0.3
Other traditional methods	5	1.6
Total	321	100.0
Overall use-prevalence rate = 34.1		
 <u>Reasons for Non-Use</u>		
Husband/mother-in-law disapproves	182	29.4
Wants more children	153	24.7
Heard about/experienced side-effects	63	10.2
Does not feel need ¹	70	11.3
Newly married / no issue	52	8.4
Wants sons	33	5.3
Long interval between births	35	5.7
Ill Health	20	3.2
Against religion	11	1.8
Total	619	100.0

Source: Eligible Women Survey, 1982

Note : See text for the reason

home. It may also be possible that some of these women wanted to have more children but they did not like to tell this directly to the interviewer. A sizable proportion of non-users (over 10 per cent) appears to have experienced or be afraid of possible side-effects of contraceptives. The other main reasons for non-use were: recent marriage or that the respondent has no issue as yet, suspected subfecundity because of long interval between births, and desire to have son. It is interesting to note that no one complained about inaccessibility to services or difficulty in getting supplies. This is encouraging support for the implementation of the project; non-adoption of modern contraceptive appears to be related primarily to social and cultural factors for which the existing strategy of the project cannot be made accountable.

8.2 DEMOGRAPHIC CHARACTERISTICS AND CONTRACEPTIVE USE

8.2.1 Age

The age structure of the respondents is comparatively young (Table 8.2). women aged under 30 years comprise over 52 per cent of the total sample, the mean age of the respondents being 29.5 years. Women aged 45 years and above comprise a very small proportion of the sample because most women of that age would have reached menopause and only those few who reported regular menstruation were included in the list of eligible women. The use of contraception by women of this age group would have little demographic impact. However, indirectly the use of contraception by these women has very important social implications, because it provides social legitimacy for contraceptive use by younger women. We have discussed this point in some detail in earlier chapters.

TABLE 8.2

Distribution of Eligible Women of Sample Baris By
Selected Demographic Characteristics and Contraceptive Use
Matlab MCH-FP Project, 1982

Characteristics	No. of Women	Number per 100 Women	Percentage of current Users
<u>Age of Women</u>			
< 20 Years	100	10.6	12.0
20-24 "	227	24.1	22.5
25-29 "	166	17.7	34.3
30-34 "	160	17.0	41.3
35-39 "	155	16.5	43.2
40-44 "	97	10.3	55.7
≥ 45	35	3.7	40.0
Total	940	99.9	34.1
<u>Number of Living Children</u>			
None	82	8.7	1.2
1	146	15.5	18.5
2	147	15.6	31.3
3	137	14.6	36.5
4	119	12.7	40.3
5	119	12.7	53.8
6	90	9.6	51.1
7	51	5.4	45.1
8 or more	49	5.2	32.7
Total	940	100.0	34.1
<u>Number of Sons</u>			
None	189	20.1	10.1
1	277	29.4	28.5
2	214	22.8	50.9
3	141	15.0	46.1
4	73	7.8	41.1
5 or more	46	4.9	41.3
Total	940	100.0	34.1

TABLE 8.2 (continued)

Characteristics	No. of Women	Number Per 100 Women	Percentage of Current Users
<u>Death of any live-born child</u>			
At least one died	407	43.3	40.8
None died	464	49.4	33.2
Gave birth to no live-born child	69	7.3	1.4
Total	940	100.0	34.1
<u>Breastfeeding of the Youngest Child</u>			
Breastfeeds	524	55.7	30.5
Does not breastfeed	150	16.0	30.7
Does not breastfeed, child aged			
5 years or older	184	19.6	62.0
No child	82	8.7	1.2
Total	940	100.0	34.1

Source: Eligible Women Survey, 1982.

The pattern of contraceptive use seems to parallel the early experience of other countries with newly introduced family planning programmes - namely a relatively high rate of use among the middle aged women. As can be seen from Table 8.2, the use rate is highest for those aged 30-44 years, when both spacing and limitation of births are particularly acute. As could be expected, the rate is lowest among women aged under 20 years; during the early years of marriage there is little need for contraception, since one or two children are usually desired right away (Rahman et al., 1979). A relatively high use rate among the older women aged 45 years and above (which is almost double that for the women aged under 25 years) seems interesting and deserves explanation.

One plausible explanation for a relatively higher use rate among the older women may be that they do not like to take the risk for any more pregnancies, because many of them might have already achieved or even exceeded their desired family size. Another explanation given by some anthropologists (Maloney et al., 1981, for example) and supported by our observation in the field is the feeling of shame about pregnancy when one has grown up children, particularly a daughter-in-law in the house. In the village it is generally a matter of criticism and ridicule for parents to give birth when their own sons and daughters have their own children. The norm requires that by the time one is a grand parent one's sexual urge should be tapering off (Maloney et al., 1981). If one has a child at that age it publicizes to one's children and neighbours that there has been intercourse.

8.2.2 Number of Living Children

The two reasons for contraception are spacing of births and limitation of family size. In either case, given desired family size, the adoption of contraception would increase with parity. This is well documented by recent analysis of the World Fertility Survey data for a number of Asian countries, including Bangladesh (ESCAP, 1981). In the present analysis we used number of living children rather than parity, because it is the living children that represent economic pressures on the one hand and satisfaction afforded by parenthood on the other.

Our respondents have, on the average, 3.7 living children; a considerable proportion of them have more than five children (20.2 per cent) and only a small proportion (less than nine per cent) have no surviving child. An overwhelming majority of the latter group of respondents are young wives aged under 25 years. There was not a single childless woman aged 40 years or above in our sample.

The relationship between the number of living children and contraceptive use rate among the respondents resembles a bell-shaped pattern (Table 8.2). Use of contraception increases consistently with the number of living children, from about 19 per cent for women with one living child to a peak of about 54 per cent for those with five children, and then it declines gradually. One reason for the decline of contraceptive use rate among women with more than five living children may be that older, low fecundity women form a large proportion in this group. However, this is beyond the scope of our present discussion and will be examined in a later section.

Another plausible explanation is suggested by our observation in the field that some of these women maintain a rather indifferent attitude towards the increasing number of their children. This is apparent from some of the comments frequently made to the field workers - for example, 'when God has blessed my children, many as they are, with food and shelter he will definitely not deprive the few more that I can beget in the remaining short span of my reproductive period', or 'when we could bear the trouble of maintaining so many children we can bear the burden of the few more that God may give us in the future'. There are some practical considerations in this argument as well. In a large family some of the children will be now old enough to help their mother in the care of the new-born baby and to assist their father in providing for the additional members in the family.

If we look closely at the table, one fact is strikingly clear; namely that the idea of family planning among the village women is no longer limited to the 'termination of child birth period' as observed by some earlier studies (Ratcliffe et al., 1968; Stoeckel and Chowdhury, 1973). Nearly one-third of the respondents with two children accepted contraception, obviously for spacing. A similar trend has been observed in other parts of the country as well. During the period between 1968 and 1976 the percentage of users among parents with two children increased about four times, as against slightly more than one and a half times among parents with seven children (Hong, 1980).

8.2.3 Number of Living Sons

Traditionally, it has been argued that in many societies a high premium is placed on bearing sons rather than daughters. Sons are presumed to have a greater net utility in these societies than daughters for a variety of sociological and economic reasons. Included in this rationale are, for instance, economic utility, such as assistance in the family's economic activity or security in illness and old-age; the utility perceived in continuity of kinship and carrying on the name of the family; or utility in performing certain religious rituals (Freedman, 1963; Kirk, 1966).

Empirical support for the son preference thesis in Bangladesh has been found in many earlier studies (Ahmed, 1972; Cain, 1977a; Khuda, 1977; Rahman, 1978; Salahuddin, cited in Javillonar et al., 1979). During a survey conducted in Matlab in 1975, over 88 per cent of currently married women of reproductive age expressed their intention to continue having children even after achieving their desired family size in the hope of getting at least one son (Rahman, 1978). The hypothesis that sons receive preferential care and attention is supported indirectly by the differences in death rates of male and female children (Curlin et al., 1976, Ruzicka and Chowdhury, 1978; D'Souza and Chen, 1980; Huda, 1980). In a recent anthropological survey, Maloney et al. (1981) observed that the son preference is rooted not only in economic considerations, as emphasized by some of the above mentioned studies, but also in the local customs and religious beliefs of both Hindus and Muslims. Whatever the reason, almost all families in rural Bangladesh attempt to have some living sons and the sooner this goal is attained, the earlier in their

reproductive life cycle are the couple likely to try to limit the total number of living children.

Table 8.2 shows that a great majority of our respondents have at least one son; on the average, the respondents with children have 1.9 sons. The relationship between the number of sons and contraceptive use closely resembles that of number of living children and contraceptive use. Use of contraception increases with the number of living sons, reaches a peak for those with two sons and then gradually declines. The highest use rate among the women with two sons is close to that observed for women with five living children. An examination of the number of sons and total family size shows that, on the average, more than three-fourths of the respondents could expect to have at least two sons by the time they attain a family size of five children (not shown in the table).

8.2.4 Child Mortality

The theory of demographic transition emphasises that norms and practices supportive of high fertility evolved in order to ensure social survival under conditions of high mortality (Notestein, 1945; Davis and Blake, 1966). At the individual family level, the implications of this assumption are manifested in the child replacement and child survival hypotheses. The former states that parents try to replace children who die; the latter argues that parents aim to produce more children than they would desire otherwise to ensure the survival of the intended number to adulthood (Tylor et al., 1976; Scrimshaw, 1978; Preston, 1978).

In Bangladesh, the incidence of child-death in the family, and even fear of child-death, may have an important bearing on the fertility behaviour of parents. Using data from a sample of 4,200 married women in Bangladesh in 1960-1961, Schultz and Davanzo (1970) showed that the magnitude of fertility response to child-loss is greatest among the oldest and youngest women; it is also greater when the deceased child is a boy than when it is a girl. By examining the difference in birth intervals between women who had experienced at least one child-death and those who had not, Chowdhury et al. (1976) concluded that with a moderately high level of fertility and mortality, as in Pakistan and Bangladesh, 'there is no evidence that child deaths generate a desire to replace children' (p258). They provided evidence, however, that the positive relationship between high fertility and high mortality in rural Bangladesh might work through biological processes rather than behavioural intention and that the former effects are much more powerful than the latter.

As can be seen from Table 8.2 almost one-half (46.7%) of the respondents (excluding those who have not yet given a live birth) reported having lost at least one of their children. The table also shows that the contraceptive use rate is considerably higher among the respondents who had experienced child-death than among those who had not. However, given a built-in relationship between family size and child mortality it is not possible to draw any definite conclusion about the impact of child mortality on contraceptive use from the present bivariate analysis.

8.2.5 Breastfeeding of the Youngest Child

Breastfeeding in Bangladesh is almost universal and continues for a long period. It is widely believed that every child has a right to its mother's milk (Maloney et al., 1981). According to a recent national representative sample survey (Bangladesh, 1978), the length of breastfeeding is 19.2 months for rural and 17.5 months for urban women, with no differentials by religion or husband's occupation. Slightly longer breastfeeding was observed in the Matlab study area in some earlier studies (Chen et al., 1974; Hoffman et al., 1980). According to these studies the medium length of breastfeeding is 24 months, and in fact it continues well into the next pregnancy.

The fertility-depressing effect of breastfeeding is now a well established fact (Simpson-Hebert and Hoffman, 1981; van Gimneken, 1974). According to some analyses (Rosa, 1975), the contraceptive protection provided by breastfeeding in less developed countries was greater, at least up to 1974, than that achieved through family planning programmes. Explaining the causes of a fertility decline in Bangladesh recorded by the National Impact Survey conducted in 1968-1969, Sirageldin et al. (1975) argued that it was largely due to reduced infant and child mortality which, through prolongation of lactation and an extension of the period of postpartum amenorrhea, tended to increase the interval between live births. Early studies in Matlab suggest that the medium duration of post-partum amenorrhea may extend beyond 18 months with birth intervals of approximately three years (Mosley et al., 1977).

Table 8.2 shows that the majority (about 56%) of our respondents are nursing mothers; of the remaining ones about two-thirds are not breastfeeding their youngest child as its age is well above five years. There seems to be no difference in contraceptive use between the nursing mothers and those who discontinued breastfeeding the youngest child aged under five years. One probable explanation, given by Maloney et al. (1981), may be that women are not conscious of any physiological link between breastfeeding and pregnancy. Another reason, and probably the most important reason, is that the project encourages nursing mothers to initiate contraceptive use as soon as they begin regular menstrual periods or six months after the childbirth, whichever one is earlier (Rahman et al., 1979). The higher use rate among the women with children aged five years and older may be due to an over-representation of relatively older women with large families in this group and we must reserve our comment until we examine the result of the multivariate analysis in the later section.

8.3 SOCIO-ECONOMIC CHARACTERISTICS AND CONTRACEPTIVE USE

8.3.1 Education of Respondents and Their Husbands

The literature on fertility control behaviour has shown that a direct relationship between education and contraceptive use is almost a universal phenomenon. A substantial number of studies in both developed and developing countries have shown the positive effect of education on contraceptive use in both univariate and multivariate analysis and at the individual as well as aggregate level (Cochrane, 1979). Many theoretical interpretations of this relationship have

been given. For example, education provides directly, or facilitates, the acquisition of information about modern contraceptive devices and their effective use (Miro and Rath, 1965; Bhutnager, 1972; Arnold et al., 1975). Education increases the aspiration for quality of children and, hence, reduces the perceived utility of numbers of children (Muller, 1972; Caldwell, 1976). It is also suggested that education imparts a sense of self-efficiency, control over one's own fate, and trust in science and technology, all of which promote the use of contraception as a rational means of controlling one's own life (Inkles and Smith, 1974).

Several studies conducted in recent years in Bangladesh tended to confirm the relationship between level of education and use of contraception (Alauddin, 1979; Chowdhury, 1977; Hong, 1980, Rahim, 1981). However, an earlier study in Matlab observed that in a situation of an easy and equal access to family planning services, literacy of the wife does not make much difference in the initial acceptance of contraception, but it makes a definite difference in continuation of use (Rahman et al., 1980). Using panel data from the Matlab project to test a procedure for measuring 'underlying motivation to practice family planning', Chowdhury et al. (1982) showed that educational attainment of the husband is a strong predictor of contraceptive use.

As mentioned earlier, educational attainment in Matlab is higher than in other parts of the country. This is also reflected in the distribution of our sample of women by their own educational attainment and that of their husbands (Table 8.3). About 43 per cent of wives and 60 per cent of husbands reported to have had at least

TABLE 8.3

Distribution of Eligible Women of Sample Baris By Selected
Socio-Economic Characteristics and Contraceptive Use
Matlab MCH-FP Project, 1982

Characteristics	No. of Women	Number Per 100 Women	Percentage of Current Users
<u>Education of Wife</u>			
No formal schooling	534	56.8	35.2
Primary School	327	34.8	29.3
Secondary School	78	8.3	47.4
Above Secondary School	1	0.1	-
Total	940	100.0	34.1
<u>Education of Husband</u>			
No formal schooling	373	39.7	35.4
Primary School	273	29.1	28.6
Secondary School	241	25.6	36.1
Above Secondary School	53	5.6	45.3
Total	940	100.0	34.1
<u>Education of Husband-Wife</u>			
Husband illiterate + Wife illiterate	310	33.0	36.1
" " + " Primary	63	6.7	30.2
" Primary + " illiterate	163	17.3	35.6
" " + " Primary	110	11.7	20.0
" Secondary or above + " illiterate	61	6.5	29.5
" " + " Primary or above	233	24.8	39.5
Total	940	100.0	34.1
<u>Occupation of Husband</u>			
Agriculture	293	31.2	34.8
Agricultural labourer	101	10.7	42.0
Non-agricultural labourer	230	24.5	26.1
Service	105	11.2	42.9
Business	134	14.2	36.6

TABLE 8.3 (continued)

Characteristics	No. of Women	Number Per 100 Women	Percentage of Current Users
Fishing	65	6.9	27.7
No Work (students, invalid)	12	1.3	33.3
Total	940	100.0	34.1
<u>Husband's Presence at Home</u>			
All the time	641	68.2	36.7
Comes home every week	36	3.8	36.1
Comes 1-2 times in a month	149	15.9	28.9
Comes at an interval longer than a month	114	12.1	26.3
Total	940	100.0	34.1
<u>Duration of Wife's Urban living</u>			
Never lived	696	74.0	33.5
Lived less than one year	125	13.3	35.2
Lived one year or more	119	12.7	37.0
Total	940	100.0	34.1
<u>Frequency of Wife's Radio Listening</u>			
At least once in every alternative day	450	47.9	37.8
Less frequent than the above interval	364	38.7	33.2
Does not listen to radio	126	13.4	23.8
Total	940	100.0	34.1

Source: Eligible Women Survey, 1982.

some years in primary school, and some of them have attended secondary school, but very few have gone beyond that level. Few men with advanced education are living in the villages, and those who do are usually teachers in local schools or employees in local Government offices and banks. A comparison of the relative levels of education of wife and husband confirms the general tendency of males to marry a girl with an equal or lower educational qualification. Less than seven per cent of the wives recorded as literate have illiterate husbands. However, the level of education among these wives is limited only to some years in primary school.

Whether we consider education of husband and wife together or separately, there appear to emerge two distinct patterns of contraceptive use: illiterates and literates beyond primary school have a comparatively higher use rate than those couples with some primary school or with only one partner having some education. This tends to support the hypothesis presented in the preceding chapter that contraceptive use is highest among the poorest and among those who had acquired a relatively modern attitude. The point will be discussed in some detail in a later section along with the results of the multivariate analysis.

8.3.2 Occupation of Husband

In a pre-industrial society, each occupation tends to carry with it its own mode of life, social orientation and values (Hodge and Donald J, 1966; Thomas, 1962). However, with industrialization and modernization, the division of labour has become very complex. Such complexity in the occupational structure has reduced the validity of occupational classification as the criterion of social stratification.

However, occupation is still taken the most important indicator of socio-economic status in most fertility surveys, particularly in developing countries where information on income given by the respondents appears to be doubtful, partly because of ignorance and partly because of fear that the information may be used for taxation or similar purposes (Shryock and Siegel, 1975). Theoretically, it may be expected that social status (approximated by occupation) has a positive relationship with fertility regulation behaviour. Earlier studies in Bangladesh have shown that consistently a higher proportion of those in the highest status category (business and skilled) know about, have a favourable attitude toward, and practice family planning than other occupational groups (Stoeckel and Chowdhury, 1973; Bangladesh, 1978; Rahman et al., 1979).

Except for the ICDDR,B resident FVWs no women in our sample are engaged in any regular job other than household work for reasons mentioned in the introductory chapter. Only about six per cent of the respondents were reported to do some handicraft work in addition to their household duties. In the present analysis we have therefore considered only the occupation of the husband. Twelve respondents reported that their husband was not gainfully employed either because of physical invalidity or continuing study; they were excluded from our analysis. As is true for the whole Matlab study area, about 42 per cent of the husbands are engaged in agriculture; one-third of them are agricultural labourers (Table 8.3). Over one-fifth of the husbands are non-agricultural labourers; a great majority of them are mill and factory workers in towns. About one-fourth of the husbands are engaged in business or service (almost equally divided between the two categories) and the remaining seven per cent are fishermen.

The pattern of contraceptive use among different occupational groups tends to support our earlier hypothesis that the use rate is highest among the poorest, here agricultural labourers, and those relatively modern, here service holders and businessmen. Some plausible explanations for the lower use rate among fishermen were given in Chapter 4. The low use rate among the non-agricultural labourers is somewhat unexpected, given the fact that most of them have regular contacts with town life, and needs some elaboration. With a gradual decline in agricultural self-sufficiency the proportion of non-agricultural labourers is steadily increasing and this deserves the attention of any developmental programmes in rural area, including family planning.

One immediate explanation for a lower use rate among non-agricultural labourers, particularly those who have urban jobs, would be that unlike agricultural labourers they are not so much concerned about 'Malthusian pressure'. Their regular salaried or wage-earning occupation may have enabled them to provide two meals a day for their families. But at the same time it may have made them somewhat fatalistic about the future of their children. The husband of one respondent, a rickshaw puller, remarked during my informal interview with him: 'Before taking up rickshaw pulling my condition was very poor, I had no cultivable land of my own. I use to work on others' land as a day labourer. But there was no work every day. With my irregular earning we would eat one time and not the next time. I am still poor. But food and clothing is no longer scarce for my family'. To my query about the future of his children (two daughters and three sons) he asserted: 'God will take care of them. Towns and cities are growing day by day. If God wishes my sons can find a

better work than mine'.

As regards the impact of the exposure to urban experience of non-agricultural labourers, the observation made by a study 'Human and Social Impact of Technological Change in Pakistan' [now Bangladesh] about three decades ago still seems to hold true. According to the study, gambling and tea drinking may become a habit for a villager working in the town but not some of the other values represented by the town (Hussain, 1956). Another plausible explanation for a lower use rate by the wives of non-agricultural labourers seems to be the husband's irregular presence at home. This point is discussed in the following section.

8.3.3. Presence of Husband at Home

An earlier study in Matlab (Chowdhury and Aziz, 1974) documented considerable variation in fertility among different occupational groups. The families of service and mill workers had the lowest fertility, followed by fishermen and self-employed. The study explained lower fertility among these occupational groups by the periodic and, in some cases, prolonged absence of husbands from home. Among the service and mill workers are daily wage-earners who work in nearby towns and cities with good communication and usually come home every alternate week-end. Those who work in remote towns and cities send money and for some of the self-employed persons their occupation involves prolonged periodic absence from home, averaging nearly half of the year.

In the absence of any in-depth study it is difficult to comment on whether these families are conscious of their low fertility. But our observation in the field suggests a relatively low demand for contraception among women whose husbands do not stay at home regularly and this seems to find some support in our data in Table 8.3. About 28 per cent of the respondents reported that their husbands work away from home and come occasionally to see their families. About half of these respondents reported one or two visits by their husbands each month and the remainder reported still longer intervals between visits. The use rate is about nine points lower among these respondents in comparison to women whose husbands stay at home all the time or come home at least once in a week. We grouped the respondents whose husbands stay at home regularly and those whose husbands come home every week in one category, as the latter group comprised only 36 respondents and there appeared to be no difference in the use rate between the two subgroups.

One reason for a low use rate by the women whose husbands do not stay at home is suggested by our observation in the field; namely, if the wife uses contraceptives while her husband is away he may doubt her chastity and fidelity during his absence. Instances were not rare of husbands beating their wives in the presence of the FWW and others because the wife accepted contraceptives in his absence. Another plausible explanation for the low contraceptive use among these women may be the belief that repeated, frequent intercourse is necessary for a successful pregnancy (Maloney et al., 1981). However, this belief may not be universal. During the initial distribution of oral pills in the research area a number of women complained about prolonged and heavy bleeding. After personal interviews with some of them we

learned that many of them stopped taking the pill while the husband stayed away from home and took all of them at one time when the husband returned for a short visit.

8.3.4 Urban Experience

Urban experience has been extensively studied in relation to fertility and adoption of modern contraceptives. Studies by Chandrasekaran (1959) and Freedman and Takeshita (1969) found that urbanity is strongly related to fertility behaviour. Urban experience exposed people to urban mentality and modernism, both considered important elements of social change.

For obvious reasons we have considered the urban experience of the wife rather than that of her husband as an important discriminating variable in explaining differential contraceptive use. Nevertheless, the occupation of husband may provide some insight into the contribution of his urban experience, if any, as discussed in an earlier section. The urban experience of the respondent herself is defined in terms of whether and for how long she lived in town after reaching the age of ten years. Table 8.3 shows that over one-fourth of our respondents lived in a town [1] for some time in their life after age ten; about one-half of them lived in an urban environment for less than one year and a half for one year or more. The contraceptive use rate differs in the expected direction according to the length of stay in an urban area: the rate is highest for those who reported one year or more of urban life, intermediate for those

[1] The definition of a town or urban area in this study was restricted to the district headquarters or industrial city of the county.

who had lived there less than one year and lowest for those who had never lived in town.

8.3.5 Wife's Radio Listening

Most family planning programmes in the world, particularly those supported by an official government policy, use mass media at least to some extent. In the developing countries where literacy is low and most people live in rural areas, the radio has been considered the most suitable medium for family planning propaganda, partly because of the wide coverage of population. Although the impact of radio messages on actual adoption of contraception has not yet been sufficiently explored, hundreds of KAP surveys conducted in the past years in different countries, including Bangladesh, suggest that radio is the most frequently cited source of information about family planning (see summary reviews by Scramm, 1971 and by Fawcett, 1970; for Bangladesh, Waliullah et al., 1977). This, however, is not the reason why we used radio listening as one of the variables in this study. Information about family planning in the study area is provided by FVWs as part of their routine duty and is expected to and should reach every family. Our reason for including radio listening as an explanatory variable in the study lies in the fact that it is a modern item of consumption. Our observation in the field suggests that some villagers still consider radio listening in general and listening to songs in particular as a sin.

As can be seen from Table 8.3, almost one-half of the respondents reported that they regularly listened to the radio (at least once in every alternative day), while slightly more than one-third reported listening occasionally (not more than 2-3 times a week). Only about

13 per cent of the respondents reported that they did not listen to the radio at all. As expected, the contraceptive use rate is highest among those who reported listening to the radio regularly, intermediate among those who reported occasional listening and lowest among the non-listeners. An examination of the programmes listened to by the respondents (not shown here) reveals that folk songs are the most favoured programme, followed by family planning (the latter being more frequently listened to by contraceptive users).

8.4 MULTIVARIATE ANALYSIS OF DIFFERENTIAL CONTRACEPTIVE USE

Thus far, our discussion was based on the bivariate relationship between contraceptive use and selected demographic and socio-economic characteristics of eligible women of our sample baris. In many instances we observed that two or more of our dependent variables were inter-related. For example, experience of child loss was associated with family size which, in turn, was associated with mother's age. Similarly, educational attainment of husband was associated with an urban occupation which, in turn, led to irregular presence at home. The point is that to evaluate the effect on contraceptive use of a given variable, other variables must be controlled for statistically.

One suitable way to introduce the necessary controls other than using complex contingency tables is to apply a generalised logit-linear model. The model has been described in detail by Little (1978) and has been adopted in several analyses of the World Fertility Survey data. The model is more appropriate in the case when the independent variables are categorical and the dependent variable is dichotomous.

8.4.1 Demographic Differentials in Contraceptive Use

Table 8.4 presents the results of the analysis of the effects of demographic variables on current use of contraception using the logit-linear model. The model includes five variables: age of wife, number of living children, number of living sons, breastfeeding of the youngest child and child mortality. The odds ratios displayed in the table indicate the relative probability of using contraception by a subgroups of women in comparison to that of women in other subgroups.

Logit-Linear Models of the Effects of Selected Demographic Variables on Current Contraceptive Use

Matlab MCH-FP Project, 1982

Variables	Gross Effects			Net Effects*			Expected Percentage of users **
	Odds ratio	λ^2_{LR}	P	Odds ratio	λ^2_{LR}	P	
<u>Age of Wife</u>		35.7	<.001		4.5	>.20	
< 25 years	0.538			0.961			35.5
25-34 "	1.115			1.157			39.7
35-44 "	1.625			0.840			32.5
> 45 "	1.115			0.814			31.8
<u>No. of Living Children</u>		43.2	<.001		7.2	>.05	
1 - 2	0.569			2.004			53.4
3 - 4	1.094			0.968			35.6
5 - 6	1.941			0.878			33.4
7 or more	1.146			0.945			35.1

TABLE 8.4 (continued)

Variables	Gross Effects		Net Effects		Expected Percentage of Users
	Odds ratio	λ^2 LR	Odds Ratio	λ^2 LR	
<u>No. of Living Sons</u>		50.8		13.3	<.01
One or none	0.579		0.720		29.2
2 - 3	1.716		1.450		45.3
4 or more	1.234		0.979		35.0
<u>Breastfeeding of Youngest Child</u>		44.7		28.2	<.001
Breastfeeding, age under 5	0.788		1.647		48.5
Not Breastfeeding, " "	0.759		0.653		27.2
Not Breastfeeding, " "					
or older	2.330		0.367		17.4
<u>Child Mortality</u>		6.2		0.1	>.50
None died	0.850		1.		
At least one died	1.203		0.		

Notes: * The effects are net of the effects of all the other variables included in the model and interaction of breast-feeding with age and number of living children.

** Calculations are based on net effects. λ^2 LR = Chi-square likelihood ratio; P = Level of significance.

Thus, for example, the 'Gross effects' column [2] of the variable age of wife in the table indicates that the probability of using contraception by women aged less than 25 years is 48 per cent (0.538/1.115) lower than for women aged between 25 and 34 years. The odds ratio of unity indicates no effect of the independent variable. An odds ratio larger than one indicates a higher probability of use, while an odds ratio smaller than one indicates a lower probability of use in comparison to the overall mean use rate. The chi-square likelihood ratio ($\chi^2 LR$) and probability level (p) indicate whether a particular dependent variable is significantly associated with contraceptive use. Also, in the last column of the table, the expected percentage of users in each subgroups is presented.

As can be seen from Table 8.4, the age of wife and the number of living children lose their statistical significance for the level of contraceptive use when the effect of other demographic variables (including the interaction effects) [3] are controlled for. The pattern of differentials also changes, suggesting a higher use probability among the young and low parity women. This change appears to be mainly due to an interaction of age and number of living children with breastfeeding status of the youngest child. As can be

[2] The 'Gross effects' column virtually replicates the same pattern of relationship shown by the bivariate analysis. The column is retained, however, for ease of comparison with the results in the 'Net Effects' column obtained after controlling for the effects of the other variables included in the model.

[3] Of all the possible two way interaction tests performed only (1) age of wife and breastfeeding of the youngest child and (2) number of living children and breastfeeding of the youngest child were found to have significant interaction effects on contraceptive use (p < .01 and < .05 respectively) and were included in the model when examining 'net effects'.

seen from Table 8.5, the probability of using contraception increases considerably among women aged 25-44 years or women with five or more children when the age of their youngest child reaches or exceeds five years, that is when it has passed the crucial period of high mortality risk. That the fear of child mortality may discourage a woman from using contraception is further supported by our finding under the 'Net Effects' column in Table 8.4. It shows that the probability of contraception is considerably lower among women who experienced child death than among the women who did not. The finding thus tends to support the child replacement hypothesis discussed earlier.

One interesting observation to be made from Table 8.5 is that the probability of using contraception among nursing mothers is highest when they are in their early twenties or late forties. Given the high incidence of complications at child birth among the young and older women (Bouvier and van der Tak, 1976; Wolfers and Scrimshaw, 1978), it is quite understandable why these women need sufficient rest, and hence protection from the risk of an early pregnancy. An apprehension of the risk of an early next pregnancy, because of their comparatively shorter duration of postpartum amenorrhea (Chowdhury, 1978), coupled with motivation by FVWs, may encourage the young nursing mothers to initiate contraceptive use even before the termination of their postpartum amenorrhea period. It may be mentioned here that the Matlab project advises nursing mothers to accept any method of contraception as soon they complete six months of postpartum amenorrhea or start regular menstruation, whichever is earlier. The custom of feeling shy about having children at an older age, for the reason explained earlier, may be an additional factor contributing to higher use-prevalence among the older nursing mothers.

TABLE 8.5

Logit-Linear Models of the Joint Effects of Breastfeeding Status and Age, and Breastfeeding Status
and Number of Living Children on Current Contraceptive Use
Matlab MCH-FP Project, 1982

Variables	Gross Effects		Net Effects*		Expected Percentage of Users **
	Odds Ratio	λ^2 LR	Odds ratio	λ^2 LR	
<u>Breastfeeding of youngest child and Age of mothers</u>		21.2		6.6	
Breastfeeding (under 5):					> .30
< 25 years	0.522		1.274		42.2
25-34 "	0.757		0.480		21.5
35-44 "	0.579		0.707		28.8
≥ 45 "	0.760		1.096		38.5
Not Breastfeeding (under 5):					
< 25 years	0.206		0.502		22.3
25-34 "	1.074		1.040		37.3
35-44 "	2.714		1.454		45.4
≥ 45 "	0.835		0.576		24.8
Not Breastfeeding (5 or older):					
< 25 years	0.168		0.443		20.2
25-34 "	5.352		3.935		69.2
35-44 "	7.282		3.270		65.6
≥ 45 "	2.362		1.500		46.2

TABLE 8.5 (continued)

Variables	Gross Effects		Net Effects		Expected Percentage of Users
	Odds Ratio	λ^2 LR	Odds Ratio	λ^2 LR	
<u>Breastfeeding of youngest child and No. of Children</u>		26.3		15.4	>.01
<u>Breastfeeding (under 5):</u>					
1-2 children	0.565		1.091		38.4
3-4 "	0.696		0.815		31.8
5-6 "	0.815		0.880		33.5
7 or more	0.954		0.755		30.2
<u>Not Breastfeeding (under 5):</u>					
1-2 children	0.302		0.566		24.5
3-4 "	0.858		0.424		19.5
5-6 "	1.999		1.787		50.6
7 or more	1.440		1.067		37.9
<u>Not Breastfeeding (5 or older)</u>					
1-2 children	0.205		0.398		18.5
3-4 "	4.932		2.621		60.0
5-6 "	8.661		5.620		76.4
7 or more	4.418		2.547		59.3

Note: * The effects are net of the effects of all other demographic variables included in the model.

** Calculations are based on net effects. λ^2 LR = Chi-square likelihood ratio; P = Level of significance

Their recent child birth, an evidence of continuing fecundity, may have given them a feeling of urgency to initiate early contraception in order to safeguard against any further accidental pregnancy.

Another important observation on the findings in Table 8.5 is that there seems to be no stigma against using contraception by nursing mothers. An apprehension of early weaning due to another pregnancy, coupled with FWs' postnatal educational effort, appears to have rather increased significantly the possibility of contraceptive use among them ('Net Effects' column of Table 8.4). It may be mentioned here that in contrast to the urban areas bottle feeding has not yet become a widespread practice in the rural areas of Bangladesh, either due to the cultural support for breastfeeding, or the parent's inability to afford breast milk substitute such as powdered milk. The finding thus tends to support indirectly the arguments which are often made in favour of postpartum family planning programmes - for example, a woman who has recently experienced the trouble of childbirth will be a better and more easily motivated client for contraception (Berelson, 1970).

The lower use rate among women whose youngest child has been weaned (Table 8.4) may suggest that they have reached the right time to conceive another child. It is also possible that some of these women have reached the state of secondary sterility as evident from the age of their youngest child and so do not feel a need for contraception. An examination of the women who reported 'no need' as the reason for non-use of contraception shows an over representation of women with long open birth intervals: this group comprises about 76 per cent of women with the youngest child aged five years or more (not shown in the table).

Among all the demographic variables included in the analysis, the number of living sons appears to be the most consistent predictor of contraceptive use. The effect of number of sons on current use of contraception remains statistically significant ($p < .01$) even after controlling for the effects of other demographic variables included in the model. The finding thus supports the son preference hypothesis advocated by some previous studies in Bangladesh mentioned earlier. A lower use rate among women with four or more sons in comparison with those with two or three sons tends to substantiate our earlier assertion regarding the indifference of some parents with large families towards the risk of having a few more children.

8.4.2 Socio-Economic Differentials and Contraceptive Use

Table 8.6 presents the results of the analysis of the effect of selected socio-economic variables (education of husband and wife, occupation of husband, husband's presence at home, wife's urban living experience and her listening to the radio) on current contraceptive use. It shows that all the variables maintain their general pattern of relationship with contraceptive use but the effect of two of them, namely husband's occupation and wife's urban living experience, lose their statistical significance once the effects of the other variables are controlled for [4]. Also the effect of better education is now reduced, suggesting a possibility that some of its effect are mediated through other variables such as wife's listening to the radio, and her

[4] Of all the possible two way interaction tests performed, only education and husband's presence at home were found to have significant ($p < .05$) effect on contraceptive use; this interaction was included in the model when examining the 'net effects'.

Logit-Linear Models of the Effects of Selected Socio-Economic Variables on Current Contraceptive Use

Matlab MCH-FP Project, 1982

Variables	<u>Gross Effects</u>			<u>Net Effects*</u>			Expected Percentage of Users**
	Odds Ratio	λ^2 LR	P	Odds Ratio	λ^2 LR	P	
<u>Education</u>		17.3	<.01		15.2	<.01	
Husband illiterate + Wife illiterate	1.143			1.196			37.7
" " + " Primary	0.735			0.835			29.7
" Primary + " illiterate	1.045			1.467			42.6
" " + " Primary	0.496			0.377			16.1
" Secondary + " illiterate	0.722			0.601			23.3
" " + " Primary or above	1.318			1.104			35.8
<u>Occupation of Husband</u>		13.2	<.01		3.5	>.10	
Agriculture	1.148			1.090			35.5
Non-agricultural labourers	0.690			0.795			28.7
Service or Business	1.260			1.105			35.9

TABLE 8.6 (continued)

Variables	Gross Effects			Net Effects*			Expected Percentage of Users
	Odds Ratio	λ^2 LR	P	Odds Ratio	λ^2 LR	P	
<u>Husband's presence at home</u>		9.8	<.01		4.7	<.05	
Regular	1.147			1.090			35.5
Irregular or periodic	0.705			0.804			28.9
<u>Wife's urban living</u>		0.4	>.80		0.6	>.70	
Lived one year or more	1.169			1.146			36.7
Lived less than one year	1.093			1.032			34.3
Never lived	0.959			0.972			33.3
<u>Wife's radio listening</u>		13.2	<.01		11.9	<.01	
Listens regularly	1.223			1.187			37.5
" occasionally	0.958			0.991			33.4
Does not listen	0.557			0.542			21.5

Note: * The effects are net of the effects of all other socio-economic variables included in the model and interaction between education and husband's presence at home.

** Calculations are based on net effects. λ^2 LR = Chi-square likelihood ratio; P = Level of significance.

urban living experience. This possibility is suggested by an over representation of better educated couples among the latter two groups of respondents (Table 8.7)

The husband's presence at home effects contraceptive use both directly and jointly with the level of education. In general, the husband's irregular presence at home increases the possibility of contraceptive use among the better educated couples, while it reduces such probability among the illiterate or less educated couples (Table 8.8). The group of better educated husbands mostly consists of service employees working in the urban areas and the higher use-prevalence among them suggests an influence of urban experience on their attitudes and behaviour. The latter two groups largely consist of agricultural labourers including some fishermen, who work in the rural areas away from home and of non-agricultural labourers who mostly work in the mills and factories in towns. The agricultural labourers are over-represented in the group of illiterate couples and the non-agricultural labourers are over-represented in the low education group. The negative effect of husband's absence from home on contraceptive use is more prominent in the latter subgroup for the reasons explained earlier.

Since the proportion of better educated persons working in towns or cities is very small, the influence of their higher use rate on over all use-prevalence appears to be minimal and, in fact, is suppressed by the lower use rate of the illiterate and low literate couples with husbands working away from home. Consequently, the probability of contraceptive use becomes more prominent among the women whose husbands stay at home in comparison to those whose

TABLE 8.7

Distribution of Eligible Women of Sample Baris by
Education, Radio Listening and Urban Living Experience
Matlab MCH-FP Project, 1982

	Illiterate (Per 100 women)	Low literate (Per 100 women)	Better educated (Per 100 women)
<u>Wife's Radio Listening</u>			
listens regularly	37.4	46.3	64.4
" occasionally	42.6	41.1	29.6
Does not listen	20.0	12.6	6.0
Total	100.0	100.0	100.0
<u>Wife's Urban Living</u>			
Lived one year or more	6.8	10.8	23.6
" less than one year	6.8	13.1	22.3
Never lived	86.4	76.1	54.1
Total	100.0	100.0	100.0
	N = 310	397	233

Note: Illiterate = Both husband and wife have no formal schooling

Low literate = Only one partner literate or both have some primary education

Better educated = Husband has more than primary and wife has primary or more

Source: Eligible Women Survey, 1982

Logit-Linear Models of the Joint Effects of Education and Husband's Presence at Home on

Current Contraceptive Use

Matlab MCH-FP Project, 1982

Variables	Gross Effects			Net Effects*			Expected Percentage of Users **
	Odds Ratio	λ^2 Lr	P	Odds Ratio	λ^2 LR	P	
<u>Husband's regular presence at home</u>							
Husband illiterate + Wife illiterate	1.144			1.517			43.4
" " + " Primary	0.804			1.060			34.9
" Primary + " illiterate	1.478			1.860			48.5
" " + " Primary	0.400			0.478			19.5
" Secondary + " illiterate	0.621			0.762			27.8
" or above + " Primary or above	1.302			0.683			34.6
" "							
<u>Husband's irregular or periodic presence</u>							
Husband illiterate + Wife illiterate	0.712			1.119			36.2
" " + " Primary	0.881			0.450			18.5
" Primary + " illiterate	0.374			0.429			17.8
" " + " Primary	2.694			0.790			28.6
" Secondary + " illiterate	2.121			1.140			36.6
" or above + " Primary or above	1.423			1.078			35.3
" "							

Note: * The effects are net of the effects of all other demographic variables included in the model.
 **Calculations are based on net effects
 λ^2 LR = Chi-square likelihood ratio; P = Level of significance.

husbands stay away from home (Table 8.6).

To sum up, we find that significant socio-economic differentials in contraceptive use exist among the eligible women of our sample baris and much of these differences can be attributed to three important variables: education of husband and wife, husband's presence at home and wife's radio listening. However, some of these socio-economic variables may be associated with the demographic variables that have also been proved important. For example, husbands of older women may be under-represented in the group of women whose husbands stay away from home, or comparatively more younger women may have better educated husbands.

In order to address this issue, a new model was adopted incorporating three demographic variables (age of wife, number of living sons and breastfeeding status of the youngest child) and three socio-economic variables (education of husband and wife, wife's radio listening and husband's presence at home). It was not feasible to include all of the demographic and socio-economic variables in a single model, due to limited sample size. We, therefore, included those variables that showed statistically significant net effects on contraceptive use in earlier models. Age was included in the model for its likely association with some of the socio-economic variables. In order to minimize the matrix size further, we collapsed educational categories 'only one partner having some education' or 'both having some education' into one. Also, women aged 35-44 years and 45 years and above were combined into one group. The integration of two or more categories into one was done on the basis of their similarity in use rate and in consideration of the sample size.

The result shown in Table 8.9 indicates that only wife's radio listening continues to have a significant effect on contraceptive use ($P > .01$) when the effects of other variables included in the model are controlled for. The pattern of the effect of education remained unchanged, but its statistical significance was considerably reduced. This reduction was more notable among the illiterate couples, suggesting that the higher use rate observed among these groups before controlling for the demographic variables was probably associated with an over representation of older couples who have generally higher use-prevalence in comparison to younger couples.

The effect of husband's presence at home loses its statistical significance and assumes a reverse pattern of relationship once the effects of other variables are controlled for. This appears to happen mainly due to its interaction with age of wife shown in Table 8.10. The table shows that the age of wife maintains its expected pattern of relationship with contraceptive use if the husband stays at home. If the husband does not stay at home then the probability of using contraception decreases significantly in the case of younger women. One explanation for a higher use rate among the younger couples is that the better educated service employees are over represented in this group. Another plausible explanation may be that the husbands of younger wives come home more frequently than the husbands of middle aged and older women, and doubtless have more frequent intercourse than the latter. The need for contraception is thus greater among the younger wives. Of the two groups, middle aged and older women, the former has a considerably lower use rate. An examination of husband's occupation reveals that the non-agricultural labourers who have generally lower use-prevalence (for reasons explained earlier) are over-represented in this subgroup.

Logit-Linear Models of the Net Effects* of Selected Socio-Economic and Demographic Variables

On Current Contraceptive Use
Matlab MCH-FP Project, 1982

Variables	Odds ratio	λ^2 LR	P	Expected percentage of Users
<u>Education</u>		3.9	>.10	
Husband - Wife both illiterate	0.625			25.6
Only one partner literate or both some Primary	1.148			38.7
Husband Secondary or above and wife Primary or above	1.356			42.7
<u>Wife's Radio Listening</u>		8.7	>.01	
Listens to radio regularly	1.328			42.3
" " " occasionally	0.974			34.9
Does not listen to radio	0.511			22.0
<u>Husband's Presence at Home</u>		0.7	>.70	
Regular	0.813			30.9
Irregular or periodic	1.756			49.2
<u>No. of Living Sons</u>		10.5	<.01	
One or none	0.586			23.0
2-3	1.651			47.6
4 or more	1.388			43.3

TABLE 8.9 (continued)

Variables	Odds Ratio	λ^2 LR	P	Expected percentage of Users
<u>Age of Wife</u>		8.7	>.01	
Less than 25 years	0.510			21.9
25-34 "	1.424			44.0
35 and above "	1.244			40.7
<u>Breastfeeding of the Youngest child</u>		5.6	>.05	
Breastfeeding age under 5	0.959			34.6
Not breastfeeding " "	2.191			54.7
Not breastfeeding age 5 or older	0.615			25.3

Note: * The effects are net of the effects of all other variables incorporated in the model, including interaction effects of age and husband's presence at home, and number of sons and breastfeeding of the youngest child.

λ^2 LR = Chi-square likelihood ratio; P = Level of significance

TABLE 8.10

Logit-Linear Models of the Joint Effects of Wife's age
and Husband's Presence at Home on Current Contraceptive Use

Matlab MCH-FP Project, 1982

Variables	Odds ratio	Expected Percentage of Users
<u>Husband's regular presence at home</u>		
Age of wife: <25 years	0.696	27.7
25-34 "	2.040	52.9
≥35 "	1.572	46.4
<u>Husband's irregular or periodic presence</u>		
Age of wife: <25 years	1.449	44.4
25-34 "	0.125	6.4
≥35 "	0.469	20.5
$\lambda^2_{LR} = 24.5$ $P < .001$		

Interestingly, the effects of interaction between husbands presence at home and education observed in the earlier model appear to be substituted by the effects of interaction between husband's presence at home and age in the present model. This is understandable given an interaction between age of wife and husband's education: better educated couples are over-represented among the younger wives having their husbands working away from home. However, it is also apparent that age rather than education dominates the direction of the pattern of association between husband's presence at home and contraceptive use. This is not surprising given the low proportion of better educated husbands (29.7 per cent) in the over all sample of husbands working away from home.

Among the demographic variables included in the model, age and number of living sons retain their statistically significant and theoretically expected pattern of relationship with contraceptive use. The effect of breastfeeding is reduced to a statistically non-significant amount. However, breastfeeding appears to affect contraceptive use significantly ($p < .001$) in association with the number of living sons. This pattern replicates that of the association of breastfeeding with the number of living children shown in Table 8.5. The finding thus suggests that the effect of breastfeeding on contraceptive use is an unstable one and subject to its association with the number of living sons and, through that, with number of living children.

In summary, of all the variables included in the multivariate analysis, three variables emerge as the most important determinants of differential contraceptive use at the individual level. These are age of wife, number of living sons and wife's radio listening. The effects of other demographic and socio-economic variables appear to be unstable and either reduce to non-significant levels when the effects of other variables are controlled for or become significant only in conjunction with another variable. Number of living children, child mortality experience, husband's occupation, education of husband and wife, and wife's urban living experience fall under the former category, while breastfeeding of the youngest child and husband's presence at home fall under the latter category. In the following section we will examine whether the three social and demographic variables found to have significant effects on differential contraceptive use at the individual level contribute to the observed areal variation in contraceptive use. More specifically, we will first examine whether the service delivery units in our sample differ in the frequency distribution of the three variables and then examine whether they differ in their effect on contraceptive use among the units at three levels of contraceptive use-prevalence: high, average and low.

8.5 CONTRAST BETWEEN THE HIGHEST AND LOWEST USE-PREVALENCE UNITS

Table 8.11 presents the contrast between the highest and lowest use-prevalence service delivery units of the same village by age of wife, number of living sons, wife's radio listening and education of husband and wife. We have included the latter variable in this analysis because of its seeming association with a number of other

Contrast Between the Highest and Lowest Use-Prevalence Service Delivery Units in Age of Wife,

Number of Sons and Wife's Radio Listening,

Matlab MCH-FP Project, 1982

Variables	<u>Village 1</u>		<u>Village 2</u>		<u>Village 3</u>		<u>Total*</u>		
	Highest use-prev.	Lowest use prev.	Highest use-prev.	Lowest use-prev.	Highest use-prev.	Lowest use-prev.	High use-prev	Average use prev.	Low Area
	Unit	Unit	Unit	Unit	Unit	Unit	Area	Area	Area

Age of Wife (%)

< 25 years	27.3	46.7	31.5	36.9	31.5	34.4	29.6	38.7	35.6
25-34 "	34.5	30.3	39.3	31.2	36.8	35.6	35.7	35.0	33.4
≥ 35 "	38.2	23.0	29.2	31.9	31.7	30.0	34.7	26.3	31.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

No. of Living Sons (%)

None or one	38.2	49.4	39.3	44.4	43.9	38.6	43.5	48.6	44.6
2 - 3	42.5	36.2	36.9	35.0	40.5	36.2	43.9	40.3	38.3
4 or more	19.3	14.4	23.8	20.6	15.6	25.2	12.6	11.1	17.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 8.11 (continued)

Variables	Village 1		Village 2		Village 3		Total*	
	Highest use-prev. Unit	Lowest use-prev. Unit	Highest use-prev. Unit	Lowest use-prev. Unit	Highest use-prev. Unit	Lowest use-prev. Unit	High use-prev. Area	Average use-prev. Area
<u>Wife's Radio Listening (%)</u>								
Listens regularly	53.2	49.4	55.3	53.1	51.0	26.5	52.1	52.5
Listens occasionally	39.6	32.2	32.8	32.5	41.9	53.0	40.8	32.5
Does not listen	7.2	18.4	11.9	14.4	7.1	20.5	7.1	15.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<u>Education</u>								
Husband-Wife both illiterate	27.3	45.4	28.6	36.9	29.7	30.1	28.6	38.6
Only one literate or both some Primary	44.6	32.9	42.8	45.6	47.1	40.4	45.9	38.1
Husb. Secondary or above	28.1	21.7	28.6	17.5	23.2	29.5	25.5	25.3
Wife Primary or above	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: * High use-prev area = Highest unit of village 1 (Use-prev. rate = 48.9%) + Highest Unit of village 3 (Use-prev. rate = 43.8%)

Average " " = Lowest " " (Use-prev. rate = 36.2%) = Highest " " 2 (Use-prev. rate = 31.0%)

Low " " = Lowest " " 2 (Use-prev. rate = 21.9%) = Lowest " " 3 (Use-prev. rate = 25.9%)

socio-economic characteristics, namely, husband's occupation and wife's urban living experience. The table shows that in general the highest use-prevalence unit of a village has a comparatively lower proportion of women aged below 25 years, a slightly lower proportion of women with no sons or one son, a higher proportion of better educated couples, and a lower proportion of women who reported that they did not listen to the radio. However, the contrast is not as sharp as we expected on the basis of differences between the current use rates in the highest and lowest use-prevalence units.

Table 8.12 presents the results of the multivariate analysis of the effects of the above mentioned four variables on current contraceptive use by areas - namely, high, average and low use-prevalence areas. The high use-prevalence area comprises the highest use-prevalence units of Villages 1 and 2 and has an average use rate of 46.3 per cent. The average use-prevalence area comprises the lowest use-prevalence unit of Village 1 and the highest use-prevalence unit of Village 2 and has an average use rate of 33.4 per cent. The low use-prevalence area comprises the lowest use-prevalence units of Villages 2 and 3 and has an average use rate of 23.9 per cent.

The analysis shows that except for education, all the other variables included in the model exhibit a consistent pattern of association with contraceptive use in all three areas. In the low use-prevalence area the probability of using contraception appears to increase with an increase in the level of education. In the high and average use-prevalence area, on the other hand, the probability of contraceptive use appears to be highest at the two ends of the scale, that is among the illiterate and the better educated couples.

TABLE 8.12

Logit-Linear Models of the Net Effects* of Selected Socio-Demographic Variables on Current
 Contraceptive Use by Areas,
 Matlab MCH-FP Project, 1982

Variables	High		Average		Low		
	<u>Use-prevalence area</u>	Expected % of users	<u>Use-prevalence area</u>	Odds Ratio	<u>Use-prevalence area</u>	Odds Ratio	Expected % of users
<u>Age of Wife</u>							
Less than 25 years	0.834	43.3	0.705	0.512	0.621	0.512	15.0
25-34	0.843	43.6	0.916	1.342	1.637	1.342	31.6
35 years and above	1.354	55.4	1.676	1.363	1.145	1.363	31.9
λ^2 LR	2.58		5.09	5.57		5.57	
P	>.20		>.05	<.10		<.10	
<u>Number of Living Sons</u>							
None or one	0.585	34.9	0.780	0.621	0.621	0.621	17.3
2 - 3	1.601	59.5	1.427	1.637	1.637	1.637	36.0
4 or more	1.235	53.1	0.815	1.145	1.145	1.145	28.3
λ^2 LR	10.67		4.53	7.61		7.61	
P	<.01		>.10	<.05		<.05	

TABLE 8.12 (continued)

Variables	High		Average		Low	
	Use-prevalence area Odds Ratio	Expected % Of Users	Use-prevalence area Odds Ratio	Expected % Of Users	Use-prevalence Area Odds Ratio	Expected % Of Users
<u>Education</u>						
Husb.-Wife both illiterate	1.34	55.1	1.060	38.4	0.864	22.9
Only one literate or both some primary	0.702	39.2	0.814	32.4	1.004	25.7
Husb. Secondary and above Wife Primary and above	1.625	59.8	1.267	42.7	1.236	29.8
λ^2_{LR}	7.21		1.47		0.94	
P	<.05		>.30		>.50	
<u>Wife's Radio Listening</u>						
Listens regularly	0.309	22.1	0.562	24.8	0.642	18.1
Listens occasionally	0.907	45.4	0.869	33.8	1.075	27.0
Does not listen	1.287	54.1	1.299	43.3	1.144	28.2
λ^2_{LR}	8.60		5.09		2.14	
P	<.02		>.05		>.30	

Note: * The effects are net of the effects of all the other variables included in the model.

λ^2_{LR} = Chi-square likelihood ratio; P = Level of significance

As regards significance of the effects of the four variables on contraceptive use, we observe that in the high use-prevalence area the effects of all the variables but age of wife maintain their statistical significance. In contrast, in the average use-prevalence area none of the variables, and in the low use-prevalence area only the number of living sons, retain a statistically significant effect once the effects of the other variables included in the model are controlled for. Interestingly enough, the effect of the age of the wife on contraceptive use, which appeared to be significant in our earlier analysis using the combined socio-economic and demographic variables, loses its statistical significance in the present model. Also, the effect of education, which was observed to be insignificant in the earlier combined model, appears to become significant in the present model in the high use-prevalence area. The finding thus reminds us of the statement by Lorimer mentioned earlier: 'Different factors sometimes act together in the same direction, whereas elsewhere their action tends to be opposed so that they are without influence on the final results'.

The findings in Table 8.12 raise one important question: why do the variables which appear to have statistically significant effects on contraceptive use in the high use-prevalence area not hold significant effects in the average and low use-prevalence areas? One possible explanation may be that given the low level of use and the small sample size, the underlying pattern is not strong enough to produce significant effects. Other variables that are not allowed for in our model generate variation that overshadows that pattern. It is plausible to hypothesise that the low use prevalence areas are comparatively more conservative and the influence of aggregate level

characteristics on contraceptive use predominates over that of the individual characteristics.

This latter possibility is suggested by a relatively higher proportion of religious leaders as bari heads, particularly, in the low use-prevalence areas (as was shown in the preceding chapter). This is further supported by a relatively higher proportion of women in these two areas who reported that they did not listen to the radio (Table 8.11). It may be mentioned in this context that the non-availability of radio in a bari does not always indicate the economic inability of the bari to own one. Rather, as mentioned earlier, it often indicates the conservative attitude of the bari head. More interestingly, as reported by our FWs, for some baris a radio is a status symbol. In these baris male members may listen to news and, sometimes, religious songs. But they do not like their women to listen to it, particularly to secular songs. After all, as the local saying goes, it is the duty of the men to keep their women away from gith (song) and gibath (malicious gossip), the two most common characteristics of women which will increase their proportion in duzak (hell) in the after-world.

8.6 SUMMARY AND DISCUSSION

In this chapter we conducted a series of multivariate analysis to identify which of the socio-economic and demographic variables account for a variation in contraceptive use. Among the five demographic variables included in the multivariate analysis (age of wife, number of living children, number of living sons, breastfeeding of the youngest child and experience of child mortality), only the number of

surviving sons appeared to have a consistent and statistically significant effect on contraceptive use at the individual level. In general, the use of contraception increases with an increase in the number of living sons, with only a slight decline when the number exceeds three. The number of living children appeared to affect contraceptive use significantly only in conjunction with breastfeeding status of the youngest child. Among women with larger families the use of contraception is highest when their youngest child has been completely weaned, and particularly when the child has passed the crucial age of high mortality. Among women with smaller families contraceptive use is highest when their youngest child is still breastfeeding, indicating an apprehension among these women of 'possibility of competition between this child and a future one' as well as an impact of the FVW's motivation regarding sufficient rest before having another child.

Among the socio-economic variables included in the multivariate analysis (education of husband and wife, occupation of husband, husband's presence at home, wife's radio listening and her experience of urban living), only wife's radio listening appeared to have a consistent and statistically significant effect on contraceptive use, once the effects of other socio-economic and demographic variables were controlled for. The women who reported regularly listening to the radio had a use rate which was considerably higher than that for the women who reported listening occasionally and almost double that for the women who reported that they did not listen to the radio at all.

Husband's occupation had a theoretically consistent effect on contraceptive use, but it was not statistically significant. The effect of education on contraceptive use appeared to be substituted by wife's urban living experience, her radio listening and influence of husband's urban occupation. Husband's irregular presence at home had a significantly negative effect on contraceptive use among middle aged women, while it has a significantly positive effect among younger women, mainly due to an over-representation in this group of better educated husbands who were service employees.

An examination of the contrast between the highest and lowest service delivery units of the same village, by age of wife, number of living sons, wife's radio listening and education of husband and wife suggested a theoretically consistent difference between the units. However, the difference did not appear to be large enough to explain the observed areal variation in contraceptive practice to a significant extent. Nevertheless, a multivariate analysis of the effects of these variables on contraceptive use by areas (high, average and low use-prevalence areas) suggested their differential contribution across the villages. Number of living sons, wife's radio listening and education of husband and wife demonstrated statistically significant effects on contraceptive use in the high use-prevalence area, while in the average use-prevalence area none of the variables, and in the low use-prevalence area only the number of living sons exhibited a statistically significant effect. Thus, although there does not appear to exist much difference between the high, average, and low use-prevalence areas in the number of living sons, wife's radio listening and education of husband and wife, their differential effects on contraceptive use suggest a definite contribution to the

areal variation in contraceptive practice.

Lastly, although some variables included in the multivariate analysis failed to show any statistically significant effects on contraceptive use the pattern of their association with contraception clearly bear important programme implication. A negative effect of child mortality on contraceptive use supports the justification of the integration of family planning with selected child health services in the Matlab project. A comparatively higher use probability among the young lactating mothers suggests the success of the project's postnatal educational efforts.

CHAPTER 9

CONCLUSIONS

9.1 Summary

The debate over the best route to fertility decline in less developed countries - social and economic development versus aggressive family planning programmes - has been termed the major controversy in demography (Berelson, 1975). In this study an attempt has been made to evaluate this debate in the light of the experience of a family planning experimental project in a rural area of Bangladesh. The project, known as the Matlab MCH-FP project, was initiated to test the effect of family planning on fertility in the absence of significant socio-economic development. A dramatic increase in contraceptive use-prevalence following the initiation of the project confirmed that there existed an unmet demand for contraceptive services in the area. However, although the average use rate soon appeared to reach a plateau, a wide variation in use-prevalence among the villages has been noted. This suggests that there are other factors, in addition to mere provision of services, which account for the observed differential acceptance of contraception in various parts of the project area. In the present study we anticipated that these other factors could be found in (1) individual disposition toward contraception, defined by the wife's or her husband's personal, social, economic and demographic characteristics; (2) the characteristics of the immediate social group responsible for controlling individual behaviour, including fertility; (3) the

socio-economic infrastructure of the community providing a stimulant to and constraint on individual contraceptive decisions; and (4) the credibility of the community-level worker responsible for persuading individuals to accept contraception and deliver the range of services under the programme.

We conceptualized these factors at four broad, and necessarily interrelated, units of observation (namely, eligible women, bari, village, and female village worker or FVW) and developed a multi-level analytical framework to examine their effects on individual contraceptive behaviour and their contribution to the observed areal variation in use-prevalence rates. A series of surveys was conducted to collect information on these factors and this was complemented by information collected through field observation and supplementary data sources. The summaries at the end of respective chapters highlighted important findings derived from this multi-level analysis and we see no point in repeating them here in detail. Rather our objective in this final chapter is to draw upon the major findings of the study and discuss their policy and research implications.

In general, the empirical findings of this study support our theoretical proposition that the contraceptive behaviour of an individual is affected not only by his or her personal characteristics but also by the characteristics of his or her immediate social group, including those of the community in which most social and economic activities of the family take place. Among the individual level variables considered in this study number of living sons, wife's listening to the radio and education of husband and wife emerged as the most important determinants of individual contraceptive behaviour.

The first variable defines, apart from the individual's demographic status, also his or her implied social, economic and cultural attainments. The second and third variables may be considered as indicating individual's modernity.

An examination of the effects of these variables by areas, however, tended to suggest that a fuller realization of the importance of individuals' modernity in the decision to accept contraception might require a relatively modern environment. Thus we observed that in the low use-prevalence areas dominated by illiterate and conservative bari heads, wife's listening to the radio, and education of husband and wife did not exercise any significant effect on the individual's contraceptive use. In such an environment, traditional group values and conservatism appeared to override the individual's modernity; the opinion of the bari head became a crucial factor in the individual couple's decision to use contraception. Of course, some couples did act counter to the opinion of their bari heads, but this usually was the case when personal, economic and demographic pressures became so great that there was readiness on the part of the former to risk the disapproval of the latter. The comparatively higher use rate among the couples under 'Malthusian pressure' noted in Chapter 7 or the relatively higher use rate among women with several sons shown in Chapter 8 clearly support this observation.

The above observations lend support to the hypothesis that family planning and development are interrelated. This is further supported by a positive relationship between the village literacy rate (expressed as the percentage of literate household heads) and the village's contraceptive use-prevalence rate as observed in this

study. But our findings also support the notion that the family planning programme itself affect the level of contraceptive acceptance in a community. In fact, our analysis in Chapters 5 and 6 showed that the observed inter-village variation in contraceptive use-prevalence in the Matlab MCH-FP project resulted largely from differential effectiveness of the female village workers. However, the factors which appeared to determine the worker's effectiveness, namely, the numerical strength of samaj or kin group, observance of the custom of 'being shy and having shame' in interaction with client population, and respect for local customs and values, also, to some extent, reflect 'under-development' or conservatism of the population.

We conclude then that of the two schools of thought - that which argues that basic social and economic conditions are the primary determinants of fertility reduction, and that which argues that the supply of contraceptive services is the key - neither is fully vindicated by our findings on the determinants of areal variation in contraceptive practice in the Matlab MCH-FP project. Rather the results seem to show that the actual determinants are exceedingly complex. Both the inputs into the family planning programme and the general environment into which they are introduced determine the response, but both are greatly affected by the manner in which the interventions are organized and implemented.

9.2 Policy Implications

As we stated previously, this study is limited to a very small geographical area of Bangladesh. Because of this, generalizations on the findings shall be made very cautiously and wider inferences are

possible only by comparison with findings of other studies in this area.

Table 9.1 presents a list of variables showing important relationship with contraceptive use in this study. It is clear from the table that the problems of low and differential contraceptive use in the Matlab project, as well as in the national family planning programme, suggested both by our analysis and by findings from other studies, are manifold. Some of them relate to programme deficiencies, particularly to differential effectiveness of community-level workers, others are inherent in the very nature of the client populations and the social, economic and cultural context within which they live. The first category of problems falls within the feasible scope of programme modifications. We have discussed them in detail in Chapters 5 and 6 and see no point in repeating them here. In contrast, the solution for the second category of problems appears to lie largely in a well-designed programme of social change. It is here that we encounter a fundamental dilemma: the family planning programme usually seeks short-term solutions, but the problem of social change is a long-term phenomenon. And, yet, the interrelatedness between the two categories of problems suggests that an appreciable improvement in the present low use-prevalence of contraceptive practice in Bangladesh should come through a well-integrated effort by both the family planning programme and other social and economic development programmes of the country.

Of special significance in the situation of rural Bangladesh are cultural values which, as suggested by the present study, may override the impact of both individual traits and community characteristics.)

TABLE 9.1

List of Variables Showing the Most Consistent Relationship
With Contraceptive Use, Matlab MCH-FP Project

Variables	Direction of Relationship
<u>Individual Level</u>	
No. of living sons	Direct up to 3 sons, then tends to be inverse
Wife's radio listening	Direct
Education of husband and wife	Direct, but tends to be inverse when one partner is literate or both have some primary education
<u>Bari</u>	
Education of <u>bari</u> head	Direct
Perceived favourable attitude of <u>bari</u> head	Direct
Presence of some satisfied user(s)	Direct
<u>Village</u>	
Literacy rate	Direct
<u>FVW</u>	
Seniority in terms of age and life experience	Direct
Strength of own <u>samaj</u> in the village of work	Direct
Size of target population	Inverse

Source: FVW Survey, 1982

One such value is the preference for sons. In fact, the empirical evidence cited from earlier studies in Chapter 8 and the findings of this study suggest that in the situation of rural Bangladesh it is not merely 'son-preference' of the type described in the literature on value of children. What is involved is more than a preference; it is a 'necessity'. Given the crucial role of the number of living sons in the decision to adopt family planning observed in this study, it seems plausible to argue that unless the son-necessity norm is modified, all other efforts to reduce fertility may be attenuated or even blocked. Tied in with the educational efforts to modify the son-necessity norm may be the modification of property inheritance rights that discriminate against women and cultural definitions of son's role in supporting parents. Effective social legislation is also needed - for example, a family welfare law that promotes a more egalitarian socio-economic role and image for women. These measures of incentives and disincentives for son-necessity have been, of course, under almost constant review by one or another committee in the country for the past 15 or 20 years. But none of the proposals has yet been tried because the political, economic or administrative feasibility of any such proposals seems to be problematic.

The ultimate solution of the problem of parental dependency on children, we believe, lies in the full economic self-reliance of the parents. In the mean time, one measure which seems to be within the feasible scope of policy makers and which, as evident from a review of relevant literature (see, for example, Cochrane, 1979), would have an important effect in decreasing the productive utility of children, particularly sons, is to introduce compulsory schooling up to a certain age, say 14 years, for boys as well as for girls. If an

incentive programme is to be tried in rural areas, educational assistance for children may be a suitable reward for families that limit their family size. This possibility is suggested by the high educational aspirations of our respondents for their children. Table 9.2 shows that as many as 86 per cent of the respondents in the case of boys and about 46 per cent in the case of girls desired for their children a level of education ranging from high school to university graduation. Undoubtedly, this is a very ambitious level of education in comparison to one achieved by the respondents themselves or by their husbands, and considering their economic potential to bear the expenses involved in attaining such a high level of education. The latter point is further supported by a frank note of pessimism expressed by a very high proportion of respondents about the prospect of attaining such a high level of education by their children due to their economic inability (Table 9.2). However, the fact remains that in societies such as Bangladesh, where change is relatively slow and social mobility without education is difficult, self-aspirations tend to be projected and realized through educating children, especially sons. In the absence of government assistance, the only way in which a poor family can afford to educate a son, as suggested by our observation in the field, is to have several so that one can be supported by others while he is going to school.

An examination of other individual and aggregate level constraints on contraceptive use also points to the importance of improvement of education. In this context it should be mentioned here that the present educational system of Bangladesh for the most part has an urban bias. It is geared to preparing people for civil service positions in towns and cities. This is unfortunate not only for the

TABLE 9.2

Desired Level of Education for Children and Parents'
Perceived Ability to Bear the Expense of Education
Matlab MCH-FP Project, 1982

	Son	Daughter
	per 100 respondents	per 100 respondents
<u>Desired Level of Education</u>		
Primary or less	4.6	39.7
High school	34.0	40.0
College/University	44.2	5.2
Medical/Engineering	7.7	1.3
Religious degree	4.0	0.2
No need, cannot afford	2.9	7.6
Has not given thought	2.6	6.0
Total	100.0 (N=940)	100.0 (N=940)
<u>Whether Family Can Bear the Expense</u>		
Family can bear the expense	49.1	50.8
Family cannot bear the expenses but		
- relative may help	4.0	1.5
- Government should help	43.3	47.3
- God may help	3.6	0.4
Total	100.0 (N*=888)	100.0 (N*=812)

Note: * Excluding those who reported that they did not consider it necessary to give education to their children or those who reported that they had not given thought about education of their children.

Source: Eligible Women Survey, 1982

reason that it undermines opportunities in agricultural extension training and rural community development but also because it adds to the continuing problem of unemployment and underemployment, since there are not enough jobs available to absorb all the graduates of the school system. During our field work we observed many young, educated people who, after failing to find a white collar job in the town, returned to the village to idle about near their families. It is not surprising, then, to find that nowadays there is a feeling among some villagers that after receiving education their children will become a liability, rather than an asset.

The change in fertility behaviour through improvement of education is a long-term process. One measure which may lead to some appreciable improvement in the present low use-prevalence of contraceptive practice in the absence of significant socio-economic development is to create peer pressure at the community level, as suggested by the experience of China and Bali in Indonesia (Freedman and Berelson, 1976). Unfortunately, there exists in Bangladesh no such local social structure as a 'Brigade' in China or a 'Banjar' in Bali, capable of bringing effective pressure on individuals. The village as a social entity lacks cohesiveness and direct control over individual behaviour; the structure of samaj and patron group is fluid in character. The only well-defined and universal social group is the bari. But the logistic problems of dealing with about three million baris are overwhelming. However, given the importance of bari in restricting or facilitating individual contraceptive use observed in this study, we feel that any attempt to create peer pressure for contraception should begin there. The present family planning extension strategy should expand its scope to educate and motivate

bari heads. These men are responsible for upholding traditional morals; therefore many of them are opposed to family planning; those having religious education are more conservative, and so are those who are illiterate. The changes causing the pressure of population growth have come about so quickly that local values and customs have not had time to respond. But the government will have to take the lead in popularizing the concept that, in the present changed situation, fertility control is also a moral issue. The bari heads are men of experience; they are familiar with the effects of land fragmentation due to population increase; and our observation in the field suggests that there is a latent understanding among many bari heads about the importance of population control. Their opposition to the use of contraception by their own bari members is partly a reflection of their ignorance about modern contraceptives, and partly due to the lack of knowledge about the current position of religious leaders and theologians supporting family planning. Finally, and probably most importantly, it is due to disregard of their authority by family planning workers by dealing directly with the eligible couples. These problems are within the scope of programme modifications and we feel that their solution will facilitate bringing sanctions of recognized authority and peer pressure to bear on individuals.

9.3 Implications for Further Research

Most of the findings of this study confirm patterns observed elsewhere. However, a few findings appear to contradict the conventional wisdom and need further research. One such finding is the comparatively higher use rate among those who are very poor, namely, agricultural labourers. This is unexpected from the view

point of modernization theory and the often made assertion that the poor in less developed countries cannot be motivated for contraception because, for them, children are a net economic asset even when they are young, apart from the security they provide in old age (Cain 1977b; Nag et al., 1978). Another finding is the low use rate among those poor villagers who have found some new job opportunities in nearby towns and cities, as mill and factory workers, rickshaw-pullers, and urban day-labourers. This negates the hypothesis that more frequent contacts of villagers with town life will lead to higher use-prevalence of contraceptive practice. But probably the most important observation of this study is the inconsistent, and in some instances unexpected, pattern of relationship between the presence of selected development programmes (such as women's co-operatives, farmers' co-operatives and adult education programmes) in a village and the contraceptive use-prevalence rate.

Some of the probable reasons for each of these unexpected and inconsistent findings have been discussed in the respective chapters. What we would like to add here is that cross-sectional studies alone probably fail to measure the impact of such socio-economic changes and induced rural development programmes on fertility limitation behaviour. Well-designed longitudinal studies are needed which can document the effect of socio-economic change through more definitive information about the role of community characteristics in explaining fertility and fertility limitation practices. In this context we would emphasize the need to give more in-depth attention to social and psychological factors. In studying social structural effects on human behaviour, it would be more important to know, for example, how each

individual person perceives his or her environment. In other words, the definition of the situation by the actors themselves may provide the best approach to assessing environmental effects.

The findings of this study fully support our hypothesis that the use of contraception by an individual is often a matter of following the example of other members of her or his bari. We have also identified certain characteristics of a bari associated with acceptance or non-acceptance of contraception by its members. Further research is needed which can identify the steps involved in taking decisions by an individual to accept or not to accept contraception and the contribution of other members of the bari, including its head, to such a decision. A study of this type should not only include eligible couples as the respondents but should also include other senior members and heads of their baris.

Lastly, the limited sample size of the present study points to the need for a wider study based on a representative sample, so that the findings may be generalized to all Bangladesh, and possibly even further to other less developed countries with similar socio-economic and cultural environment. Moreover, as has been indicated earlier, a large representative sample would undoubtedly provide greater heterogeneity in the community characteristics and provide a much better test of the explanatory and predictive power of community variables.

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APPENDIX 1

Determinants of Areal Variation in
Contraceptive Practice in BangladeshVILLAGE QUESTIONNAIRE

IDENTIFICATION

FOR CODERS ONLY

Study No.	----	----	----
	1	2	3
Card No.	----		
	4		
Village----- Code No.	----	----	----
	5	6	7 8

PART - 1

Interviewer (Name):----- Date:-----

Respondent (Name):----- Designation:-----

1. ACCESS TO TOWN/CITY:

MATLABGANJ CHANDPUR NARAYANGANJ

Distance from the village (in miles)

Mansoon:

Means of transport

Time taken for journey (in hours)

Dry Season:

Means of transport

Time taken for journey (in hours)

2. TRANSPORT:(nearest accessible)	In/adjacent to the village (Please tick)	Outside the village (distance in hours)
-----------------------------------	--	--

Paved/metalled road

Bus stop

Launch ghat

District Council Road

3. SOCIAL AND ECONOMIC SERVICE

a) Public Institutions:

Primary School

Jr. High School

High School

College

Madrassa

Mosque

Temple

R.H.C

Govt. Dispensary

Gove. MCH/FP Clinic

ICDDR,B Subcentre

U.C. Community Centre

b) Services:

Post Office

Bank

Market

c) Service Personnel (in village):

Qualified doctor

----- (Number)

Kabiraj	"	"
Other doctor	"	"
Govt. Health and FP workers	"	"
Veterinarian	"	"
Agri. Extension worker	"	"
Midwife	"	"
Imam	"	"
Homoeopath	"	"

4. SOCIAL GROUPS AND LEADERS

a) Number of Samaj in the village -----

b) Number of leaders:

U.C. Chairman	-----	Number
U.C. Member		"
Village Matabbar		"
National Political Leader		"

5. OTHER COMMUNITY ACTIVITIES

Existance of:

Youth club	----	yes	---	no
Women's Cooperative	"		"	
Fishermen's Cooperative	"		"	
Farmer's Cooperative	"		"	
Adult Education Programme	"		"	

PART - II

1. Religious composition (1978 census update):

	No. of baris	No. of households	No. of persons
Hindu			
Muslim			
Other			
Total			

2. Occupation of HH heads (as in 1974 census)

3. Education of HH heads (as in 1974 census)

APPENDIX 2

Determinants of Areal Variation in
Contraceptive Practice in Bangladesh

F.V.W. QUESTIONNAIRE

IDENTIFICATION	FOR CODERS ONLY			
	Study No.	----	----	----
		1	2	3
	Card No.	----		
		4		
Village -----	code No.	----	----	----
		5	6	7
F.V.W. -----		----	----	8
		9	10	

We have been conducting a survey among all the FVWs of the Matlab Community Health Services Project. The objective of the survey is to know more about you and your work. It has nothing to do with your job. This research is strictly for academic purposes and, therefore, all information you give us will be kept confidential.

As you can see, there are many questions. I have found that we can complete this best if you will let me read them in order, and you write your answers one by one. Please feel free to ask me for any further clarification after I finish explaining the question. Please remember that the result of this survey depends totally on your cooperation and frank responses.

Let me start by reading questions relating to you and your children.

1. How old are you now? ----- years
2. Which class have you Passed? ----- class passed.
3. What is your religion? ----- Islam ----- Hindu
4. How many children do you have?
----- Sons ----- Daughters ----- Total

5. How old is your yongest child?
----- years ----- months
6. Do you still give him/her breast milk?
----- yes ----- no

7. Who look after your child when you go out for work?

(Now I am going to read to you some questions relating to your husband and other family members)

8. Did your husband attend school?
----- no
----- yes; what is the highest class he passed? ----- class
9. What does your husband usually do for a living?

10. Does your family own any cultivable land?
----- no
----- yes; how many bighas? -----

11. Are your parents-in-law living with you?
Mother-in-law: ----- yes ----- no ----- dead
Father-in-law: ----- yes ----- no ----- dead

12. If 'no', since when has he/she been not living with you? I mean,
was it before you started the job of FWV or after this?
----- before ----- after

13. Did any married brother of your husband live with your before

you started the job of FWV?

----- yes ----- no

14. Has any married brother of your husband get separated from your household since you started the job of FWV?

----- yes ----- no

15. In your household, are you alone with your husband and children?

----- yes

----- no: who are the relatives living with you?

----- father-in-law

----- mother-in-law

----- married brothers-in-law (number)

----- un-married brothers-in-law/

sisters-in-law (number)

----- daughters-in-law (number)

----- other (specify) -----

----- total

16. Does your family own the following items?

Radio ----- yes ---- no

Watch/clock ----- yes ---- no

Motor-cycle ----- yes ---- no

Bicycle ----- yes ---- no

Sewing machine ----- yes ---- no

17. Do you or your husband regularly buy or subscribe to a magazine or newspaper?

----- none

----- magazine, (name) -----

----- newspaper (name) -----

18. Is there a tube-well in your Bari?

----- yes ----- no

19. In which village do you work?

(name) -----

20. Does your family live in this village?

----- no

----- yes; For how long have you been living
in this village?

----- since childhood

----- since marriage

----- since starting the job of FWW

----- other (specify the length of residence)

----- years/months.

21. How many Samaj are there in this village?

(number) -----

22. Which Samaj does your family belong to?

(name) -----

23. How many members are there in your Samaj?

(number) -----

24. Does any member of your Bari or Samaj hold the following
positions?

	FROM BARI	FROM SAMAJ	RELATION TO THE RESPT.
U.C. Chariman	-----	-----	-----
U.C. Member	-----	-----	-----
Village Matabber	-----	-----	-----

25. Do you have an women's cooperative/club in your village?

----- no

----- yes; are you/is any woman of your bari a
members of the cooperative/club?

- no
- herself
- other woman.

(So far we have discussed about your family and Samaj. Now, I am going to read to you some questions relating to your work)

26. When did you start the job of FVW?

(date) ----- month ----- year

27. Before you started this job, had you ever worked in a paying position?

----- no

----- yes; what kind of job was it?

(description of work) -----

28. Do you wish to continue your work as FVW? I mean, do you think that you may resign from this job or take another job in the next 5 years?

----- no

----- yes; why do you think so? -----

29. Do you think that the FVW job is good work for women?

----- yes; why do you think so? -----

----- no; why do you think so? -----

(Now, please go through your register book and answer the following questions)

30. (a) How many couples in your village are currently using contraceptives? (number) -----

(b) How many of these current users are:

relatives from your parent's side -----

relatives from your in-law's side -----

non-relatives Samaj members -----

non-relatives, non-Samaj villagers-----

31. Do you think that this is the best number of users you can achieve? I mean, could you increase this number of users?

----- no; why do you think so? -----

----- yes; what, do you think, should be done by yourself or by your supervisors to increase the number of users?

by yourself: -----

by LFPV -----

by Sr. H.A -----

32. Do you think that you need additional training to improve your performance further?

----- no

----- yes; In which aspects? -----

(Now, let me read to you some questions relating to the support you might have received in your work from your family and Samaj members)

33. Do you discuss your work with your husband?

----- no

----- often

----- occasionally

34. Do your husband assist you in your work?

----- no

----- yes; how? -----

35. (a) Do any of the following persons disapprove your work as FWV?

mother-in-law ----- yes ----- no ----- na (deceased)

father-in-law " " "

Bari head " " "

head of own Samaj " " "

(b) Does any of these persons encourage you in your work?

mother-in-law ----- yes ----- no ----- na

father-in-law " " "

Bari head " " "

head of own Samaj " " "

36. To the best of your knowledge, does any head of other Samaj in your village express views about your work?

VIEWS	SAMAJ 1	SAMAJ 2	SAMAJ 3	SAMAJ 4
Disapproving	---	---	-----	-----
Critical				
Approving				
Uncertain				

37. We know that every contraceptive method has its own merit and demerit. Based on your experience and observation, list in order of merit the names of two methods available for -

(a) Couples who desire spacing:

	NAME OF METHOD	REASONS FOR YOUR CHOICE
1.	-----	-----
2.	-----	-----

(b). Couples who desire no more children:

1.	-----
2.	-----

38. Are you now using any contraceptive?

----- yes (name of the method) -----

----- no; did you use any method in past?

----- no

----- yes; (name of the method) -----

39. List in order of merit the name of two temporary and two permanent methods of contraception which are best liked by women of your village

	TEMPORARY METHOD	PERMANENT METHOD
1.	-----	-----
2.	-----	-----

(Now, I am going to cite two problems which you as a community health worker might have faced. Please describe in as much detail as possible the necessary action you might have taken or will take in the situation)

40. A young mother expressed to you her desire to accept contraception. She told you that her husband did not like the idea and that she was not sure what would be the reaction of her mother-in-law. What steps would you take or suggest to the young mother in this situation?

(a) steps to be taken by you: -----

(b) steps to be taken by the woman: -----

41. Due to a recent quarrel between your Bari and another Bari in your village, the members of the two Baris have stopped all social contacts and visits. Under the circumstances, how will you carry out your routine work in that Bari?

Name of Interviewer: ----- Date: -----

APPENDIX 3

Determinants of Areal Variation in
Contraceptive Practice in Bangladesh

INDIVIDUAL QUESTIONNAIRE

IDENTIFICATION		FOR CODERS ONLY
	Study No.	-----
	Questionnaire type	-----
Village	Census No.	-----
Bari	Id. No.	-----
Family	Id. No.	-----
Respondent	Id. No.	-----
Religion	----- Hindu ----- Muslim	-----

INTERVIEW RESULTS

Interview Calls	1	2	3
Date			
Time started			
Time ended			
Duration			
Result code*			
Next visit			
Date			
Time			

*1 Completed, 2 Absent, 3 Refused,
4 Other, (specify) -----

INTRODUCTION

I am from Matlab Cholera Hospital. The doctors in the hospital are interested to know more about couples of Matlab thana and their children. They need this information to give better advice when couples ask for it. You may rest assured that all information you give me will be kept confidential and used solely for research purposes.

Signature/thumb impression
of the respondent

Name of Interviewer: -----

A. Marriage and Pregnancy

Let me start by asking a few questions about your marriage and family.

1. How old are you now?

----- years (check the census record)

2. How old is your husband now?

----- years (check the census record)

3. For how long have you been married?

----- months/years

4. Was your husband a relative of yours before your marriage?

----- yes ----- no

5. Is this your first marriage?

----- yes ----- no

If no: How many times have you been
married before this marriage?

----- number

6. What was your age at the time of your first marriage?

----- years

7. Did you go to live with your (first) husband immediately
following your marriage?

----- yes ----- no

If no:

After how many months of marriage did you go to
live with your husband?

----- months

8. Does your husband stay at home all the month?

----- yes ----- no

If no:

a) Where does he stay?

b) How often does he come home?

9. We should like to get a complete record of all the babies you
have given birth to in your life. Please count all who were
born alive at any time including any in previous marriage(s).

Have you ever given birth to any baby?

----- yes (skip to Q.11)

----- no

10. Have you ever given birth to a child who later died, even if the child lived only for a short time?

----- yes

----- no (skip to Q.16)

11. How many living children have you given birth to in your life (including any in previous marriages)?

----- number

12. How many children do you now have?

----- son

----- daughter

----- total (skip to Q.16 if the respondent has
no child alive)

13. How old is your youngest child?

----- months/years

14. (If the age of the youngest child is less than 5 years then ask this question)

Are you giving breast milk to him/her?

----- yes (skip to Q.16)

----- no

15. (If the age of the youngest child is 5 years or more, or if 'no' response to Q.14 then ask this question)

How many months did you give breast milk to him/her?

----- years ----- months

16. Have you ever had a pregnancy that resulted in a baby who was born dead, a miscarriage or a 'kacha' (abortion)?

----- yes

----- no (skip to Q.18)

17. How many such pregnancies have you had?

----- times

18. Are you pregnant now?

----- yes (skip to Q.21)

----- no

19. For how long have you not been pregnant?

----- year ----- month

20. Why is that you have not been pregnant for

----- years/months?

(as mentioned in Q.19)

----- using contraceptives

----- other reason,

(Specify) -----

21. Is this your husband's first marriage?

----- yes (skip to Q.26)

----- no

22. How many times has he been married besides this one?

----- times

23. Is your husband's other wife (wives) alive?

----- no (skip to Q.25)

----- yes; ----- number

24. Does his other wife (wives) live in this household?

----- no

----- yes; ----- number

25. How many children born to the other wife (wives) of
your husband are still alive?

----- son

----- daughter

----- total

B. Knowledge and Use of Contraceptives

26. Now I want to talk about a somewhat different topic. As you
may know, many couples do something to keep from having a
baby. Have you heard of any medicine or ways to do this?

----- yes

----- no

27. From whom did you hear these medicine or methods?

----- FVW

----- Friends

----- Relatives

----- Husband

----- Govt. FP Worker

----- Radio

----- Other, (specify) -----

28. Could you please tell me the name of these medicine or methods?

----- Don't know name (skip to Q.36)

----- yes, (INTERVIEWER: Enter the method table and give tick mark (/) in column 1 corresponding to each method mentioned by the respondent. For each method so ticked, ask the respondent, --- 'have you ever used this method?')

Contraceptive Method Table

Column 1 (/)	Name of Methods	Ever Use (/)	
		yes	no
	Condoms		
	Oral Pills		
	DMPA injection		
	IUD		
	Tube ligation		
	Vasectomy		
	MR (menstrual regulation)		
	Other modern methods (specify)----- -----		
	Other traditional methods (specify) -----		

(INTERVIEWER: Q. 29 - Q. 35 relate to the knowledge of the respondent about some selected modern contraceptive methods. Ask these questions only in case the respondent mentioned the name of these methods in Q.28. The questions should be followed by a statement - 'just to make sure whether this is the same method the Matlab Cholera Hospital has been providing to married couples, would you please tell me').

29. CONDOM

- a) What is the condom made of? -----
- b) Who should use the condom - male or female? -----
- c) When is the condom used? -----

30. ORAL PILLS

- a) Who should take the pills - male or female? -----
- b) How many pills are there in one page? -----
- c) On what day of the month should one start taking the pills? -----

31. DMPA INJECTION

- a) Who should take the DMPA - male or female? -----
- b) How is it taken? -----
- c) How often should it be taken? -----

32. IUD

- a) Who should use the IUD - male or female? -----
- b) How is the IUD used? -----
- c) How long one can use it? -----

33. LIGATION

- a) Who receives the ligation - male of female -----
- b) Can one become pregnant after having ligation?
----- yes ----- no ----- don't know
- c) Where can you get it? -----

34. VASECTOMY

- a) Who should accept the vasectomy - male or female? ---
- b) Can one become pregnant after receiving vasectomy?
----- yes ----- no ----- don't know
- c) Where can you get it? -----

35. MR

- a) When should one accept MR? -----
- b) where can one get it? -----

36. Did someone ever suggest that you use contraceptives?
 ----- yes
 ----- no (skip to Q.38)

37. Who was it?
 ----- FVW
 ----- Govt. FP Worker
 ----- Other, (relation to the respt. -----

38. Has any of the following persons ever advised you to use contraceptives?
 a) mother-in-law ----- yes ----- no
 b) husband " "

c) other family member:
 ----- no
 ----- yes, (relation) -----

d) other Bari member:
 ----- no
 ----- yes, (relation) -----

39. (INTERVIEWER: Check the method table. If the respondent reported having used no method then ask this question)

Have you ever used any contraceptive method?
 ----- yes (name of method) -----
 ----- no Why? -----
 (skip to Q.43)

40. Are you using any contraceptive method?
 ----- yes, (name of the method) -----
 ----- no (reaons) -----

41. Do you intend to continue its use in the future?
 ----- yes
 ----- no, (reasons) -----

42. Whose advice inspired you most for acceptance of contraceptives?

43. (INTERVIEWER: Ask this question to all except the current users.)

Do you intend to use a contraceptive method in the future?
 ----- yes
 ----- no (reasons) -----

C. Family size Preference

44. (INTERVIEWER: Check Q.12 carefully and tick the appropriate response)
 ----- respondent has no living children
 ----- respondent has one or more living children
 (skip to Q. 48)

45. Do you want to have any children soon?

- yes
- no

46. How many children do you want to have?

- number
- has not given thought
[go to (a)]
- husband knows
[go to (b)]
- depend on God's will/fate
[go to (c)]

(a) As you feel now, if you could have the number of children you want, how many would that be?

(INTERVIEWER: Write the number in the appropriate column in 46. If the respt. still refuses to specify the number, skip to Q. 51)

(b) You are vey correct. However, every married woman cherishes a desire for a certain number of children. If your husband agrees with you, how many children would you like to have?

.b 1;

(INTERVIEWER: Write the number in the aproprate column in 46. If the respt. refuses to specify the number then skip to Q. 51)

(c) Everythings comes from God. We pray to him for things we need or desire. If you pray to God for children, how many children would you pray for?

(INTERVIEWER: Write the number in appropriate column in 46. If the respt. refuses to specify the number then skip to Q. 51)

47. How many of these children would you like to be boys

and how many girls?

----- boys ----- girsl ----- total

(skip to Q. 51)

48. Do you want any more children?

----- yes ----- no (skip to Q. 51)

49. How many more do you want to have?

----- number

----- has not given thought (follow the
instruction given in Q. 46a)

----- husband knows (follow 46b)

----- depend on God/fate (follow 46c)

50. How many of them would you like to be boys and
how many girls?

----- boys ----- girls ----- total

51. have you and your husband ever talked about the number of
children you would like to have?

----- yes

----- no; why? -----

52. Do you think your husband wants more children than you,
or fewer?

----- more

----- same

----- fewer

----- don't know

53. In general, can you tell me what your husband's views are
about family planning?

D. Extended Family Relations and Decision-Making

54. Now, let me ask you a few questions about your parents-in-law.

Are your husband's parents alive?

----- no (skip to Q. 56)

----- mother alive

----- father alive

----- both alive

55. Are any living with you in this household?

Father ----- yes ----- no

Mother " "

Both " "

56. Who in your family makes decisions in finalising the budget for Eid/Puja?

----- self (skip to Q. 58)

----- other, (relation to the respt. -----)

57. Does he/she consult you in making the decision?

----- yes ----- no

58. Who in your family makes decisions about akika (naming) or annoprashon (first rice) to children in your family)?

----- self (skip to Q. 60)

----- other, (relation to the respt.) -----

59. Does he/she consult you in making the decision?

----- yes ----- no

60. Who in your family makes decisions in taking a sick

child in your family to a doctor or hospital?

----- self (skip to Q. 62)

----- other, (relations to the respt.) -----

61. Does he/she consult you in making the decision?

----- yes ----- no

62. Who in your family makes decisions for purchasing new
land/ business establishment?

----- self (skip to Q. 64)

----- other, (relations to the respt.) -----

63. Does he/she consult you in making the decision?

----- yes ----- no

64. (INTERVIEWER: Ask this question only to the ever user
of contraceptives.)

Did you have to have permission from the following
persons for your acceptance of contraceptives?

a) father-in-law ----- yes ----- no

b) mother-in law " "

c) husband " "

d) Bari head " "

65. (INTERVIEWER: Ask this question only to a never user)

In case of your accepting contraception in the future do
you think that it will be necessary for you to get
permission from the following persons?

a) father-in-law ----- yes ----- no

- b) mother-in law " "
- c) husband " "
- d) Bari head " "

E. Perceived Attitudes of Influential Referents

66. Has anybody from your Bari accepted contraception?

----- no (skip to Q. 69)

----- yes; how many? -----

67. Have you ever talked with her/them about contraceptives?

----- yes

----- no; why? -----

(skip to Q. 69)

68. What is her/ their opinion about use of contraceptives?

----- favour ----- against ----- don't know

69. What is the attitude of the following persons toward use of contraceptives by the women of your Bari or neighbours?

- a) father-in-law --- favour --- against --- dont'know
- b) mother-in law " " "
- c) husband " " "
- d) Bari head " " "

70. Is the FVW of your village a relative of yours?

----- no

----- yes (relationship) -----

F. Expectation from Children

71. Now, coming back to the question of your children, if your sons are able to pass examinations, what level of schooling do you expect them to receive?

----- class

----- no need; why? -----

(skip to Q. 74)

72. Nowadays education for children is very expensive, do you think you could afford the educational expense for your sons?

----- yes (skip to Q. 74)

----- no

73. How can you fulfill your desire then? Do you think that some relatives could help you, or do you want the government should help you?

----- relative

----- Government

----- other (specify) -----

74. How about your daughters? What level of schooling do you expect them to receive?

----- class

----- no need; why? -----

(skip to q. 77)

75. Do you think that you can afford educational expenses for your daughters?

----- yes (skip to Q. 77)

----- no

76. Do you think that some relatives will help you, or do you want that the Government should help you?

----- relative

----- Government

----- other, (specify) -----

77. Do you expect any assistance from your sons in the future?

----- yes

----- no, why? -----

(skip to Q. 79)

78. What kind of assistance do you expect from your sons?

For example, food, shelter, financial help, others?

----- food/shelter

----- financial help

----- other, specify -----

79. Do you expect any assistance from your daughters in the future?

----- yes; what kind of assistance? -----

----- no; why? -----

80. Do you expect to live with your children and grandchildren in your old age?

yes: why? -----

no: why? -----

G. Awareness about Outside World

81. Did you ever attend school/maktab?

----- yes

----- no (skip to Q.83)

82. Which class have you passed?

----- class passed

83. Did your husband attend school/maktab?

----- yes

----- no (skip to Q.85)

84. What is the highest class he passed?

----- class passed

85. Aside from doing your household work, are you doing any other work?

----- no

----- yes; what kind of work? -----

86. What is the occupation of your husband?

(description of work)

87. Has your husband ever lived in a town or city?

----- no

----- yes; (a) in which town/city did he live?

(name of town/city)

(b) how long? -----

88. Has your husband visited a town/city in the past
12 months?

----- no (skip to Q.90)

----- yes; how many times? -----

89. For what work does he usually go to the city/town?

90. How about you? Have you ever lived in a town/city?

----- no

----- yes; (a) in which town/city did you live?

(b) for how long? -----

(c) at what age? -----

91. Have you visited a town/city in past 12 months?

----- no

----- yes; how many times? -----

92. Do you have any relatives in town/city?

----- no (skip to Q.94)

----- yes; in which town/city? -----

93. Do(es) they (he or she) visit(s) you regularly?

----- no

----- yes; how many times in a year? -----

94. Have you ever gone to the movies?

----- no (skip to Q.96)

----- yes

95. Have you gone to the movis in the past 12 months?

----- no

----- yes; how many times? -----

96. Do you listen to the radio?

----- no

----- yes

97. How often do you listen to the radio?

----- every day

----- often; how many days in a week? -----

----- other, (specify) -----

98. What programme do you usually listen to? -----

99. (INTERVIEWER: If 'family planning' is not mentioned in Q.98 then ask this question)

Have you heard about family planning from the radio?

----- no

----- yes

INTERVIEWER'S NOTE

a) Who were present during the interview?

----- children ----- relatives ----- neighbours

b) Did this person(s) help respondent during the interview?

----- yes ----- no ----- na

c) To which of the question did the respondent give doubtful answers?

QUESTION NO.	REASON FOR DOUBT
i) -----	-----
ii) -----	-----
-----	-----
-----	-----

d) How co-operative was the respondent?

----- very co-operative ----- co-operative
 ----- very unco-operative -----unco-operative

Name of the interviewer: -----

Date of interveiw: -----

APPENDIX 4

Determinants of Areal Variation in
Contraceptive Practice in Bangladesh

HOUSEHOLD QUESTIONNAIRE

IDENTIFICATION	FOR CODERS ONLY
Study No.	--- --- ---
	1 2 3
Questionnaire type	---
	4
Village ----- Id No. -----	--- --- --- ---
	5 6 7 8
Family ----- Id No. -----	--- --- --- ---
	9 10 11 12
Bari ----- Id No. -----	--- ---
	13 14
Religion -----Muslim ----- Hindu	---
	15

Name of Respt.----- Sex -----	---
	16
Id. No. -----	
Relationship to HH Head -----	
Name of Interviewer -----	
Date of Interview -----	

Household Composition: (List all the residents of the household along with the following information from the household census record. Check with the respondent each item of information for verification and updating)

Sl. No.	Relation ship with HH. head	Sex	Age	Marital Status	Present occupation (details)	Education (class passed)	Id. No. of Currently married women 15-44 years
1	2	3	4	5	6	7	8

1. Head*

2.

3.

4.

20.

* If the head does not work presently, specify his/her previous occupation -----

e) sewing machine " "

15. Did the household use the following agricultural inputs in past 12 months?

a) chemical fertilizer ----- yes ----- no

b) new seed varieties " "

16. Does the head or any member of the household hold the following positions?(/)

	HEAD	OTHER MEMBER
a) U.C. Chairman	---	--
b) U.C. Member		
c) Village Matabbar		
d) Farm Co-op. Member		
e) Fishermen Co-op. Member		
f) Women Co-op. Member		
g) Hazi		
h) Moulvi/Moulana		
i) Imam		
j) Spiritual Leader		
k) Priest		

(In case of Muslim household ask Q.17 and 18)

17. Does the head of the household pray five times regularly?

----- yes -----no

18. How many adult members other than the HH head pray five times regularly?

Men -----(number)

Women -----(number)

(in case of Hindu households ask Q. 19 and 20)

19. Does the head of the household spend some time on religious activity (Puja) regularly?

----- no

----- yes, only in morning

----- yes, only in evening,

----- yes, both in morning and evening

20. How many adult members of the household spend some time in 'Jopnam' regularly?

Men -----(number)

Women -----(number)

21. Who is the head of this Bari?

Name ----- Id.No.-----

22. Do all households in the Bari belong to the same Samaj?

----- yes -----no

23. Does the household have:

a) Separate room as kitchen? ----- yes ----- no

b) Outside room/Baitak ghar? " "

c) Tube-well in Bari compound? " "

d) Pucca latrine? " "

24. Type of main house building: (/)

----- floor: cement, roof: brick/tin

----- floor: mud, roof: brick/tin

----- floor: mud, roof: thatched

25. Reproductive status and contraceptive practices (to be obtained from FVW register)

----- total currently married women aged 15-44 years

----- No. pregnant

----- No. breastfeeding

----- No. PPA

----- No. currently using contraceptives

----- No. not currently using but used in past
12 months

26. Acceptance of Tetanus immunization in past 12 months:

----- No. pregnant

----- No. accepted immunization

27. Use of oral therapy for diarrhoea in past 12 months

(to be obtained from Bari Mother Note Book)

----- No. episode

----- No. used oral therapy

APPENDIX 5

Determinants of Areal Variation in
Contraceptive Practice in Bangladesh

BARI QUESTIONNAIRE

IDENTIFICATION

FOR CODERS ONLY

Study No.----- Card No.-----

Village ----- Code No. ----

Bari ----- Code No. ----

Religion -----

Sl. No. of Household	1	2	3	- -	20	Total
Census Id. No.	---	---	---	---	---	---

1. SIZE AND TYPE OF HOUSEHOLDS (HH):

- a) No. of single/non-family HH
- b) No. of nuclear HH
- c) No. of joint HH
- d) No. of male residents
- e) No. of female residents
- f) No. of children 7-14 years old

2. EDUCATION:

- a) Class passed by HH head
- b) No. of male studying in town/city
- c) No. of females " " "
- d) No. of boys (7-14) in school
- e) No. of girls " " "

(Table continued)

3. ECONOMIC STATUS:

- a) Occupation of HH head
- b) Amount of cultivable land (acres)
- c) No. of males working in town/city
- d) No. of females "
- e) Remittance (no =0, yes =1)
- f) Main house building (brick/tin
roof =1, thatched roof =2)
- g) Baitak ghar (no =0, yes =1)
- h) Separate kitchen (no =0, yes =1)
- i) Pucca latrine (no =0, yes =1)
- j) Tube well in the bari (no =0, yes =1)

4. MODERN CONSUMPTION ARTICLES

- a) Radio (no =0, yes =1)
- b) Watch/Clock (no =0, yes =1)
- c) Bicycle/motor cycle (no =0, yes =1)
- d) Sewing machine (no =0, yes =1)
- e) Magazine/newspaper subscription
(no =0, yes =1)

5. INNOVATIVENESS:

Agricultural inputs (Past 12 months)

- a) Chemical fertilizer (no =0, yes =1, na =9)
- b) New seed varieties (no =0, yes =1, na =9)

Tetanus immunization (past 12 months)

- c) No. of pregnant women
- d) No. of acceptors

(Table continued)

Oral therapy for diarrhoea (past 12 months)

- e) No. of episodes
- f) No. of applications

Contraception

- g) No. of currently married women
aged 15-44 years
- h) No. pregnant
- i) No. breastfeeding
- j) No. of PPA
- k) No. of current users
- l) No. of drop-outs (12 months)

6. RELIGIOSITY:

- a) HH head says prayer/puja regularly (no =0, yes =1)
- b) No. of other members (no =0, yes =1)
- c) HH. head a Moulvi =1, Imam =2, Hazi =3,
Spiritual leader =4, None =0
- d) No. of other members: Moulvi =1, Imam =2,
Hazi =3, Spiritual leader =4, None =0

7. LEADERSHIP:

- a) U.C. chariman (HH head=1, other Members=2)
 - b) U.C. member (" " " ")
 - c) Village matabber (" " " ")
 - d) Member of Farm Co-op. (" " ")
 - e) Member of Fishermen's Co-op. (" " ")
 - f) Member of Women's Co-op. (" " ")
-

8. INTERNAL SOLIDARITY:

- a) Does the Bari have a common head? -----yes -----no
 b) Does the Bari belong to one Samaj? -----yes -----no

9. CHARACTERISTICS OF BARI HEAD(S):

Head 1 Head 2 Head 3

	Head 1	Head 2	Head 3
a) Age	-----	-----	-----
b) Education (class passed)	"	"	"
c) Occupation	"	"	"
d) Leadership Position (U.C. Chariman=1, Member=2/Matabar=3)	"	"	"
e) Religiosity (Moulvi=1, Imam=2, Spiritual leader=3, Hazi=4, regular prayer or puja=5, None=0)	"	"	"

10. Social Status of the Bari (to be evaluated by the
 field assistant having longest experience in the
 concerned village)

	----- high	----- medium	----- low
a) Family descent			
b) Wealth	"	"	"
c) Landed property	"	"	"
d) Education	"	"	"
e) Co-operation with visiting officials	"	"	"

APPENDIX 6

Determinants of Areal Variation in
Contraceptive Practice in Bangladesh

Instructions for Comparison Area Contraceptive
Use-Prevalence Survey Questions (July 1982)

Complete the three questions below for all married women aged 15-44 years of your area. For each woman give three code numbers in the next open space on the eligible women register as follows:

Census number	Name	Method ever used	Method used in past 2 weeks	Source
-----	-----	-----	-----	-----

1. Has woman or husband used anything (at any time) to prevent pregnancy? (If more than one method is mentioned record the last method used)

0 Nothing	5 Ligation
1 Condoms	6 Vasectomy
2 Oral Pills	7 Kabirajee
3 DMPA injection	8 Other
4 IUD	

2. Is woman or husband using anything at present (in past 2 weeks) to prevent pregnancy?

0 Nothing	5 Ligation
-----------	------------

- | | |
|------------------|-----------------------|
| 1 Condoms | 6 Vasectomy |
| 2 Oral Pills | 7 Kabirajee |
| 3 DMPA injection | 8 Other |
| 4 IUD | 9 If 'nothing' in Q.1 |

3. Source of contraception used. Give most recent source.

- | | |
|---------------------------------------|-------------------------------------|
| 0 Can't say | 5 Market (shop) |
| 1 ICDDR,B worker | 6 Village practitioners/
kabiraj |
| 2 ICDDR,B subcentre/
Matlab clinic | 7 Self administred method |
| 3 Government worker | 8 Other |
| 4 Government hospital/
clinic | 9 If 'nothing' in Q.1 |

EXAMPLE: A woman presently using condoms supplied by Govt. health worker. Record as follows:

1 2 3
