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BANGLADESH CONTRACEPTIVE PREVALENCE SURVEY - 1983

SPECIAL TOPICS

Edited by

Sarah Harbison, Ph.D.

and

S. N. Mitra

Edited and Produced by:

Population Technical Assistance Project
International Science and Technology Institute
1601 N. Kent Street, Suite 1101
Arlington, Virginia 22209
Phone: (703) 243-8666
Telex: 271837 ISTI UR

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GLOSSARY

BBS	Bangladesh Bureau of Statistics
BES	Bangladesh Economic Survey
BFS	Bangladesh Fertility Survey
BRSFM	Bangladesh Retrospective Survey of Fertility and Mortality
CEB	Children ever born
CPS	Contraceptive Prevalence Survey
GOB	Government of Bangladesh
ICCDR,B	International Center for Diarrheal Disease Research, Bangladesh
WFS	World Fertility Survey

I. INTRODUCTION

by

Sarah Harbison

The studies presented in this volume are based on data collected by the 1983 Contraceptive Prevalence Survey of Bangladesh (CPS). Two volumes analyzing these data have already been published. The June 1984 "Key Results" report (Mitra and Associates, 1984) aimed at providing the basic findings of the survey as quickly as possible. The full tabulations were presented in the final report in March 1985 (Mitra and Associates, 1985). This volume presents a collection of papers, each of which focuses on a special topic related to population and family planning issues in Bangladesh.

The urgency of the demographic situation in Bangladesh is well known. Bangladesh is the most densely populated country of the world. While the country has a land area of only 55,598 square miles (BBS, 1985), the 1981 census counted its population at 83.1 million, with an average density of 1,617 persons per square mile and an average of 5.7 persons per household (BBS, 1984). When adjustments for undercounting were made, the estimated population in 1981 was almost 90 million.

Bangladesh is also among the poorest countries of the world. The annual per capita income as of 1981 was below US $100 (UN, 1981). About half the population belonged to landless or mini-farmer households. Bangladesh, though an agricultural country, has always had a shortage of food. Even "in the best of times the supply has been barely adequate for the needs of the population" (Rosenberg, 1973). Recent estimates show that the current annual food deficit varies from 1.5 to 2.0 million tons (BES, 1985). The Gross National Product (GNP) is approximately equal to one day's worth of the national production of the United States (Shelley, 1985).

Rapid population growth and high population density are among the major reasons that Bangladesh has remained a poor country. The population is still growing rapidly, resulting in increased pressure on natural resources, on the family, and on infrastructure. It seems clear that by mid-decade the Bangladesh population had exceeded 100 million people. The Bangladesh government is well aware of the deleterious effects of rapid, continued population growth and frequently asserts that reduction of fertility through promotion of contraceptive use by organized family planning efforts must be a crucial component of development. In fact, there has been a long-standing commitment on the part of the government to family planning.

Despite continuous efforts for more than two decades (Khan, 1981), however, family planning programs have not made rapid progress. Use of family planning still remains relatively low (see table-1.1). In the 1983 CPS eligible woman sample, only 19.1 percent of currently married women reported that they or their husbands were currently using some form of contraception, while the vast majority (65 percent) said they had never used any contraceptive method (Mitra and Kamal, 1985).

While contraceptive use (modern plus traditional methods) grew from 7.7 percent in 1975 to 19.1 percent in 1983, growth has been well below the goals originally set by the government. Particularly disappointing has been the lack of virtually any growth at all in the number of pill and condom users. The articles in this volume all focus on factors that may be related to the relatively low rate of contraceptive usage, including availability, unmet need, reasons for nonuse, and the general nature of contraceptive decision making. Fertility and infant mortality, as part of the demographic context within which contraceptive decisions are made, are considered in detail as well.

It is hoped that the research presented here will contribute to an improved understanding of the family planning program performance and potential for improvement and also stimulate further research. For those interested, the details of the CPS sampling procedure are presented in Appendix 1 and the questionnaire is presented in Appendix 2. Individuals interested in conducting research utilizing these data may request permission to do so by submitting a proposal to Mr. S. R. Chowdhury of the Management Information Systems Unit of the Ministry of Health and Family Planning, Government of Bangladesh.

Table-1.1

PERCENTAGE OF CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE USING CONTRACEPTION BY METHOD, BANGLADESH 1975 1979, 1981 and 1983*

(The Eligible Woman Sample)

Methods	BFS[1] 1975	CPS[2] Year 1979	1981[a]	1983[a]
Modern methods (total)	4.7	8.9	10.9	13.8
Oral pill	2.7	3.6	3.5	3.3
Condom	0.7	1.5	1.6	1.5
Vaginal method[b]	-	0.1	0.3	0.3
Injection[b]	-	0.2	0.4	0.2
IUD	0.5	0.2	0.4	1.0
Tubectomy	0.3	2.4	4.0	6.2
Vasectomy	0.5	0.9	0.8	1.2
Traditional method (total)	3.0	3.8	7.7	5.4
Safe period	1.0	2.2	3.9	2.4
Withdrawal	0.6	0.2	1.8	1.3
Abstinence	1.1	0.8	1.2	0.4
Other	0.3	0.6	0.7	1.4
Total use rate	7.7	12.7	18.6	19.1

1 Source: BFS - Bangladesh Fertility Survey (GOB, 1978): data derived from table-2.4.5 and table-4.4.1.

2 Source: CPS - Contraceptive Prevalence Survey (Mitra and Kamal, 1985).

a The sum of individual rates may not, in some cases, be equal to their relevant total. The difference is due to rounding error.

b These methods were not given as a separate category in the 1975 BFS and may be included in "other."

* Taken from "Key Results" report of the 1983 CPS (Mitra and Associates, 1984).

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2. UNMET NEED

by

Barkat-e-Khuda
Sushil Howlader

2.1 Introduction

Measurement of unmet contraceptive need is of great practical importance since it relates to the amount of resources that may be required by family planning programs. In addition, the focus on unmet contraceptive need has stimulated research that seeks to explain the often large discrepancy between the proportion of couples who report that they want no more children and the relatively larger proportion of women who do not use contraception. Based on World Fertility Survey (WFS) data from 18 Asian, Latin American and African countries, Westoff and Pebley (1982) have explored problems associated with the measurement of unmet contraceptive need in developing countries and have proposed twelve measures of unmet need by refining the measurement of fecundity, contraceptive use, and the desire for more children. The magnitude of unmet need, depending on which approach was used, varied from 7.2 percent to 40.3 percent. The simplest measure defines unmet need as the proportion of currently married women who said that they wanted no more children (the "limiters") and who were not using any effective method of contraception. Using this definition, which is the most inclusive, the highest level of unmet need observed was 40.3 percent. When unmet need is defined as the proportion of currently married women who said that they wanted no more children, whose desired family size was less than or equal to their number of living children, who were fecund and not pregnant, who were not currently breastfeeding, and who were not using any method of contraception, the lowest level of unmet need observed was 7.2 percent.

Based on four of the measures developed by Westoff and Pebley, Mitra and Pebley (1982) presented estimates of unmet contraceptive need using data from the Bangladesh Fertility Survey (BFS), 1975-76. They found that the extent of unmet contraceptive need using the various measures ranged from 9.6 percent to 56.4 percent in Bangladesh. The high estimate was obtained when unmet need was defined as the proportion of women who reported that they did not want children soon and were not using contraception. The low estimate was obtained by including only women who reported that they did not want children soon, who were not using contraception, who were fecund, who were not pregnant, who were not breastfeeding for 12 months or less, and who desired fewer than or the same number of children they actually had. The authors estimated the demographic effect of

meeting the unmet contraceptive need for limiters and concluded that the impact on fertility would be relatively small, about 7 percent. This implies that providing adequate contraceptives and motivation to women having an unmet contraceptive need to terminate fertility ("terminators") would not be sufficient to bring about a large decline in fertility.

Hatmadji and Pebley (1982), using data from the Indonesian Fertility Survey of the WFS, presented estimates of unmet contraceptive need in Indonesia. Estimates of unmet contraceptive need, based on all 12 measures developed by Westoff and Pebley (1982), ranged from 4.3 percent to 35.9 percent. As in the case of Bangladesh, the demographic impact of supplying the unmet need of limiters was estimated to be small, around 7 percent. Rahman and Pebley (1982), using data from the 1974 Malaysian Fertility and Family Survey reported values ranging from 2.8 percent to 19.1 percent. The authors estimated that the demographic effect of meeting unmet contraceptive need for terminators would be 9 percent. Based on data from the 1976 Nepal Fertility Survey, Regmi (1982) reported values ranging from 7.8 to 30.5 percent in Nepal. The author calculated that if women with unmet need had births at the rate of those with met need, fertility would decline by 15 percent, provided the unmet contraceptive need was satisfied. Chaumpluk and Pebley (1982) using data from the 1975 Survey of Fertility in Thailand reported values of 2.5 to 21.9 percent.

Most estimates of unmet contraceptive need thus far have been based on WFS data. The WFS data provide information only about those women who report that they want no more children. It does not provide data on respondents' child-spacing desires. These data are available however from the Contraceptive Prevalence Survey undertaken in the late 1970s in six developing countries, including Bangladesh. Using these data, Nortman (1982) found that around one-third of the fecund married women in these countries had an unmet contraceptive need to postpone or prevent another pregnancy. These birth "spacers" (mostly younger women) constituted a sizable proportion of the unmet need group. Unmet contraceptive need estimated separately for limiters and spacers, rather than for limiters alone, is an important contribution made by Nortman.

The present study is based on data from the Bangladesh Contraceptive Prevalence Survey, 1983. The available data permit only the assessment of unmet contraceptive need for limiters because the survey collected no information on respondents' child-spacing desires.

2.2 Measures of Unmet Need

Unmet contraceptive need is defined as the proportion of currently married women in their reproductive ages who say that they do not want any more children, and yet are not practicing family planning.[1] Both these components[2] must be present to say that a woman has unmet contraceptive need. When considering the practice of family planning, we have taken into consideration: (a) those not practicing any family planning method (i.e., nonuser of either a modern or a traditional method); and (b) those not practicing any modern family planning method. From the program point of view unmet contraceptive need exists among those women who are practicing traditional methods because the program is geared to deliver the modern (i.e., efficient) methods of family planning. The program, as it stands, does not put any emphasis on the use of traditional methods.

Bangladeshi women are exposed to the risk of pregnancy only while they are in marital union. In general, the target of any family planning program is the group of women in the reproductive age groups. There are, however, obviously both pregnant and nonpregnant women in this group. Since pregnancy is a temporary state, family planning programs should be designed to meet the unmet contraceptive need of the pregnant women as soon as they are exposed to the risk of pregnancy again. Even during their pregnancy such women should be brought within the purview of the family planning program by providing them with the necessary information and motivation, one of the essential components of the program, to be able to eventually make these women use family planning methods, once they are exposed to the risk of pregnancy.

In addition, some of the currently married pregnant women may have become pregnant unintentionally. This group of women could be regarded as in need of family planning, or more specifically, in need of more effective family planning methods.

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1 This definition is similar to how the term has been defined by others. See, for example, Westoff, 1978; Kendall, 1979; Concepcion, 1980; Palmore and Concepcion, 1980; Shah and Shah, 1980.

2 The reliability of the respondent's responses to the question relating to the desire for more children has been checked by determining the consistency of that response with the respondent's response to the question relating to reasons for nonuse of family planning. The responses appear to be highly reliable. Only 2 percent of the respondents who said that they wanted no more children reported that they were not

Besides, at an early stage of gestation, a woman does not know with certainty whether she is pregnant, and to estimate her unmet contraceptive need is problematic. Further, if a woman is contemplating an induced abortion, she may not report that she is pregnant. On balance, it is possible that the number of currently pregnant women is underreported. On the basis of an extensive analysis of WFS data, Goldman and Westoff (1982) concluded that the reporting of current pregnancy was insufficiently reliable to encourage its use for estimating current fertility. For all these reasons, measures 1 and 1A in our analysis are based on all currently married women in their reproductive years, without considering pregnancy state. The extent of unmet need obtained on the basis of these measures thus represents a "ceiling," a measure of the highest possible level of unmet contraceptive need, which the family planning program administrators must take into consideration in designing service delivery systems.

Having developed these "ceiling" measures of unmet contraceptive need, we then introduce various modifications to these measures. For example, a proportion of couples at any time may not be "at risk" of pregnancy because the wife is already pregnant, or because she is lactating, or she is sterile. Our first revision of the basic measure excludes pregnant women. Measures 2 and 2A have been developed on this basis. A further modification is introduced by excluding all breastfeeding women from our analysis. Information on breastfeeding was obtained in response to a question to the current nonusers of family planning as to why they were not practicing family planning, and breastfeeding was given as one of the reasons. This, therefore, partly limits the usefulness of the analysis in that it may underestimate breastfeeding. Measures 3 and 3A have been developed on this basis.

A final modification is introduced by excluding all infecund women from the analysis. The CPS, 1983 did not, however, ask any specific question to ascertain the fecundity[1] status of women. As with breastfeeding, information on infecundity was obtained in response to the question to current nonusers

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practicing contraception because they desired additional children; 98 percent of the respondents put forward various other reasons for not practicing family planning.

[1] The conventional classification of fecundity is based on responses to the question: As far as you know, is it physically possible for you and your husband to have a child, supposing you wanted one? The response to such a question must be handled with care so that those sterilized are not bracketed with those infecund.

of family planning as to their reasons for nonuse. We apply the proportion of women fecund in age group 40-49 to all women of reproductive age on the assumption that this will result in a maximum deduction for infecundity. Measures 4 and 4A have been developed on this basis. These measures give the "floor" measures of unmet contraceptive need or the lowest possible measures of unmet need.

We discuss below the various measures developed to ascertain the extent of unmet need for contraception.

(a) Measure-1: Gives the proportion of all currently married women under 50 years of age (regardless of their current pregnancy status) who said that they wanted no more children and who were not currently practicing any family planning method.

(b) Measure-1A: Gives the proportion of all currently married women under 50 years of age (regardless of current pregnancy status) who said that they wanted no more children and who were not currently practicing any family planning method, plus those using only traditional methods of family planning.

(c) Measure-2: Gives the proportion of all currently married, nonpregnant women under 50 years of age who said that they wanted no more children and who were not currently practicing any family planning method.

(d) Measure-2A: Gives the proportion of all currently married, nonpregnant women under 50 years of age who said that they wanted no more children and who were not currently practicing any family planning method, plus those using only traditional methods of family planning.

(e) Measure-3: Gives the proportion of all currently married, nonpregnant and nonbreastfeeding women under 50 years of age who said that they wanted no more children and who were not currently practicing any family planning method, plus those using only traditional methods of family planning.

(f) Measure-4: Gives the proportion of all currently married, nonpregnant, nonbreastfeeding fecund women under 50 years of age who said that they wanted no more children and who were not currently practicing any family planning method.

(g) Measure-4A: Gives the proportion of all currently married, nonpregnant, nonbreastfeeding, and fecund women under 50 years of age who said that they wanted no more children and who were not currently practicing any family planning method, plus those using only traditional methods of family planning.

2.3 Results

Estimates of unmet contraceptive need, based on the measures discussed in the preceding section, are presented in table-2.1. To recapitulate, measures 1, 2, 3 and 4 are based on nonusers of any method of family planning, whereas measures 1A, 2A, 3A and 4A include users of traditional methods as well as nonusers.

Using the first approach estimates of unmet need ranged from 26.8 percent to 33.2 percent. When users of traditional measures were included unmet need ranged from 30.5 percent to 37 percent (table-2.1). This approach has the effect of raising the level of unmet need by around 4 percent. There is a difference of about 7 percent between the "ceiling" measure and the "floor" measure, i.e., when all currently married women are taken into account the extent of unmet need is about 7 percent higher than when only currently married, nonpregnant, nonbreastfeeding and fecund women are considered. Given various financial and other constraints, the program should, at the least, aim at providing the necessary supplies and services to meet the unmet need of this latter group of women.

Table-2.1

MEASURES OF UNMET CONTRACEPTIVE NEED
IN BANGLADESH, 1983 (percents)

Measures	Extent of unmet need
1	33.2
1A	37.0
2	27.8
2A	31.5
3	27.3
3A	31.0
4	26.8
4A	30.5

Mitra and Pebley (1982:32) using data from the BFS 1975-76 found that depending on what measure was used unmet need

in Bangladesh ranged from 9.6 percent to 56.4 percent. The measure used by Mitra and Pebley, which corresponds closely to measure 4 in the present study, yields an estimate of unmet need at 24.6 percent, indicating that unmet need has risen by 2.6 percent during the period 1975-83,[1] although the contraceptive use rate has more than doubled during the period under consideration. This shows that the overall demand (met plus unmet) for contraception has gone up in Bangladesh during the last few years.

From the program point of view measure 1A is of the greatest practical significance since it indicates the potential demand the program should be designed to meet. In examining differentials we have, therefore, considered measure 1A. It may be pointed out that the nature of the relationship between unmet contraceptive need and the dependent variables follows the same pattern, whatever measure of unmet need is considered. In examining differentials we have considered a number of demographic, socioeconomic, and program variables. The demographic variables considered are age and parity of the respondents. The socioeconomic characteristics are education, employment, household landownership status, place of residence and religion. The program variable is whether there was a visit by a family planning field worker in the last six months. Intention of the respondents to use contraception was also considered.

The extent of unmet contraceptive need was positively related to age. For example, among women under 20 years of age the extent of unmet contraceptive need was less than 6 percent and among women aged 45-49 years it was over 80 percent (table-2.2). The increase in unmet need with age is due to a dramatic decline in the proportion of women who want no more children as they become older and already have a large number of children. Among the older women, especially those aged 45-49 years, a large proportion said that they did not want any more children, and yet a small proportion of them were contracepting. Although some of these women may be infecund and many may believe themselves to be infecund, Bangladeshi women continue to bear children late in their forties. Hence, program managers must not lose sight of these women when drawing up their plans and targets.

Many of the younger women, especially those under 20 years of age, are newly married. Some of them have had one or no live births. In addition, many of the young women may not currently be exposed to the risk of pregnancy either because they

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[1] It is important to note, however, that Mitra and Pebley's estimates are not strictly comparable with the estimates obtained in this study because questions relating to wanting children were asked differently in the BFS and the CPS. The

are already pregnant or because they are lactating. Hence, the low demand for family planning (both in terms of met need as well as unmet need) among them seems plausible.

Table-2.2

UNMET CONTRACEPTIVE NEED BY AGE OF WOMEN IN BANGLADESH, 1983 (percents)

Age group	N	Measure 1A
< 15	158	0.9
15-19	1537	5.4
20-24	1608	21.6
25-29	1504	35.3
30-34	987	50.9
35-39	749	63.1
40-44	576	77.0
45-49	496	85.0
All	7615	37.0

Our findings largely, but not totally, correspond to what has been reported in other studies. Westoff and Pebley (1982:22-24) found that unmet need rises with age at least till 39 years, after which it declines. Similar findings have been reported in several other studies (Mitra and Pebley, 1982:37; Hatmadji and Pebley, 1982:49; Rahman and Pebley, 1982:61; Regmi, 1982:78; Chaumpluk and Pebley, 1982:89).

The proportion classified as having unmet contraceptive need rises with parity. For example, at zero parity less than 1 percent have unmet need, while unmet need exceeds 75 percent at parity eight or higher (table-2.3). This is largely because of a consistent decline in the proportion wanting no more children at

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BFS asked the respondents whether they wanted children soon, while the CPS asked the respondents whether they wanted more children.

higher parities, which is not totally offset by a proportionate rise in the use rate. A similar type of relationship between unmet need and parity has been observed in all the WFS studies cited earlier.

Table-2.3

UNMET CONTRACEPTIVE NEED BY PARITY OF WOMEN IN BANGLADESH, 1983 (percents)

Parity	N	Measure 1A
0	1063	0.7
1	1313	9.0
2	1254	27.7
3	1118	40.1
4	905	55.1
5	761	63.7
6	525	70.6
7	362	73.0
8	215	79.1
9 +	142	85.2
All	7658	37.0

Unmet contraceptive need was lower among women who attended school than among those who never attended school. Unmet need was 33.8 percent among the former and 38.5 percent among the latter. Table-2.4 shows that the extent of unmet need declines at each higher level of education, although the relationship gets blurred to some extent, when controlling for age.

The general pattern of a decline in the extent of unmet need with education is understandable since contraceptive use is positively associated with education. A similar relationship with education has been found in the WFS studies.

Table-2.4

UNMET NEED BY EDUCATION AND AGE
OF RESPONDENTS (percents)

Education	Age				All
	<20	20-29	30-39	40-49	
Never attended school	5.1 (1073)	26.3 (1980)	57.0 (1276)	81.2 (840)	38.5 (5169)
Primary school	4.7 (470)	33.3 (818)	57.1 (422)	79.0 (195)	36.2 (1905)
High school	5.9 (135)	31.1 (196)	45.9 (61)	28.3 (23)	27.7 (415)
College and University	0 (16)	19.8 (106)	21.1 (19)	75.0 (4)	19.3 (145)
Total	5.0 (1694)	28.2 (3100)	56.2 (1778)	80.7 (1062)	37.0 (7634)

Unmet contraceptive need was slightly lower among those who were employed (35.5 percent) than among those who were not employed (37.1 percent).[1] This is true of all age groups, although it was relatively more pronounced among women aged 30-39 years (table-2.5). The contraceptive use rates (both ever use and current use) were higher among women who were employed than among those who were not employed (Mitra and Kamal, 1985). This explains why unmet need was lower among women who were employed compared with those who were not employed. In addition, the proportion wanting no more children was higher among women who were employed than among those who were not employed. The evidence from most studies based on WFS data also shows that unmet need was lower among women who were employed than among women who were not employed (Westoff and Pebley, 1982:22).

[1] Employment is defined as paid employment. All those having unpaid employment (i.e., working at home and those reported not working) have been grouped together under "not employed.

Table-2.5

UNMET NEED BY EMPLOYMENT STATUS
AND AGE OF RESPONDENTS (percents)

Employment status	Age <20	20-29	30-39	40-49	All
Employed	4.9 (76)	25.2 (262)	49.1 (151)	77.5 (71)	35.5 (560)
Not employed	5.0 (1619)	28.5 (2859)	57.0 (1630)	80.9 (1001)	37.1 (7100)
Total	5.0 (1695)	28.2 (3121)	56.3 (1781)	80.7 (1072)	37.0 (7660)

Unmet contraceptive need was higher among women belonging to households with cultivable landholdings (38.5 percent) than among women belonging to landless households (33.8 percent). Excepting those under 20 years of age, the relationship is consistent over all age groups (table-2.6). The prime reason was that a higher proportion of women who belonged to landed households said that they did not want any more children than women belonging to landless households. Additionally, the current use rate was slightly lower among women belonging to landed households than among women belonging to landless households - 18.7 percent and 20.1, percent respectively (Mitra and Kamal, 1985:205). However, a more meaningful analysis of landownership could have been carried out if data had been collected on the amount of land owned by households.

Table-2.6

UNMET NEED BY LANDOWNERSHIP STATUS AND
AGE OF RESPONDENTS (percents)

Landownership status	Age <20	20-29	30-39	40-49	All
Owns land	4.5 (1161)	29.3 (2964)	59.0 (1177)	83.4 (762)	38.5 (6064)
Does not own land	6.0 (534)	26.3 (1044)	51.0 (602)	74.0 (309)	33.8 (2489)
Total	5.0 (1695)	28.2 (4008)	56.3 (1779)	80.7 (1071)	37.0 (8553)

Unmet contraceptive need was lower in urban areas (32.0 percent) than in rural areas (37.5 percent), and excepting women under 20 years of age, the relationship holds among women in all other age groups, especially among those aged 30 years and older (table-2.7). Although, in general, urban women were more likely to say that they did not want any more children, a higher proportion of them were also practicing contraception. In fact, the current use rate was twice as high in urban areas as in rural areas (Mitra and Kamal, 1985:207). Given that the current use rate in rural areas was only one-half of that in urban areas and that unmet need was only 5.5 percent higher in rural areas than in urban areas, it becomes obvious that the overall (met plus unmet) demand for contraceptives is considerably lower in rural areas. Over 90 percent of Bangladeshis live in rural areas and hence program efforts must be increased there.

Table-2.7

UNMET NEED BY PLACE OF RESIDENCE AND AGE OF RESPONDENTS (percents)

Place of residence	Age				
	<20	20-29	30-39	40-49	All
Rural	4.8 (1548)	28.5 (2775)	57.7 (1606)	81.6 (979)	37.5 (6908)
Urban	6.6 (147)	25.7 (337)	44.1 (174)	70.9 (93)	32.0 (751)
Total	5.0 (1695)	17.2 (3112)	56.3 (1780)	80.7 (1072)	37.0 (7659)

In all age groups unmet contraceptive need was lower among the non-Muslims (34.9 percent) than among the Muslims (37.2 percent) (table-2.8). The reason for the differential by religion is that the use rate was higher among the non-Muslims than among the Muslims (Mitra and Kamal, 1985). The current use rate was 10 percent higher among the non-Muslims than among the Muslims and unmet need was only about 2 percent higher among the Muslims than among the non-Muslims, indicating a lower overall demand for contraceptives among Muslims.

Family planning workers are required to visit clients in order to provide supplies and to generate demand for family planning. We asked the respondents if they had been visited by family planning workers during the past six months. Table-2.9 shows that those who said they were visited by a family planning worker had a higher unmet need (38.4 percent) than those who

reported that they were not visited by a family planning worker (36.3 percent). The difference was small, and the relationship is not consistent over all age groups.

Table-2.8

UNMET NEED BY RELIGION AND
AGE OF RESPONDENTS (percents)

Religion	Age <20	20-29	30-39	40-49	All
Muslim	5.3 (1503)	28.6 (2781)	56.9 (1549)	81.1 (949)	37.2 (6782)
Non-Muslim	2.8 (191)	25.6 (331)	52.3 (232)	77.1 (123)	34.9 (877)
Total	5.0 (1694)	28.2 (3112)	56.3 (1781)	80.7 (1072)	37.0 (7659)

Table-2.9

UNMET NEED BY FAMILY PLANNING WORKER VISIT
AND AGE OF RESPONDENTS (percents)

Visit of FP worker	Age <20	20-29	30-39	40-49	All
Visited	5.0 (420)	31.9 (1024)	54.1 (591)	80.4 (273)	38.4 (2308)
Not visited	5.0 (1276)	26.4 (2088)	57.4 (1186)	80.8 (799)	36.3 (5349)
Total	5.0 (1696)	28.2 (3112)	56.3 (1777)	80.7 (1072)	37.0 (7656)

It is expected that among the nonusers, those who intend to use contraception in the future will have higher unmet contraceptive need than those among the nonusers who do not intend to use contraception. Data presented in table-2.10 confirm this. Unmet need was higher among those who intended to use contraception in the future (41.8 percent) than among those who did not (34.8 percent). The higher unmet need among women who intend to use contraception is most likely due to their positive attitude toward the use of family planning.

Table-2.10

UNMET NEED BY INTENTION TO USE CONTRACEPTION AND AGE OF RESPONDENTS (percents)

Intention to contracept	Age				
	<20	20-29	30-39	40-49	All
Yes	7.8 (697)	46.2 (1184)	83.0 (381)	83.7 (68)	41.8 (2330)
No	3.0 (999)	17.2 (1928)	49.1 (1400)	80.5 (1004)	34.8 (5331)
Total	5.0 (1696)	28.2 (3112)	56.3 (1781)	80.7 (1072)	37.0 (7661)

In order to examine the impact of certain of the independent variables on the probability that a woman will have unmet need for contraception, while controlling for all the other variables, a logistic regression analysis was carried out. All independent variables, except age and parity, were treated as dichotomous dummy variables. Means and standard deviations of these variables are presented in table-2.11.

The results of the logit regression are shown in table-2.12. The likelihood ratio statistic (X2 with 10 degrees of freedom) is highly significant at P = .001. The table shows that five variables (age, parity, household landownership status, rural-urban residence, and future intention to use contraception) have significant impacts on the probability of having unmet need. Unmet contraceptive need rises as age and parity increase. (In fact age and parity increase together and, therefore, the relationship between these two is multi-colinear). The probability of having unmet contraceptive need is higher among women who belong to the landowning households than among those who belong to the landless households. Rural women have greater probability of having unmet contraceptive needs than urban women. The probability of having unmet contraceptive need is greater among women who intend to use contraception in future than among those who do not.

The relative impact of the independent variables on the probability of having unmet need varies considerably. Age and parity have very strong influences on unmet need. Older women and women with relatively more children are more likely to say they do not want additional children, but also not to be using contraception. Intensified efforts to provide these women with services should be made by field workers. Since these women state

that they do not want additional children, they are appropriate candidates for permanent methods. This finding also points to the need for increased educational and motivational efforts among young women of lower parity.

Future intention to use contraception also has an extremely strong impact on the probability of unmet need. What this finding indicates is that a significant number of women who intend to use contraception in the future already have as many children as they want. It should be a goal of the program to reduce the gap between completion of desired family size and initiation of contraceptive usage.

Finally, the finding that women who live in rural areas are more likely to have unmet need than those who live in urban areas is not surprising. It does, however, point to the urgency of improving service delivery in rural areas where approximately 90 percent of the population of Bangladesh lives.

Table-2.11

MEANS AND STANDARD DEVIATIONS OF INDEPENDENT VARIABLES AMONG ALL CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE

Independent variables	Mean	Standard deviations
Age	27.66	7.8
Parity	4.00	2.6
Birth during last year[a]	0.20	0.4
Education[b]	0.34	0.5
Employment status[c]	0.09	0.3
Landownership[d]	0.65	0.5
Rural-urban residence[e]	0.20	0.4
Religion[f]	0.12	0.3
Visit by field worker[g]	0.30	0.5
Future intention to contracept[h]	0.31	0.5

[a] Dummy Variable: 0 = No birth occurred, 1 = Birth occurred.

[b] Dummy Variable: 0 = Never attended school, 1 = Attended school.

[c] Dummy Variable: 0 = Not employed, 1 = Employed.

[d] Dummy Variable: 0 = Owned no land, 1 = Owned land.

[e] Dummy Variable: 0 = Rural, 1 = Urban.

[f] Dummy Variable: 0 = Muslim, 1 = Non-Muslim.

[g] Dummy Variable: 0 = Visited, 1 = Not Visited.

[h] Dummy Variable: 0 = Did not intend to contracept, 1 = Intend to contracept.

Table-2.12

MULTIVARIATE LOGISTIC REGRESSION ANALYSIS OF UNMET NEED[a]

Factors (Independent Variables)	Co-efficient	Standard error	T-Value	Standardized Co-efficient
Constant	-5.491	0.151	-36.49**	
Age	0.115	.005	22.18**	0.894
Parity[b]	0.254	.015	17.24**	0.662
Birth during the last year[c]	-0.121	0.073	-1.67	-0.049
Education[c]	0.103	0.062	1.65	0.049
Employment status[c]	-0.081	.099	-0.83	-0.023
Landownership[c]	0.152	0.062	2.44**	0.072
Rural-Urban resident[c]	-0.320	0.073	-4.38**	-0.128
Religion[c]	-0.156	0.088	-1.77	-0.049
Visit by field worker[c]	-0.054	0.061	-0.88	-0.025
Future intention to contracept[c]	1.601	0.068	23.48**	0.738

a The likelihood ratio statistic, with 10 degrees of freedom, is highly significant at P = .001.

b Continuous variable.

c Dummy Variable.

** Significant at P = .001.

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3. CONTRACEPTIVE AVAILABILITY

by

A.J.M. Sufian

3.1 Introduction

The decision of couples whether to use contraception once they have decided to limit childbearing is likely to be affected by the availability of family planning information, services and supplies. In addition, the availability of contraceptives may encourage consideration of contraception among those who have not previously decided to limit family size.

Previous studies have examined whether the availability of contraceptive services and supplies affects contraceptive use. Tsui et al. (1981) analyzed WFS data from Korea, Mexico and Bangladesh and found a significant relationship between actual availability (number and location of existing service and supply sources) and contraceptive use. Their conclusion in a related study was that contraceptive use is more strongly related to perceived availability (respondents' knowledge about the availability of family planning services) than to actual availability.

Pebley and Brackett (1982) have examined WFS data from seven developing countries and found that women with knowledge of family planning outlets were much more likely to practice contraception and to use an efficient method than women who did not know of an outlet.

One of the major objectives of a family planning program is to ensure that contraceptives are widely available to couples in the reproductive age groups. The purpose of the present analysis is to examine the availability of contraceptives in Bangladesh and to analyze differentials by demographic and socioeconomic groups.

3.2 Methodology

Three measures of availabilty - number of modern methods spontaneously mentioned (i.e., without prompting), number of modern methods known with source (after prompting), and whether the woman was visited by any family planning worker during the last six months - are used as dependent variables. The variability in each of these is analyzed separately.

The first dependent variable considered is the number of modern methods spontaneously mentioned. A respondent was asked whether she knew of any family planning methods and, if so, what methods she was aware of. Since eight modern methods - pill, condom, foam tablet/emko/cream etc., injection, IUD, tubectomy, vasectomy, and menstrual regulation (MR) - were considered in the study, this variable ranges between 0 and 8.

The number of modern methods spontaneously mentioned has been used as a measure of availability on the assumption that, holding other factors constant, the higher the level of actual availability in a community, the more a person in that community is exposed to discussions concerning family planning methods and services. A woman's knowledge of availability is reinforced every day, not only through her own experience but also through the experience of others in the community. As a result, she is more likely to be able to mention more methods spontaneously than a person living in a community having a paucity of information and services.

The second measure of availability used is number of modern methods known with source. In this measure, total number of modern methods known with source, both before and after prompting, are included. We hypothesize that the higher the level of availability in a community, the higher the probability that a respondent will be able to mention a larger number of methods with source. Since each respondent could mention only one source for a method due to the way the question was phrased, this dependent variable can assume values from 0 to 8.

The third measure - whether a respondent was visited by any family planning worker during the last six months - reflects availability of family planning services. The higher the level of availability, the greater the frequency of affirmative answers that would be expected. This dichotomous variable has been measured as: (0) not visited; (1) visited. This variable also has been treated as an independent variable while analyzing the other two dependent variables.

Availability may be influenced by the age of respondents. An older woman may not be able to mention spontaneously as many methods as a relatively younger woman because of the latter's less traditional views. The family planning workers might visit the older women less frequently than the relatively younger women because the latter group of women is more in need of family planning services than the former. As such, age of the respondents has been used as an independent variable.

The greater the number of living children a woman has, the more she is likely to feel the need of family planning services and to seek information on the topic. We hypothesize

that a respondent's spontaneous knowledge of modern methods, or knowledge of modern methods with source, directly varies with the number of living children. Family planning workers may realize that a respondent with a large number of children needs family planning services more; therefore, it is also likely that a woman with a large number of living children may be visited more frequently by the family planning workers than a woman with a smaller number of living children.

Education is widely known to be associated with contraceptive knowledge and use. We assume that the higher the level of education, the greater the knowledge of family planning methods. Also, family planning workers may feel more comfortable discussing family planning with educated persons and hence may visit them more often. Employment status may also be related to knowledge of family planning methods. Women employed outside the home probably have more exposure to ideas about family planning and its methods than those who are not. As a result employed respondents are likely to know more methods, both spontaneously and with source, than unemployed respondents. Also, employed women may be less conservative and hence more open to discussion. This might induce the family planning workers to pay more frequent visits to the employed women than to unemployed women. Urban women in general have a greater exposure to modern life than rural women. Consequently, we expect that the urban respondents will be more knowledgeable about family planning methods. Religion, as well, has been included as an independent variable. It seems clear that current use of family planning methods may affect the knowledge of methods. A user is likely to know a number of methods as well as the source from which the one in use was chosen.

In an agricultural country like Bangladesh, where an overwhelming majority of people are engaged in agricultural activities, possession of land is probably the most important indicator of economic condition. Those possessing more land are likely to have more access to educational facilities and, hence, more access to employment. The hypothesized influence of these two factors on the number of methods spontaneously mentioned as well as on the number of methods known with source has been described earlier. Economically better off people are more likely to be concerned about family size. This enhances the likelihood that a landowner will be more knowledgeable about family planning methods. Also, the family planning workers might have a tendency to keep more contact with relatively wealthier people in a community. This might lead them to pay more visits to households possessing land than to households not possessing land. It should be noted, however, that a number of researchers have suggested that families holding larger amounts of land will tend to have more children because they are helpful in working

the land. This consideration complicates the analysis and makes the predicted direction of the impact of this variable ambiguous.

It may reasonably be assumed that when a woman is visited by a family planning worker, she will be told about family planning methods. Thus, a respondent visited by a family planning worker is likely to be more knowledgeable about methods than a respondent who was not visited by family planning workers, other things being equal. It also may be that workers prefer to visit those who are more knowledgeable about family planning methods. The workers may feel more at ease dealing with those more knowledgeable about family planning methods. Consequently, in analyzing the variable - whether a respondent was visited during the last six months - the number of modern methods known with source is considered.

3.3 Analytical Procedures

Univariate analyses of the socioeconomic and demographic characteristics of the sample respondents have been presented previously in the final report of the Bangladesh Contraceptive Prevalence Survey, 1983 (Mitra and Kamal, 1985) and will not be repeated here.

Since the principal aim of this study is to identify factors which influence availability, each of the three measures of availability has been cross-classified with each of the independent variables. For each table, frequency Chi square has been calculated as a test of the hypothesis of no association between the variables. For the first two measures of availability - number of modern methods spontaneously mentioned, and the number of modern methods known with source - means for the categories of the independent variable in each table have been calculated. For the third measure of availability - whether visited by any family planning worker during the last six months - percentages were calculated.

Multivariate analysis was then carried out using stepwise regression for the first two measures of availability and logit regression X for the third measure. For the purposes of the multivariate analysis, number of methods spontaneously mentioned (X12), number of methods known with source (X8), age (X1), and number of living children (X2) have been treated as continuous variables. All other variables have been used as dichotomous variables and their measures are as follows:

Education	attended school = 1
	otherwise = 0

Employment status	employed	= 1
	otherwise	= 0
Area of residence	urban	= 1
	otherwise	= 0
Religion	Islam	= 1
	otherwise	= 0
Current use status	currently using	= 1
	otherwise	= 0
Landownership	owns land	= 1
	otherwise	= 0
Whether visited	visited	= 1
	otherwise	= 0

3.4 Results - Bivariate Analysis

3.4.1 Number of Modern Methods Spontaneously Mentioned

Table-3.1 presents the distribution by age of the number of modern methods spontaneously mentioned. The percentages of women in different age groups who could not name any modern method spontaneously vary considerably. In the youngest age group - 25 years or less - the percentage is 17.9. It decreases to 13.2 for the age group 25-34 and then increases to 21.0 for the oldest age group - 35 years or more. The probable reason is that both younger women, who are unlikely to have attained their desired family size, and older women, who are usually more traditional in their views, are less knowledgeable about modern methods than their counterparts in the middle age group.

Regarding those who mentioned only one method spontaneously, the percentages do not vary across the first two age groups (around 21 percent) but rise quite substantially thereafter. For two and three methods spontaneously mentioned, the percentages remain more or less constant over the whole range of the age variable. For four methods, the pattern is similar to that for one method except that for the oldest age group, there was a fall in the percentage. For other numbers of methods, the cell frequencies tapered off to the extent that a grouping of "5+" methods spontaneously mentioned is warranted. A greater percentage of women in the middle age group than women in other age groups have demonstrated their spontaneous knowledge of five or more family planning methods. The chi square value for this

Table-3.1

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY AGE[1]

No. of methods spontaneously mentioned	Age			All
	25 years or less	25-34 years	35 years or more	
0	17.87 (590)	13.16 (328)	21.02 (392)	17.11 (1310)
1	21.08 (696)	20.87 (520)	26.27 (490)	22.28 (1706)
2	26.48 (874)	27.81 (693)	26.49 (494)	26.91 (2061)
3	18.18 (600)	19.98 (498)	16.51 (308)	18.34 (1406)
4	9.85 (325)	10.27 (256)	6.86 (128)	9.26 (709)
5+	6.54 (216)	7.91 (197)	2.84 (53)	6.09 (466)
Total[a]	100.00 (3301)	100.00 (2492)	100.00 (1865)	100.00 (7658)
Mean number of methods	2.07	2.25	1.87	2.05

Chi square = 128.89 with 10 degrees of freedom - significant at 5 percent level.

[1] Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

[a] The percentages in a column may not add to 100 due to rounding error.

table is 128.9 with 10 degrees of freedom which indicates a highly significant assocation between age and knowledge of family planning methods.

The distribution of the number of methods spontaneously mentioned, cross-classified by total number of living children, is presented in table-3.2. The percentages of women having different numbers of living children who could not mention any method spontaneously follow the same pattern as in the case of

age. The percentage decreases from 17.3 for 3 or fewer living children to 15.6 for 4-6 living children and then rises again to 19.8 for 7 or more living children. For one and two methods spontaneously mentioned, the percentage gradually increases with the number of living children. For other numbers of methods spontaneously mentioned, an overall decreasing pattern is evident. In general, the relationship between the number of living children and the number of methods spontaneously mentioned

Table-3.2

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY NUMBER OF LIVING CHILDREN[1]

No. of methods spontaneously mentioned	Living children			All
	3 or less	4-6	7 or more	
0	17.33 (823)	15.60 (342)	19.83 (143)	17.07 (1308)
1	21.46 (1019)	23.31 (511)	24.41 (176)	22.27 (1706)
2	26.45 (1256)	27.10 (594)	29.40 (212)	26.92 (2062)
3	18.11 (860)	19.80 (434)	15.81 (114)	18.08 (1408)
4	9.69 (460)	9.03 (198)	7.07 (51)	9.25 (709)
5+	6.95 (330)	5.16 (113)	3.47 (25)	6.11 (468)
Total[a]	100.00 (4748)	100.00 (2192)	100.00 (721)	100.00 (7661)
Mean number of methods	2.09	2.04	1.80	2.05

Chi Square = 39.16 with 10 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

is not very different from that between age and number of methods. The chi square value is 39.2 with 10 degrees of freedom, which implies the association between the two variables is significant. If we assume that age and the number of living children are positively associated, the observed trend is as expected.

Table-3.3 presents the distribution of the number of modern methods spontaneously mentioned by educational level. The percentages of women in different educational categories who did not mention any modern method of contraception decrease with increases in education. Greater percentages of less educated women spontaneously mentioned fewer modern methods. Generally consistent increases in the percentages across educational levels, from left to right, for three or more modern methods spontaneously mentioned, can be observed. The lower the educational level, the lower is the percentage of women who could spontaneously mention large numbers of modern methods. The chi square for this table is 1387.0 with 10 degrees of freedom, implying a highly significant association between the two variables.

Table-3.4 presents the distribution of the number of modern methods spontaneously mentioned by employment status. The percentages of women in the two employment categories who did not mention any modern method are 16.9 (unemployed) and 19.2 (employed). The same pattern is observed for one or two methods - a smaller percentage of those employed than those unemployed could spontaneously mention modern methods. However, the pattern is different for three or more methods. Higher percentages of employed women spontaneously mentioned larger numbers of modern methods. The chi square for this table is not significant.

Table-3.5 presents the cross-classification of the number of modern methods spontaneously mentioned with area of residence. A considerably greater percentage (68.9 percent) of rural women spontaneously mentioned two or fewer methods than urban women (42 percent). A much higher percentage of urban women could mention three or more methods than their rural counterparts. The chi square for this contingency table indicates significance.

In table-3.6 the variable "number of modern methods spontaneously mentioned" and the variable "religion" have been cross-classified. A higher percentage of non-Muslim women (21.4 percent) than Muslim women (16.5 percent) knew no modern methods. For one and two methods, the percentage for Muslims is higher than for non-Muslims. However, a greater percentage of non-Muslims (20.7 percent) than Muslims (18.1 percent) spontaneously mentioned three methods. For four or more methods the percentages fluctuate. It is to be noted that 97.5 percent of

Table-3.3

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY WOMEN'S EDUCATION[1]

No. of methods spontaneous mentioned	Women's Education			All
	No schooling	Less than primary	Primary or more	
0	20.63 (1070)	14.32 (197)	3.78 (41)	17.10 (1308)
1	25.70 (1333)	20.06 (276)	8.93 (97)	22.30 (1706)
2	28.67 (1487)	27.03 (372)	18.51 (201)	26.93 (2060)
3	16.75 (869)	21.22 (292)	22.10 (240)	18.32 (1401)
4	6.22 (323)	11.56 (159)	20.72 (225)	9.24 (707)
5+	2.02 (105)	5.81 (80)	25.97 (282)	6.11 (467)
Total[a]	100.00 (5187)	100.00 (1376)	100.00 (1086)	100.00 (7649)
Mean number of methods	1.70	2.19	3.51	2.05

Chi square = 1386.99 with 10 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.4

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY EMPLOYMENT STATUS OF WOMEN[1]

No. of methods spontaneously mentioned	Employment status		
	Unemployed	Employed	All
0	16.86 (1178)	19.17 (129)	17.07 (1307)
1	22.62 (1580)	19.02 (128)	22.30 (1708)
2	27.09 (1892)	25.26 (170)	26.93 (2062)
3	18.22 (1273)	19.91 (134)	18.37 (1407)
4+	15.20 (1062)	16.64 (112)	15.33 (1174)
Total[a]	100.00 (6985)	100.00 (673)	100.00 (7658)
Mean Number of Methods	2.07	2.12	2.08

Chi Square = 8.01 with 4 degrees of freedom - not significant.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.5

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY AREA OF RESIDENCE[1]

No. of methods spontaneously mentioned	Area of residence		
	Rural	Urban	All
0	18.34 (1267)	5.58 (42)	17.09 (1309)
1	23.10 (1596)	14.87 (112)	22.29 (1708)
2	27.50 (1900)	21.51 (162)	26.92 (2062)
3	17.98 (1242)	21.78 (164)	18.35 (1406)
4	8.38 (579)	17.13 (129)	9.24 (708)
5+	4.69 (324)	19.12 (144)	6.11 (468)
Total[a]	100.00 (6908)	100.00 (753)	100.00 (7661)
Mean Number of Methods	1.94	3.07	2.05

Chi Square = 386.83 with 5 degrees of freedom-significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

non-Muslims are Hindus and therefore any inference about the non-Muslim group may for practical purposes be taken as an inference about Hindus. The chi square value for this contingency table is 23.8 with 5 degrees of freedom, which implies significance.

Table-3.6

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY RELIGION[1]

No. of methods spontaneously mentioned	Religion		
	Islam	Other	All
0	16.54 (1122)	21.35 (187)	17.09 (1309)
1	22.66 (1537)	19.41 (170)	22.29 (1707)
2	27.33 (1854)	23.63 (207)	26.91 (2061)
3	18.06 (1225)	20.66 (181)	18.36 (1406)
4	10.07 (638)	7.99 (70)	9.24 (708)
5+	6.00 (407)	6.96 (61)	6.11 (468)
Total[a]	100.00 (6783)	100.00 (876)	100.00 (7659)
Mean Number of Methods	2.05	2.02	2.05

Chi Square = 23.84 with 5 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.7 presents the cross-classification of the number of modern methods spontaneously mentioned with the total number of modern contraceptive methods known with source. Percentages along the first row of the table clearly show a decreasing trend - the higher the number of modern methods known with source, the lower the percentage of women who could not mention any method or only one method spontaneously. A considerably greater percentage of those (68.4 percent) having no

Table-3.7

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY NUMBER OF MODERN METHODS KNOWN WITH SOURCE[1]

No. of methods spontaneously mentioned	Modern methods known with source			All
	0-1	2-4	5+	
0-1	68.39 (1387)	39.90 (1300)	13.92 (330)	39.41 (3017)
2-4	31.46 (638)	58.75 (1914)	68.48 (1623)	54.53 (4175)
5+	0.15 (3)	1.35 (44)	17.59 (417)	6.06 (464)
Total[a]	100.00 (2028)	100.00 (3258)	100.00 (2370)	100.00 (7656)
Mean Number of Methods	1.05	1.83	3.19	2.05

Chi Square = 1872.77 with 4 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

knowledge or knowledge of only one modern method with source than those with knowledge of a larger number of modern methods with source, could not mention any modern method or mentioned only one modern method spontaneously. Overall, a much greater percentage of women knowing a larger number of modern methods with source also spontaneously mentioned a larger number of modern methods.

The chi square value for this table is 1872.8 with 4 degrees of freedom, which is highly significant.

The variables "number of modern methods spontaneously mentioned" and "current use" are cross-classified in table-3.8.

Table-3.8

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY CURRENT USE[1]

No. of methods spontaneously mentioned	Current use		
	Using	Not using	All
0	4.50 (66)	20.06 (1242)	17.08 (1308)
1	16.44 (241)	23.70 (1467)	22.31 (1708)
2	24.35 (357)	27.52 (1704)	26.92 (2061)
3	24.90 (365)	16.81 (1041)	18.36 (1406)
4	15.08 (221)	7.87 (487)	9.25 (708)
5+	14.73 (216)	4.04 (250)	6.09 (466)
Total[a]	100.00 (1466)	100.00 (6191)	100.00 (7657)

Chi Square = 532.00 with 5 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

The percentages of women in the two categories - currently using and not currently using family planning methods - who could not mention any modern method spontaneously, are 4.5 and 20.1

respectively. In general, the table suggests that a larger proportion of those using contraception could spontaneously mention more modern methods than those not using contraception. The chi square is 532.0 with 5 degrees of freedom.

The last variable cross-classified with the number of modern methods mentioned is landownership (whether the respondent's family owned cultivable land). The percentages of women in the two categories of landownership who could not mention any modern method spontaneously differ by 2.6 points (table-3.9). A greater percentage of those having no cultivable land were unable to mention any method spontaneously. Up to three modern methods, the percentages of those having no cultivable land are slightly higher than those having cultivable land. For four or more modern methods, the pattern is reversed - greater percentages of those having cultivable land spontaneously mentioned more methods. The chi square value of 32.9 with 5 degrees of freedom implies a significant association between the two variables.

3.4.2 Number of Modern Methods Known with Source

Table-3.10 presents the bivariate table involving the variables "number of modern methods known with source" and "age." The percentages of women in different age groups who were not aware of any method with source first decrease, although not sharply, from 14.8 in the 25 or less age group to 13.3 in the age group 25-34 and then increase to 19.7 for ages 35 or more. A similar pattern is observed for one and two contraceptive methods known with source except that the increase in this case is much less pronounced. For three or four methods known with source, the percentages increase from 26.4 in the age group of 25 years or less to 30.2 in the age group of 35 years or more. For five or more methods known with source, a monotonic decrease is observed.

Table-3.11 shows the cross-classification of the number of modern methods known with source and the number of living children. The percentages of women having different numbers of living children who were not aware of any method with source, do not show any noteworthy variation. For three or four methods known with source, however, the percentages gradually increase from 26.3 in the three or fewer living children category to 32.6 in the 7 or more living children category. For five or more methods known with source, a decreasing trend in the percentages is evident.

Table-3.9

NUMBER OF MODERN METHODS SPONTANEOUSLY MENTIONED, BY LANDOWNERSHIP[1]

No. of methods spontaneously mentioned	Landownership		
	Owns culti-vable land	Does not own cultivable land	All
0	16.25 (839)	18.84 (469)	17.09 (1308)
1	22.06 (1139)	22.81 (568)	22.30 (1707)
2	26.86 (1387)	27.03 (673)	26.92 (2060)
3	18.23 (941)	18.59 (463)	18.35 (1404)
4	9.53 (492)	8.63 (215)	9.24 (707)
5+	7.07 (365)	4.10 (102)	6.10 (467)
Total[a]	100.00 (5163)	100.00 (2490)	100.00 (7653)
Mean Number of Methods	2.11	1.92	2.05

Chi Square = 32.92 with 5 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.10

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY AGE[1]

Methods known with source	Age: 25 years or less	Age: 25-34	Age: 35 years or more	All
0	14.84 (490)	13.32 (332)	19.69 (367)	15.52 (1189)
1-2	26.35 (870)	24.63 (614)	25.91 (483)	25.68 (1967)
3-4	26.35 (870)	28.00 (698)	30.15 (562)	27.81 (2130)
5+	32.47 (1072)	26.30 (849)	24.25 (452)	30.98 (2373)
Total[a]	100.00 (3302)	100.00 (2493)	100.00 (1864)	100.00 (7659)

Chi Square = 74.79 with 6 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.11

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY LIVING CHILDREN[1]

Methods known with source	Living children			All
	3 or less	4-6	7 or more	
0	15.63 (742)	15.53 (341)	14.92 (107)	15.54 (1190)
1-2	25.63 (1217)	25.01 (549)	27.89 (200)	25.67 (1966)
3-4	26.33 (1250)	29.57 (649)	32.64 (234)	27.85 (2133)
5+	32.41 (1539)	29.89 (656)	24.55 (176)	30.95 (2371)
Total[a]	100.00 (4748)	100.00 (2195)	100.00 (717)	100.00 (7660)

Chi Square = 27.72 with 6 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Distribution of the number of modern methods known with source by educational level is presented in table-3.12. The percentages of women across the different educational levels who did not know any method with source shows a decreasing trend - 18.7 percent of those with no schooling did not know any method with source while only 4.8 percent of those having primary or more education were unaware of any method with source. The percentages for up to four methods known with source reveal that a relatively smaller proportion of women having higher education know fewer methods with source. The percentages for five or more methods known with source support this contention. Higher percentages of women having higher education knew greater number of methods with source.

Table-3.12

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY WOMEN'S EDUCATION[1]

Methods known with source	Women's education			All
	No schooling	Less than primary	Primary or more	
0	18.74 (972)	11.98 (165)	4.78 (52)	15.54 (1189)
1-2	29.86 (1549)	21.79 (300)	10.40 (113)	25.64 (1962)
3-4	29.46 (1528)	29.05 (400)	18.68 (203)	27.85 (2131)
5+	21.94 (1138)	37.18 (512)	66.15 (719)	30.96 (2369)
Total[a]	100.00 (5187)	100.00 (1377)	100.00 (1087)	100.00 (7651)

Chi Square = 895.38 with 6 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.13 is the bivariate table obtained by cross-classifying the number of modern methods known with source and employment status of women. A greater percentage of unemployed women (15.7 percent) knew no method with source than employed women (13.8 percent). The variability among the percentages for one or two methods known with source is not considerable. This is also true for other numbers of methods known with source. There is not a statistically significant relationship between these two variables in the population.

Table-3.13

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY EMPLOYMENT STATUS[1]

Methods known with source	Employment status		
	Unemployed	Employed	All
0	15.69 (1096)	13.84 (93)	15.53 (1189)
1-2	25.91 (1810)	23.34 (157)	25.69 (1967)
3-4	27.67 (1933)	29.61 (199)	27.84 (2132)
5+	30.72 (2146)	33.18 (223)	30.94 (2369)
Total[a]	100.00 (6985)	100.00 (672)	100.00 (7657)

Chi Square = 5.22 with 3 degrees of freedom - insignificant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

The variables "number of modern methods known with source" and "area of residence" are cross-classified in table-3.14. The percentages of women in the rural area and in the urban area who knew no contraceptive method with source differ significantly. A much higher percentage of rural women (16.4 percent) than urban women (7.7 percent) were unaware of any method with source. Also, a greater percentage (26.7 percent) of rural women than urban women (16.5 percent) knew only one method with source. On the other hand, a much higher percentage of urban women (53.3) than rural women (28.5) knew five or more methods with source. The chi square for this contingency table is 203.4 with 3 degrees of freedom, implying a highly significant association.

Table-3.14

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY AREA OF RESIDENCE[1]

Methods known with source	Area of residence		
	Rural	Urban	All
0	16.39 (1132)	7.71 (58)	15.54 (1190)
1-2	26.66 (1842)	16.49 (124)	25.67 (1966)
3-4	28.42 (1963)	22.47 (169)	27.83 (2132)
5+	28.53 (1971)	53.32 (40)	30.97 (2372)
Total[a]	100.00 (6908)	100.00 (752)	100.00 (7660)

Chi Square = 203.42 with 3 degrees of freedom - significant at percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.15 presents the cross-classification of the number of modern methods known with source and religion. The table shows that a greater percentage of non-Muslims (17.7 percent) than Muslims (15.3 percent) did not know any modern method of contraception with source. For one or more methods known with source the percentages for Muslims are greater than those for non-Muslims in most cases. The differences, however, are not large.

Table-3.15

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY RELIGION[1]

Methods known with source	Religion		
	Islam	Other	All
0	15.25 (1034)	17.71 (155)	15.53 (1189)
1-2	25.73 (1745)	25.14 (220)	25.67 (1965)
3-4	28.05 (1902)	26.17 (229)	27.83 (2131)
5+	30.97 (2100)	30.97 (271)	30.97 (2371)
Total[a]	100.00 (6781)	100.00 (875)	100.00 (7656)

Chi Square = 4.11 with 3 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.16 cross-classifies the number of modern methods known with source and workers' visits during the last six months. The table shows that a much greater percentage of women who were not visited by the family planning workers (19.8 percent) than women visited by the family planning workers (5.5 percent) knew no method with source. Also, for one or two methods known with source, the percentage for women not visited by family planning workers is greater than the percentage for women visited. The pattern is reversed thereafter. Among women knowing five or more methods with source, there is a greater percentage (43.6 percent) for those visited by family planning workers than for those not visited (25.5 percent). The chi square value is 428.3 with 3 degrees of freedom, which suggests a highly significant association between the variables.

Table-3.16

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY FAMILY PLANNING FIELD WORKER'S VISIT IN THE LAST SIX MONTHS[1]

Methods known with source	Visit in the last six months		
	Not visited	Visited	All
0	19.84 (1062)	5.50 (127)	15.52 (1189)
1-2	27.95 (1496)	20.37 (470)	25.67 (1966)
3-4	26.68 (1428)	30.52 (704)	27.84 (2132)
5+	25.52 (1366)	43.61 (1006)	30.97 (2372)
Total[a]	100.00 (5352)	100.00 (2307)	100.00 (7659)

Chi Square = 428.29 with 3 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.17 presents the cross-classification of the number of modern methods known with source and whether currently using family planning method. In general, women who know a large number of methods are more likely to be users.

Table-3.17

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY CURRENT USE[1]

Methods known with source	Current use		
	Using	Not using	All
0	1.63 (24)	18.83 (1136)	15.54 (1190)
1-2	16.21 (238)	27.91 (1728)	25.67 (1966)
3-4	27.86 (409)	27.83 (1723)	27.84 (2132)
5+	54.29 (797)	25.42 (1574)	30.96 (2371)
Total[a]	100.00 (1468)	100.00 (6191)	100.00 (7659)

Chi Square = 608.61 with 3 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

The variables - number of methods known with source and land-ownership - have been cross-classified in table-3.18. The table shows that a larger percentage of those who do not own cultivable land (16.9 percent) are not aware of any modern contraceptive method with source than those who do own (14.9 percent). For one or two modern methods known with source, the percentage (28.5 percent) for those who have no cultivable land is greater than the percentage (24.4 percent) for those who have. Although for three or four methods known, the percentage differential is small, for five or more methods known with source, the percentage for women having cultivable land is considerably greater than the percentage of women who do not have cultivable land. This means that a greater percentage for women in households that own cultivable land are aware of a greater number of modern methods with source than are women in households that do not own of cultivable land.

Table-3.18

NUMBER OF MODERN METHODS KNOWN WITH SOURCE, BY LANDOWNERSHIP[1]

Methods known with source	Landownership: Owns cultivable land	Landownership: Does not own cultivable land	All
0	14.87 (768)	16.91 (421)	15.53 (1189)
1-2	24.36 (1258)	28.47 (709)	25.70 (1967)
3-4	28.00 (1446)	27.47 (684)	27.82 (2130)
5+	32.78 (1693)	27.15 (676)	30.95 (2369)
Total[a]	100.00 (5165)	100.00 (2490)	100.00 (7655)

Chi Square = 32.95 with 3 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

3.4.3 Visits by a Family Planning Worker

This next set of tables examines the relationship between visits by a family planning fieldworker and various characteristics of the women. Table-3.19 relates family planning worker visits to age. The percentages of women in different age groups who were not visited by any family planning worker during the last six months decrease first with age from 72.0 percent in the age group - 25 years or less - to 65.4 percent in the age group 25-34 and then increase to 72.1 percent in the oldest age group - 35 years or more.

As has been observed previously, younger women are unlikely to have attained their desired family size and therefore

are not likely to be interested in family planning services. Older women, who, on the other hand, may have more traditional views, are also less likely to accept family planning services. This leaves women in the middle age range as the easiest targets for family planning services, and as such they are more frequently visited. Percentages in the second row of the table substantiate our assumption: more women in the middle age range are visited by the family planning workers than women in the younger or older age groups.

Table-3.19

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY AGE[1]

Whether visited	Age			All
	25 years or less	25-34	35 years or more	
Not visited	72.00 (2379)	65.40 (1629)	72.06 (1344)	69.87 (5352)
Visited	28.00 (925)	34.60 (862)	27.94 (521)	30.13 (2308)
Total[a]	100.00 (3304)	100.00 (2491)	100.00 (1865)	100.00 (7660)

Chi Square = 35.10 with 2 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Cross-classification of whether the woman was visited with the number of living children is presented in table-3.20. The highest percentage of women not visited (71.4 percent) were those with three or fewer living children. The percentage then decreases to 67 for 4 to 6 living children, and, thereafter slightly increases to 68.9 for 7 or more living children. The pattern is not far from what was expected. Women with no or few living children are less interested in family planning services. On the other hand, women with a large number of living children are relatively older and may hold more traditional views. The percentages for women who were visited support our contention:

the percentage is the highest (33.0 percent) for women with 4-6 living children.

Table-3.20

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY LIVING CHILDREN[1]

Whether visited	Living children			All
	3 or less	4-6	7 or more	
Not visited	71.37 (3388)	66.96 (1467)	68.89 (496)	69.87 (5351)
Visited	28.63 (1359)	33.04 (724)	31.11 (224)	30.13 (2307)
Total[a]	100.00 (4747)	100.00 (2191)	100.00 (720)	100.00 (7658)

Chi Square = 14.25 with 2 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

In table-3.21 visits have been cross-classified with educational level. The table shows that the percentages of women in different educational categories who were not visited decreases with increases in educational level. Visits are cross-classified with the employment status of women in table-3.22. It appears from the table that there are not important differences between the two employment categories.

Table-3.21

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY WOMEN'S EDUCATION[1]

Whether visited	Women's education			All
	No schooling	Less than primary	Primary or more	
Not visited	72.03 (3736)	66.16 (911)	64.15 (698)	69.85 (5345)
Visited	27.97 (1451)	33.84 (466)	35.85 (390)	30.15 (2307)
Total[a]	100.00 (5187)	100.00 (1377)	100.00 (1088)	100.00 (7652)

Chi Square = 37.34 with 2 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.22

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY EMPLOYMENT STATUS[1]

Whether visited	Employment status: Unemployed	Employed	All
Not visited	70.01 (4889)	68.45 (460)	69.88 (5349)
Visited	29.99 (2094)	31.55 (212)	30.12 (2306)
Total[a]	100.00 (6983)	100.00 (672)	100.00 (7655)

Chi Square = 76.71 with 1 degree of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.23 cross-classifies visits of a fieldworker with area of residence. The table shows a small but not significant variation between the percentages of women in rural and urban areas who were not visited (69.7 percent and 71.7 percent respectively). Similarly, religion does not seem to be an important factor in whether or not a woman received a visit (table-3.24). On the other hand visits do seem to be related to number of modern methods known with source (table-3.25). The highest percentage (84.8 percent) of those not visited is among those who do not know any method and its source. For those who were visited, the trend is reversed. Those having knowledge of a larger number of contraceptive methods with source were more likely to have been visited by family planning workers. A small percentage of those (15.2 percent) having no knowledge or knowledge of only one method with source were visited by family planning workers. The chi square is 385.0 with 2 degrees of freedom, which implies a highly significant association between the variables.

Table-3.23

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY AREA OF RESIDENCE[1]

Whether visited	Area of residence		
	Rural	Urban	All
Not visited	69.67 (4813)	71.77 (539)	69.88 (5352)
Visited	30.33 (2095)	28.23 (212)	30.12 (2307)
Total[a]	100.00 (6908)	100.00 (751)	100.00 (7659)

Chi Square = 1.33 with 1 degree of freedom - insignificant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.24

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY RELIGION[1]

Whether visited	Religion		
	Islam	Others	All
Not visited	69.84 (4736)	70.01 (614)	69.86 (5350)
Visited	30.16 (2045)	29.99 (263)	30.14 (2308)
Total[a]	100.00 (6781)	100.00 (877)	100.00 (7658)

Chi Square = 0.01 with 1 degree of freedom
- insignificant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.25

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY NUMBER OF MODERN METHODS KNOWN WITH SOURCE[1]

Whether visited	Methods known with source			All
	0-1	2-4	5+	
Not visited	84.81 (1719)	69.54 (2267)	57.59 (366)	69.88 (5352)
Visited	15.19 (308)	30.46 (993)	42.41 (1006)	30.12 (2307)
Total[a]	100.00 (2027)	100.00 (3260)	100.00 (2372)	100.00 (7659)

Chi Square = 384.96 with 2 degrees of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.26 presents the cross-classification of visits with current use. A higher percentage of women (72.2 percent) not currently using any family planning method were not visited by family planning workers than those currently using family planning methods (60.0 percent). Table-3.27 is the cross-classification of visits with landownership. Women from landless households were less likely to be visited than women from households that owned land.

Table-3.26

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY CURRENT USE[1]

Whether visited	Current use		All
	Using	Not using	
Not visited	59.99 (880)	72.22 (4471)	69.87 (5351)
Visited	40.01 (587)	27.78 (1720)	30.13 (307)
Total[a]	100.00 (1467)	100.00 (6191)	100.00 (7658)

Chi Square = 84.15 with 1 degree of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

Table-3.27

FAMILY PLANNING WORKER'S VISIT IN THE LAST SIX MONTHS, BY LANDOWNERSHIP[1]

Whether visited	Landownership		All
	Owns cultivable land	Does not own cultivable land	
Not visited	68.75 (3550)	72.21 (1798)	69.87 (5348)
Visited	31.25 (1614)	27.79 (692)	30.13 (2306)
Total[a]	100.00 (5164)	100.00 (2490)	100.00 (7654)

Chi Square = 9.57 with 1 degree of freedom - significant at 5 percent level.

1 Figures within brackets are the number of currently married women in the 1983 CPS eligible woman sample.

a The percentages in a column may not add to 100 due to rounding error.

3.5 Results: Multivariate Analysis

In order to consider the impact of all the independent variables simultaneously on availability, regression analyses were carried out. Results of the stepwise multivariate regression analysis of the socioeconomic and demographic variables on the number of methods spontaneously mentioned are presented in table-3.28.

Table-3.28 shows that more than 40 percent of the variation in the number of methods spontaneously mentioned is explained by the nine variables - number of methods known with source, area of residence, education, number of living children, current use status, age, employment status, landownership, and religion - operating jointly.

Table-3.28

REGRESSION OF THE NUMBER OF METHODS SPONTANEOUSLY MENTIONED ON SELECTED INDEPENDENT VARIABLES

Independent variables	B Co-efficient	Beta	R2
No. of methods known with source	0.33988*	0.50313	0.35659
Area of residence	0.51760*	0.13559	0.37745
Education	0.45801*	0.13413	0.39450
No. of living children	-0.00423*	-0.06225	0.39739
Current use status	0.32888*	0.04230	0.39918
Age	-0.00605*	-0.03391	0.40014
Employment status	0.07390**	0.01289	0.40028
Landownership	0.03708***	0.01097	0.40038
Religion	-0.02453***	-0.00475	0.40041
constant	0.93591		

* P< .001

** P< .2

*** Not significant even at 20 percent level.

In general the results indicate that urban women are likely to mention significantly more methods than rural women and more educated women mention more methods than less educated women. Current users of contraception are likely to mention more methods than nonusers and employed women mention more methods than unemployed women. On the other hand, older women mention fewer methods than younger women.

Table-3.29 shows the regression results of the number of methods known with source on the predictor variables. A little over 20 percent of the variation in the number of methods known with source was explained by the nine independent variables considered. The F test has shown the regression equation to be highly significant.

Table-3.29

REGRESSION OF THE NUMBER OF METHODS KNOWN WITH SOURCE ON SELECTED INDEPENDENT VARIABLES

Independent variables	B co-efficient	beta	R2
Education	1.39160*	0.27530	0.11792
Area of residence	1.14797*	0.20315	0.15829
Visit by FP worker	-0.16202*	-0.15654	0.18607
Current use status	1.13630*	0.09872	0.19629
Employment status	0.44519*	0.05244	0.19831
Landownership	0.22801*	0.04556	0.02001
Age	-0.01235*	-0.04679	0.20119
Number of living children	-0.00395*	-0.03933	0.20258
Religion	0.15402**	0.02014	0.20298
Constant	3.64661		

* P<.001

** P<.05

The table shows that the women who attended school know, on the average, 1.39 more methods with source than women who did not attend school at all. Urban women know 1.15 more methods with source than rural women, current users know 1.14 more methods than nonusers, employed women know .45 more methods than unemployed women, and women in households that own cultivable land know .23 more methods than women in households that do not own cultivable land.

The mean number of methods known to Muslim women is .15

more than that known to non-Muslim women. Also, age and number of living children are negatively associated with the number of modern methods known with source. The expected value of this measure of availability decreases by .01 with a one-year increase in age, and by .004 with a one-child increase in the number of living children.

The beta co-efficients show that, other things being equal, a change in education would introduce the greatest positive change in the number of methods known with source, while whether a woman is an urbanite ranks second with respect to positive impact on the dependent variable. Religion has the least impact on number of methods known with source.

3.6 Conclusions

In this analysis, contraceptive availability and its correlates have been examined. Three dimensions of availability - number of modern methods spontaneously mentioned, number of modern methods known with source, and whether a woman was visited by any family planning worker during the last six months - have been examined in terms of the independent variables - age, number of living children, education, employment status, area of residence, religion, whether currently using family planning methods, and landownership. In addition, number of modern methods known with source has been used as an independent variable while analyzing the number of modern methods spontaneously mentioned. Each of the other two measures of availability was used as an independent variable while analyzing the other.

The number of modern methods spontaneously mentioned has been found to be significantly associated with all the independent variables considered with the exception of employment status. The level of this association is extremely high for women's education and number of modern methods known with source. Only employment status and religion have no significant association in the bivariate analysis with the second measure of availability - number of modern methods known with source. Women's education, as before, and current use of contraception show the strongest association with availability. Area of residence and religion are not significantly associated with fieldworker visits. The other eight independent variables are significantly associated with fieldworker visits. Number of modern methods known with source and current use status have the strongest relationship with the dependent variable.

A number of interesting findings emerge from the multivariate analyses. Women who attended school spontaneously mentioned more methods and knew more methods with source. A

similar relationship was observed for urbanites, current users of contraception, employed women, and owners of cultivable land when contrasted, respectively, with rural residents, current nonusers, unemployed women, and nonowners of cultivable land. Age and number of living children have a negative relationship with number of methods spontaneously mentioned and number of methods known with source. While Muslim women spontaneously mentioned fewer methods than non-Muslim women, they knew, on average, a greater number of methods with source.

This study has a number of policy implications. Even the simple dichotomization of the education variable produced a difference of .46 methods in the average number of methods mentioned spontaneously, and a difference of 1.39 methods in the average number of methods known with source. Also, we have seen that the greatest positive impact on knowledge of methods with source would be produced by an increase in education. As for spontaneous knowledge, education ranks third in magnitude of positive impact. In general, the study points to the importance of improving family planning services in the rural areas and of improving access to education.

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4. REASONS FOR NONUSE

by

Barkat-e-Khuda
and
Sushil Ranjan Howlader

4.1 Introduction

Despite the fact that over 98 percent of the ever-married women under 50 years of age in Bangladesh knew of at least one modern method of contraception, and despite the wide-ranging government efforts to provide family planning services to the whole country, still only about 14 percent of these women were using modern contraception in 1983.

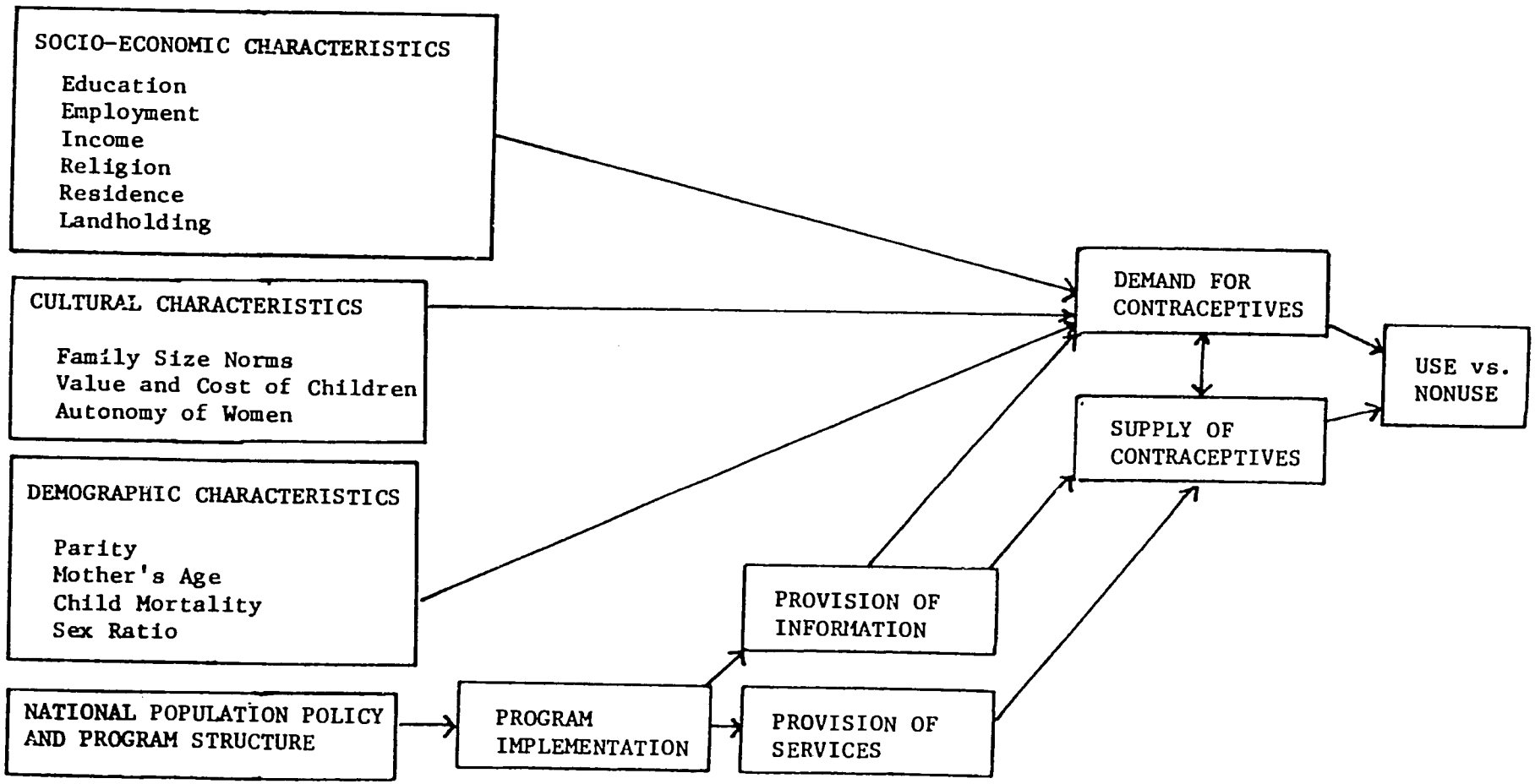
In analyzing factors related to nonuse of contraception in Bangladesh, both supply and demand factors must be considered: contraceptive use may be low because the services are not widely available or it may be low because women simply do not want to use contraception. It seems likely that both constraints are contributing to the low rate of current use. The purpose of this paper is to identify the various supply and demand constraints on the use of family planning in Bangladesh and to place these factors within a conceptual framework.

4.2 Framework for Analysis

Figure 4.1 presents a schematic representation of the factors which can influence use or nonuse of contraception. Starting on the left side of the diagram, we assume that all socioeconomic, cultural, demographic, and programmatic factors affect the probability of use (or nonuse) through their impact on the demand for contraceptives and/or the supply of contraceptives. Supply of contraceptives is largely regulated by the family planning program, and the direction of the impact seems clear: more program activity, both in terms of delivery of services and delivery of information, leads to greater supply and higher probability of use. Although this may seem simple initially, supply factors (the availability of services) can be difficult to measure. Reported nonavailability of services is certainly a constraint on use. It should be noted, however, that the lack of knowledge of existing services may account for some of the reported nonavailabiliity. It may also be the case that certain methods are widely available but that an appropriate method for a specific woman with a specific set of demographic and medical characteristics is lacking. There is an important distinction between availability of any method and availability

Figure 4.1

Determinants of Use vs. Nonuse of Contraception



of culturally, medically, and demographically acceptable methods delivered in a highly accessible way.

Demand factors can be even more complicated. Demand may be related to a wide range of socioeconomic, demographic and cultural factors, including education, employment, landholding, income, religion, place of residence, etc. It also depends on the age, parity, and child mortality experience of the woman. Demand depends as well on cultural norms concerning family size and related beliefs about the value and cost of children. In general, demand for contraception seems to be positively related to education, employment, landholding status, income, exposure to mass media, urban residence, non-Muslim religion, and higher age and parity of the woman. It should be noted, however, that demand is clearly linked with supply of information (or knowledge about contraception). To the extent that information about methods and services may be differentially available to various groups of women this may contribute to differences in demand. A detailed analysis of sociodemographic characteristics and their interactions with supply factors is necessary to understand the determinants of nonuse.

4.3 Results

Women who reported in the 1983 Contraceptive Prevalence Survey that were not currently using contraception were asked to report the main reason for their nonuse. These women were also asked if they would use contraception any time in the future. If they responded no, they were again asked the main reason. This analysis will focus, however, only on the reasons for current nonuse. The question was open ended and responses included desire for additional children (DAC), husband's objection to family planning (HOB), religiosity (REL), respondent's belief that she is unable to bear children (FEC), breastfeeding and postpartum amenorrhoea (BFP), nonavailability of methods (AVL), health reasons (HTH), and fear of side effects (SID). We analyze six socioeconomic characteristics that are related to nonuse: age, education, landownership, employment, place of residence, and religion. Differentials among various categories of these characteristics are considered for various reasons for nonuse.

Reasons for nonuse in the overall sample are striking (table-4.1). The desire for more children is by far the major reason for nonuse in both rural and urban areas (36.4 and 33.1 percent, respectively). Furthermore, it is not only couples of low parity who are not using contraception because of a desire for more children: about 40 percent of the respondents who had more than two boys and two girls said they were not using contraception because they desired more children.

Table-4.1

PERCENTAGE OF CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE NOT CURRENTLY USING CONTRACEPTIVES, BY THE MAIN REASONS FOR NONUSE

Main reasons for non-use of contraceptives	National	Rural	Urban
Desire for additional children (DAC)	36.2	36.4	33.1
Objections by husband (HOB)	4.7	4.5	6.2
Health reasons (HTH)	4.1	3.9	7.0
Fear for side effects (SID)	4.4	4.5	4.2
Religious reasons (REL)	8.4	8.8	4.2
Wife believed she was unable to have children (FEC)	14.4	14.4	14.4
Nonavailability of methods (AVL)	2.2	2.3	1.0
Breastfeeding (BFP)	1.4	1.4	1.7
Post-amenorrhoea	12.5	12.3	15.4
Other	5.2	5.0	7.3
Don't know/no reason	6.4	6.5	5.5
Total	99.9a	99.9a	100.0
N1	5024b,c	4804b	1153

1 N in this table is the total number of currently married women, excluding those who were currently pregnant, current users, and the NS (Not Stated) cases, if any, for the question about the main reasons for nonuse of contraceptives.

a Totals are less than 100 percent due to rounding errors.

b The number of NS cases was 1 for national and 1 for rural.

c Weighted total.

Source: Bangladesh Contraceptive Prevalence Survey - 1983, Mitra and Kamal, 1985, p. 242.

side effects or health reasons. It could be argued, however, that fear of side effects represents an information supply constraint and that women who cite health reasons are constrained by supply as well in that acceptable methods are not perceived as being available.

Twenty-seven percent of the women believed they were infecund or amenorrhoeaic and therefore not in need of contraception. Additionally, 1.4 percent of the women stated they were not using contraception because they were breastfeeding. Finally, although only 2.2 percent of the women nationally gave nonavailability of services as their main reason for nonuse, it is possible that this underestimates the total number of women (regardless of their main reason for nonuse) who think services are unavailable. For example we do not know what percentage of the women who thought they were infecund thought that services were available.

An examination of reasons for current nonuse of family planning by selected characteristics of the respondents provides insight into how various constraints to the adoption of family planning vary across different groups of respondents. In each of the tables data are broken down by the number and sex of living children in order to control for family structure in analyzing the socioeconomic and demographic variables. In the remaining tables in this chapter, the first number in each cell is the row percentage, the second is the column percentage, and the number in parentheses is the number of cases.

Table-4.2 focuses on the impact of age (being either less than or more than 30). The proportion of older women who said they were not using contraceptives because they desired additional children was, not surprisingly, much higher for the younger women. On the other hand older women cited religion, infecundity, nonavailability of services, health reasons, and fear of side effects as the major reasons for nonuse.

In considering education (table-4.3) among the current nonusers, the desire for additional children was cited more often by those who had been to school than by women who had not been to school. Those who had been to school were generally younger than those who had not been to school. Religiosity as a constraint to the adoption of family planning was less pronounced among those who had been to school than among those who had not been to school. Among the current nonusers, the proportion reporting the unavailability of methods as the reason for nonuse of family planning declined with a rise in education. The more educated one is, the more one is likely to be aware of the supply points. The proportion reporting side effects as the major reason also declined with a rise in education.

Table-4.2

CHILDREN NOW ALIVE BY SEX, BY REASONS FOR NONUSE BY AGE

	Women Less Than 30								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	89.90 1.06 (89)	-	4.04 1.97 (4)	-	2.02 0.29 (2)	-	1.01 0.95 (1)	-	3.03 1.69 (3)	100.00 3.07 (99)
1 Boy	60.78 3.32 (279)	3.05 9.40 (14)	4.58 10.34 (21)	0.22 5.00 (1)	20.70 13.63 (95)	1.74 11.59 (8)	1.09 4.76 (5)	1.96 7.38 (9)	5.88 15.17 (27)	99.99 14.24 (459)
1 Girl	64.10 3.16 (266)	2.89 8.05 (12)	4.34 8.87 (18)	0.48 10.00 (2)	18.80 11.19 (78)	1.45 8.70 (6)	0.72 2.86 (3)	2.17 7.38 (9)	5.06 11.80 (21)	100.0 12.87 (415)
1b + 1g	40.95 1.53 (129)	5.40 11.41 (17)	6.35 9.85 (20)	0.32 5.00 (1)	27.30 12.34 (86)	2.22 10.14 (7)	5.40 16.19 (17)	4.44 11.48 (14)	7.94 14.04 (25)	100.00 9.77 (315)
2b	38.33 0.82 (69)	4.44 5.37 (8)	6.11 5.42 (11)	1.11 10.00 (2)	33.89 8.75 (61)	2.22 5.80 (4)	2.78 4.76 (5)	5.56 8.20 (10)	5.56 5.62 (10)	100.01 5.58 (180)
2g	59.43 1.24 (104)	1.71 2.01 (3)	4.57 3.94 (8)	0.57 5.00 (1)	26.29 6.60 (46)	1.14 2.90 (2)	2.29 3.81 (4)	1.71 2.46 (3)	2.29 2.25 (4)	100.00 5.43 (175)
2b + 1g	20.19 0.50 (42)	9.13 12.75 (19)	12.98 13.30 (27)	0.48 5.00 (1)	37.02 11.05 (77)	1.92 5.80 (4)	5.29 10.48 (11)	7.69 13.11 (16)	5.29 6.18 (11)	100.0 6.45 (208)
1b + 2g	28.57 0.64 (54)	6.88 8.72 (13)	10.05 0.36 (19)	1.06 10.00 (2)	32.80 8.90 (62)	3.17 8.70 (6)	7.94 14.29 (15)	4.23 6.56 (8)	5.29 5.62 (10)	100.0 5.86 (189)
2b + 2g	13.33 0.17 (14)	11.43 8.05 (12)	16.19 6.37 (17)	-	36.19 5.45 (38)	4.76 7.25 (5)	10.48 10.48 (11)	3.81 3.28 (4)	3.81 2.25 (4)	100.0 3.26 (105)
> 2b + 2g	58.94 7.56 (636)	4.73 34.23 (51)	5.38 28.57 (58)	0.93 50.00 (10)	14.09 21.81 (152)	2.50 39.43 (27)	3.06 31.43 (33)	3.54 40.16 (49)	5.84 35.39 (63)	100.0 33.47 (1079)
Total	52.17	4.62	6.30	0.62	21.62	2.14	3.26	3.78	5.52	100.0
N	1682	149	203	20	697	69	105	122	178	3224

Table-4.2 (continued)

	Women Older Than 30								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	47.4 4.5 (9)	-	-	42.1 1.1 (8)	5.3 0.3 (1)	-	-	-	5.3 0.6 (1)	100.0 1.0 (19)
1 Boy	37.1 6.4 (13)	2.9 1.1 (1)	2.9 0.4 (1)	40.0 1.9 (14)	5.7 0.7 (2)	-	5.7 1.9 (2)	-	5.7 1.3 (2)	100.0 1.8 (35)
1 Girl	60.0 8.9 (18)	-	-	23.3 1.0 (7)	-	3.3 2.3 (1)	-	3.3 0.9 (1)	10.0 1.9 (3)	100.0 1.5 (30)
1b + 1g	18.5 5.7 (12)	3.1 2.1 (2)	6.2 1.7 (4)	40.0 3.6 (26)	13.8 3.0 (9)	-	7.7 4.6 (5)	3.1 1.9 (2)	7.7 3.2 (5)	100.0 3.0 (65)
2b	25.0 4.5 (9)	8.3 3.2 (3)	11.1 1.7 (4)	22.2 1.1 (8)	11.1 1.4 (4)	-	2.8 0.9 (1)	2.8 0.9 (1)	16.7 3.9 (6)	100.1 1.8 (36)
2g	41.2 6.9 (14)	-	2.9 0.4 (1)	23.5 1.1 (8)	17.6 2.0 (6)	-	5.9 1.9 (2)	-	8.8 1.9 (3)	100.0 1.7 (34)
2b + 1g	18.3 7.4 (15)	4.9 4.3 (4)	11.0 3.9 (9)	28.0 3.2 (23)	23.2 6.4 (19)	2.4 4.7 (2)	3.7 2.8 (3)	1.2 0.9 (1)	7.3 3.9 (6)	100.0 4.2 (82)
1b + 2g	13.4 4.5 (9)	6.0 4.3 (4)	9.0 2.6 (6)	34.3 3.2 (23)	10.4 2.4 (7)	3.0 4.7 (2)	10.4 6.5 (7)	4.5 2.8 (3)	9.0 3.9 (6)	100.0 3.4 (67)
2b + 2g	6.1 3.5 (7)	3.5 4.3 (11)	14.0 6.9 (16)	32.4 5.1 (37)	23.7 9.1 (27)	3.5 9.3 (4)	6.1 6.5 (7)	6.1 6.5 (7)	4.4 3.2 (5)	100.0 5.8 (114)
> 2b + 2g	6.5 47.5 (96)	5.1 80.9 (76)	12.9 82.3 (191)	38.7 78.8 (574)	14.9 74.7 (221)	2.3 79.1 (34)	5.5 75.0 (81)	6.3 86.1 (93)	8.0 76.1 (118)	100.0 75.5 (1484)
Total	10.2	4.8	11.8	37.0	15.1	2.2	5.5	5.5	7.9	100.0
N	202	94	232	728	296	43	108	108	155	1966

Table-4.3

CHILDREN NOW ALIVE BY SEX, BY REASONS FOR NONUSE BY EDUCATION

	No Schooling								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	79.5 4.7 (62)	-	2.6 0.6 (2)	7.7 1.0 (6)	3.8 0.5 (3)	-	1.3 0.8 (1)	-	5.1 1.6 (4)	100.0 2.1 (78)
1 Boy	63.9 15.3 (200)	2.2 4.4 (7)	4.8 4.7 (15)	2.6 1.4 (8)	16.9 8.4 (53)	1.3 4.6 (4)	1.0 2.3 (3)	1.6 3.0 (5)	5.8 7.2 (18)	100.0 8.6 (313)
1 Girl	67.2 15.9 (209)	2.3 4.4 (7)	3.5 3.4 (11)	1.9 1.0 (6)	15.8 7.7 (49)	1.3 4.6 (4)	1.0 2.3 (3)	1.6 3.0 (5)	5.3 6.8 (17)	100.1 8.5 (311)
1b + 1g	38.5 7.7 (101)	6.1 10.0 (16)	6.9 5.6 (18)	7.6 3.4 (20)	22.1 9.2 (58)	2.3 6.9 (6)	5.3 10.6 (14)	2.7 4.2 (7)	8.4 8.8 (22)	100.0 7.2 (262)
2b	37.5 4.3 (57)	5.3 5.0 (8)	6.6 3.1 (10)	5.3 1.4 (8)	28.3 6.8 (43)	1.3 2.3 (2)	0.6 0.8 (1)	5.9 5.5 (9)	9.2 5.6 (14)	100.0 4.2 (152)
2g	57.6 6.1 (80)	0.7 0.6 (1)	3.6 1.6 (5)	7.2 1.7 (10)	22.3 4.9 (31)	1.4 2.3 (2)	2.1 2.3 (3)	1.4 1.2 (2)	3.6 2.0 (5)	100.0 3.8 (139)
2B + 1g	21.5 3.4 (44)	7.8 10.0 (16)	13.2 8.4 (27)	10.2 3.6 (21)	28.3 9.2 (58)	1.5 3.4 (3)	4.9 7.6 (10)	5.4 6.7 (11)	7.3 6.0 (15)	100.0 5.6 (205)
1b + 2g	29.4 4.0 (52)	6.2 6.9 (11)	10.2 5.6 (18)	10.2 3.1 (18)	21.5 6.0 (38)	3.9 8.0 (7)	7.3 9.8 (13)	3.4 3.6 (6)	7.9 5.6 (14)	99.9 4.8 (177)
2b + 2g	9.2 1.2 (16)	6.9 7.5 (12)	16.7 9.0 (29)	18.4 5.4 (32)	27.0 7.4 (47)	5.2 10.3 (9)	7.5 9.8 (13)	5.2 5.5 (9)	4.0 2.8 (7)	100.0 4.8 (174)
> 2b + 2g	26.6 37.4 (490)	4.5 51.3 (82)	10.2 58.1 (187)	25.1 78.1 (461)	13.8 40.0 (253)	2.7 57.5 (50)	3.9 53.8 (71)	6.0 67.3 (111)	7.3 53.8 (135)	100.0 50.4 (1840)
Total	35.9	4.4	8.8	16.2	17.3	2.4	3.6	4.5	6.9	100.0
N	1311	160	322	590	633	87	132	165	251	365

Table-4.3 (continued)

	Primary Schooling								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	87.5 6.6 (28)	-	6.3 1.9 (2)	6.3 1.5 (2)	-	-	-	-	-	100.0 2.7 (32)
1 Boy	54.8 16.3 (69)	4.8 8.7 (6)	4.8 5.8 (6)	4.0 3.7 (5)	20.6 10.0 (26)	3.2 19.0 (4)	0.8 1.7 (1)	0.8 2.1 (1)	6.3 12.9 (8)	100.0 10.7 (126)
1 Girl	56.7 12.0 (51)	2.2 2.9 (2)	8.9 7.8 (8)	3.3 2.2 (3)	18.9 6.5 (17)	3.3 14.3 (3)	-	3.3 6.2 (3)	3.3 4.8 (3)	100.0 7.6 (90)
1b + 1g	37.1 7.8 (33)	3.4 4.3 (3)	5.6 4.9 (5)	6.7 4.5 (6)	28.1 9.6 (25)	-	6.7 10.2 (6)	6.7 12.5 (6)	5.6 8.1 (5)	100.0 7.5 (89)
2b	34.1 3.5 (15)	6.8 4.3 (3)	9.1 3.9 (4)	2.3 0.7 (1)	29.5 5.0 (13)	2.3 4.7 (1)	6.8 5.1 (3)	4.5 4.2 (2)	4.5 3.2 (2)	99.9 3.7 (44)
2g	54.9 6.6 (28)	3.9 2.9 (2)	7.8 3.9 (4)	-	23.5 4.6 (12)	-	3.9 3.4 (2)	3.9 4.2 (2)	2.0 1.6 (1)	100.0 4.3 (51)
2b + 1g	17.6 2.8 (12)	7.4 7.2 (5)	11.8 7.8 (8)	2.9 1.5 (2)	42.6 11.1 (29)	4.4 14.3 (3)	4.4 5.1 (3)	7.4 10.4 (5)	1.5 1.6 (1)	100.1 5.8 (68)
1b + 2g	15.4 2.4 (10)	7.7 7.2 (5)	10.8 6.8 (7)	9.2 4.5 (6)	38.5 9.6 (25)	1.5 4.7 (1)	10.8 11.7 (7)	3.1 4.2 (2)	3.1 3.2 (2)	100.0 5.5 (65)
2b + 2g	5.3 0.5 (2)	7.9 4.3 (3)	10.5 3.9 (4)	15.8 4.5 (6)	36.8 5.4 (14)	-	13.2 8.5 (5)	5.3 4.2 (2)	5.3 3.2 (2)	100.0 3.2 (38)
> 2b + 2g	30.4 41.5 (176)	6.9 58.0 (40)	9.5 53.4 (55)	17.8 76.9 (103)	17.3 38.3 (100)	1.6 42.9 (9)	5.5 54.2 (32)	4.3 52.1 (25)	6.6 61.3 (38)	100.0 48.9 (578)
Total	35.9	5.8	8.7	11.3	22.1	1.8	5.0	4.1	5.2	99.9
N	424	60	103	134	261	21	59	48	62	1181

Table-4.3 (continued)

	Secondary and Above								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	100.0 5.1 (6)	-	-	-	-	-	-	-	-	100.0 2.1 (6)
1 Boy	44.2 16.2 (19)	2.3 11.1 (1)	-	2.3 6.7 (1)	37.2 19.0 (16)	-	4.7 10.5 (2)	2.3 9.1 (1)	7.0 20.0 (3)	100.0 15.2 (43)
1 Girl	50.0 14.4 (17)	2.9 11.1 (1)	-	-	29.4 11.1 (10)	-	-	5.9 18.1 (2)	11.8 26.7 (4)	100.1 12.1 (34)
1b + 1g	26.1 5.1 (6)	-	-	-	43.5 11.9 (10)	4.3 25.0 (1)	8.7 10.5 (2)	13.0 27.3 (3)	4.3 6.7 (1)	100.0 8.2 (23)
2b	26.6 3.4 (4)	-	6.7 12.5 (1)	-	53.3 9.5 (8)	6.7 25.0 (1)	6.7 5.3 (1)	-	-	100.0 5.3 (15)
2g	56.3 7.6 (9)	-	-	-	37.5 7.1 (6)	-	6.3 5.3 (1)	-	-	100.1 5.7 (16)
2b + 1g	10.0 0.8 (1)	10.0 11.1 (1)	-	-	60.0 7.1 (6)	-	10.0 5.3 (1)	-	10.0 6.7 (1)	100.0 3.5 (10)
1b + 2g	-	8.3 11.1 (1)	-	8.3 6.7 (1)	58.3 8.3 (7)	-	16.7 10.5 (2)	8.3 9.1 (1)	-	100.0 4.3 (12)
2b + 2g	25.0 0.8 (1)	-	-	-	75.0 3.6 (3)	-	-	-	-	100.0 1.4 (4)
> 2b + 2g	46.2 46.6 (55)	3.4 44.4 (4)	5.9 87.5 (7)	10.9 86.7 (13)	15.1 21.4 (18)	1.7 50.0 (2)	8.4 52.6 (10)	3.4 36.4 (4)	5.0 40.0 (6)	99.9 42.2 (119)
Total	41.8	3.2	2.5	5.3	29.8	1.4	6.7	3.9	5.3	100.0
N	118	9	8	15	84	4	19	11	15	282

Table-4.4 contrasts employed and unemployed women in their reasons for nonuse of contraception. The desire for additional children and postpartum infecundability were cited less frequently by the unemployed than by employed women. Husband's objection and religiosity were more pronounced among the unemployed than among the employed. The unavailability of methods was cited less frequently by the unemployed than by employed women. Health reasons as a constraint to the adoption of family planning were more pronounced among the unemployed.

In examining landownership (table-4.5) the desire for additional children was reported as the major reason for not using family planning by women belonging to landless households more than by women belonging to households that owned land. Religiosity as a reason for nonuse was less pronounced among the respondents belonging to the landless households than among those belonging to the landed households. Respondents' belief that they were unable to bear children was cited less often by women belonging to the landless households than by those belonging to the landed households. The unavailability of methods and fear of side effects were more frequently mentioned by women belonging to the landless households than by those belonging to the landed households.

Higher rates of contraceptive usage in the urban areas of Bangladesh are well documented. It appears that desire for more children in rural areas contributes to this differential. The desire for additional children was reported as the major reason for nonuse of family planning more often in the rural areas than in the urban areas (table-4.6). The same is true with respect to religiosity. On the other hand, husband's objection, respondent's belief that she is unable to bear children and postpartum infecundability as reasons for nonuse were mentioned more often in the urban areas. Women living in urban areas cited health as a reason for nonuse of family planning more often than women living in the rural areas. The reverse was true regarding fear of side effects.

Just as there are differences between Muslims and non-Muslims in rates of contraceptive usage there are differences in reasons for nonuse (table-4.7). The desire for more children, respondent's belief that she is unable to bear children, and health reasons were cited more frequently by non-Muslims. On the other hand, husband's objections, religiosity, postpartum infecundability, and fear of side effects were mentioned more often by Muslims.

Table-4.4

CHILDREN NOW ALIVE BY SEX, BY REASONS FOR NONUSE BY EMPLOYMENT STATUS

	Employed								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	100.0 5.3 (8)	-	-	-	-	-	-	-	-	100.0 2.0 (8)
1 Boy	53.1 11.2 (17)	-	3.1 5.3 (1)	3.1 1.8 (1)	31.3 11.1 (10)	-	-	-	9.4 20.0 (3)	100.0 18.2 (32)
1 Girl	71.4 16.4 (25)	2.9 7.1 (1)	-	5.7 3.6 (2)	17.1 6.7 (6)	-	-	-	2.9 6.7 (1)	100.0 9.0 (35)
1b + 1g	35.5 7.2 (11)	3.2 7.1 (1)	9.7 15.8 (3)	3.2 1.8 (1)	32.2 11.1 (10)	3.2 8.3 (1)	3.2 9.1 (1)	3.2 4.5 (1)	6.5 13.3 (2)	100.1 7.9 (31)
2b	46.2 3.9 (6)	-	-	7.6 1.8 (1)	23.1 3.3 (3)	-	7.7 9.1 (1)	7.7 4.5 (1)	7.7 6.7 (1)	100.0 3.3 (13)
2g	72.7 10.5 (16)	-	4.5 5.3 (1)	9.1 3.6 (2)	13.6 3.3 (3)	-	-	-	-	100.0 5.6 (22)
2B + 1g	20.7 3.9 (6)	6.9 14.3 (2)	3.4 5.3 (1)	13.8 7.1 (4)	31.0 10.0 (9)	6.9 16.9 (2)	-	17.2 22.7 (5)	-	100.0 7.4 (29)
1b + 2g	26.1 3.9 (6)	4.2 7.1 (1)	-	-	43.5 11.1 (10)	13.0 25.0 (3)	8.7 18.2 (2)	4.3 4.5 (1)	-	100.0 5.9 (23)
2b + 2g	10.0 1.3 (2)	10.0 14.3 (2)	10.0 10.5 (2)	10.0 3.6 (2)	35.0 7.8 (7)	-	15.0 27.3 (3)	5.0 4.5 (1)	5.0 6.7 (1)	100.0 5.1 (20)
> 2b + 2g	30.9 36.2 (55)	3.9 50.0 (7)	6.2 57.9 (11)	24.2 76.8 (43)	18.0 35.6 (32)	3.4 50.0 (6)	2.2 36.4 (4)	7.3 59.1 (13)	3.9 46.7 (7)	99.9 45.5 (178)
Total	38.9	3.6	4.9	14.3	23.0	3.1	2.8	5.6	3.8	100.0
N	152	14	19	56	90	12	11	22	15	391

Table-4.4 (continued)

	Not Employed								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	81.8 5.2 (90)	-	3.6 1.0 (4)	7.3 1.2 (8)	2.7 0.3 (3)	-	0.9 0.5 (1)	-	3.6 1.3 (4)	100.0 2.37 (110)
1 Boy	59.9 15.9 (275)	3.1 6.2 (14)	4.6 5.0 (21)	2.8 1.9 (13)	19.0 9.6 (87)	1.7 7.9 (8)	1.5 3.4 (7)	1.7 3.8 (8)	5.7 8.2 (26)	100.0 9.5 (459)
1 Girl	62.9 14.9 (258)	2.7 4.9 (11)	4.6 4.5 (19)	1.7 1.0 (7)	17.6 8.0 (72)	1.7 6.9 (7)	0.7 1.5 (3)	2.4 4.8 (10)	5.6 7.2 (23)	100.0 8.5 (410)
1b + 1g	37.2 7.5 (130)	5.2 8.0 (18)	6.0 5.0 (21)	7.2 3.6 (25)	24.4 9.4 (85)	1.7 6.9 (6)	6.0 10.3 (21)	4.3 7.2 (15)	8.0 8.8 (28)	99.9 7.3 (349)
2b	35.1 4.1 (71)	5.4 4.9 (11)	7.4 3.6 (15)	4.5 1.3 (9)	30.7 6.9 (62)	2.0 4.0 (4)	2.5 2.5 (5)	5.0 4.8 (10)	7.4 4.7 (15)	100.0 4.2 (202)
2g	54.5 5.9 (102)	1.6 1.3 (3)	4.3 1.9 (8)	4.3 1.2 (8)	25.7 5.3 (48)	1.1 2.0 (2)	3.2 3.0 (6)	1.6 1.4 (3)	3.7 2.2 (7)	100.0 3.9 (187)
2b + 1g	19.6 2.9 (51)	7.7 8.8 (20)	13.5 8.4 (35)	7.3 2.8 (19)	33.5 9.6 (87)	1.5 4.0 (4)	5.4 6.9 (14)	4.6 5.8 (12)	6.9 5.6 (18)	99.9 5.4 (260)
1b + 2g	24.6 3.3 (57)	6.9 7.1 (16)	10.8 6.0 (25)	10.3 3.5 (24)	25.9 6.7 (60)	2.2 5.0 (5)	8.6 9.9 (20)	3.9 4.5 (9)	6.9 5.0 (16)	100.0 4.8 (232)
2b + 2g	9.0 1.0 (18)	7.0 6.2 (14)	16.0 7.7 (32)	17.5 5.1 (35)	29.0 6.4 (58)	4.5 8.9 (9)	7.5 7.4 (15)	5.5 5.2 (11)	4.0 2.5 (8)	100.0 4.2 (200)
> 2b + 2g	28.4 39.2 (677)	5.0 52.7 (119)	10.0 56.9 (238)	22.7 78.6 (542)	14.2 37.7 (340)	2.3 55.4 (56)	4.7 54.7 (111)	5.4 62.5 (130)	7.3 54.5 (174)	100.0 49.5 (2387)
Total	36.1	4.7	8.7	14.4	18.8	2.1	4.2	4.3	6.7	100.1
N	1729	226	418	690	902	101	203	208	319	4796

Table-4.5

CHILDREN NOW ALIVE BY SEX, BY REASONS FOR NONUSE BY LAND OWNERSHIP

	Own Land								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	84.5 5.6 (71)	-	4.6 1.3 (4)	5.6 0.6 (3)	3.6 0.4 (3)	-	1.2 0.6 (1)	-	2.4 0.8 (2)	100.0 2.4 (84)
1 Boy	55.7 14.0 (175)	2.9 5.5 (9)	5.4 5.6 (17)	3.2 1.9 (10)	21.3 9.9 (67)	2.2 10.4 (7)	1.6 3.2 (5)	1.3 2.8 (4)	6.4 8.4 (20)	100.0 8.9 (314)
1 Girl	64.0 14.2 (178)	2.5 4.3 (7)	4.3 4.0 (12)	1.8 0.9 (5)	16.2 6.7 (45)	1.8 7.5 (5)	0.7 1.3 (2)	2.5 4.9 (7)	6.1 7.1 (17)	99.9 7.9 (278)
1b + 1g	36.2 7.1 (89)	4.1 6.1 (10)	6.5 5.3 (16)	6.9 3.1 (17)	26.4 9.6 (65)	1.2 4.5 (3)	6.1 9.6 (15)	4.1 7.0 (10)	8.5 8.8 (21)	100.0 7.0 (246)
2b	40.8 4.2 (53)	4.6 3.7 (6)	7.7 3.3 (10)	3.8 0.9 (5)	29.2 5.6 (38)	2.3 4.5 (3)	3.1 2.5 (4)	2.3 2.1 (3)	6.2 3.3 (8)	100.0 3.7 (130)
2g	59.2 6.7 (84)	2.1 1.8 (3)	2.8 1.3 (4)	3.5 0.9 (5)	24.6 5.2 (35)	0.7 1.5 (1)	2.8 2.5 (4)	1.4 1.4 (2)	2.8 1.7 (4)	100.0 4.0 (142)
2b + 1g	17.9 2.8 (35)	7.2 8.5 (14)	13.3 8.6 (26)	2.2 2.6 (14)	37.9 11.0 (74)	1.5 4.5 (3)	5.1 6.4 (10)	4.6 6.3 (9)	5.1 4.2 (10)	100.0 5.5 (195)
1b + 2g	25.6 3.5 (44)	8.1 8.5 (14)	9.3 5.3 (16)	8.1 2.6 (14)	27.9 7.1 (48)	1.7 4.5 (3)	7.6 8.3 (13)	3.5 4.2 (6)	8.1 5.9 (14)	100.0 4.9 (172)
2b + 2g	10.3 1.3 (16)	7.7 7.3 (12)	15.4 7.9 (24)	17.9 5.2 (28)	26.9 6.2 (42)	3.8 9.0 (6)	8.3 8.3 (13)	5.1 5.6 (8)	4.5 2.9 (7)	100.0 4.4 (156)
> 2b + 2g	27.8 40.5 (507)	4.9 54.3 (89)	9.5 57.4 (174)	24.1 81.3 (439)	14.2 38.2 (258)	2.0 53.7 (36)	4.9 57.3 (90)	5.1 65.5 (93)	7.5 56.9 (136)	100.0 51.5 (1822)
Total	35.4	4.6	8.6	15.3	19.1	1.9	4.4	4.0	6.8	100.1
N	1252	164	303	540	675	67	157	142	239	3539

Table-4.5 (continued)

	Does Not Own Land								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	79.4 4.3 (27)	-	-	14.7 2.4 (5)	-	-	-	-	5.9 2.1 (2)	100.0 2.1 (34)
1 Boy	65.7 18.7 (117)	2.8 6.7 (5)	2.8 3.7 (5)	2.2 1.9 (4)	16.9 9.5 (30)	0.6 2.2 (1)	1.1 3.5 (2)	2.8 5.8 (5)	5.1 9.5 (9)	100.0 10.8 (178)
1 Girl	62.5 16.7 (105)	3.0 6.7 (5)	4.2 5.2 (7)	2.4 1.9 (4)	20.2 10.7 (34)	1.2 4.3 (2)	0.6 1.8 (1)	1.8 3.5 (3)	4.2 7.4 (7)	100.1 10.2 (168)
1b + 1g	39.6 8.5 (53)	6.7 12.0 (9)	6.0 6.0 (8)	7.5 4.8 (10)	22.4 9.5 (30)	3.0 8.7 (4)	4.5 10.5 (6)	3.7 5.8 (5)	6.7 9.5 (9)	100.0 8.1 (134)
2b	28.6 3.8 (24)	6.0 6.7 (5)	6.0 3.7 (5)	4.8 1.9 (4)	32.1 8.5 (27)	1.2 2.2 (1)	2.4 3.5 (2)	9.5 9.3 (8)	9.5 8.4 (8)	100.0 5.1 (84)
2g	48.4 4.9 (31)	-	7.8 3.7 (5)	7.8 2.4 (5)	25.0 5.0 (16)	1.6 2.2 (1)	3.1 3.5 (2)	1.6 1.2 (1)	4.7 3.2 (3)	100.1 3.9 (64)
2b + 1g	23.4 3.5 (22)	8.5 10.7 (8)	10.6 7.5 (10)	10.6 4.8 (10)	22.3 6.6 (21)	3.2 6.5 (3)	4.3 7.0 (4)	8.5 9.3 (8)	8.5 8.4 (8)	100.0 5.7 (94)
1b + 2g	22.4 3.0 (19)	3.5 4.0 (3)	10.6 6.7 (9)	12.9 5.3 (11)	25.9 6.9 (22)	5.9 10.9 (5)	11.8 17.5 (10)	4.7 4.7 (4)	2.4 2.1 (2)	100.1 5.2 (85)
2b + 2g	6.7 0.6 (4)	5.0 4.0 (2)	15.0 6.7 (9)	15.0 4.3 (9)	36.7 6.9 (22)	5.0 6.5 (3)	8.3 8.8 (5)	5.0 3.5 (3)	3.3 2.1 (2)	99.9 3.6 (60)
> 2b + 2g	30.2 35.9 (225)	5.0 44.3 (37)	10.2 56.7 (76)	19.6 70.2 (146)	15.5 36.3 (115)	3.5 56.5 (26)	3.4 43.9 (25)	6.6 57.0 (49)	6.0 47.4 (45)	99.9 45.2 (744)
Total	38.1	4.6	8.1	12.6	19.3	2.8	3.5	5.2	5.8	100.0
N	627	75	134	208	317	46	57	86	95	1645

Table-4.6

CHILDREN NOW ALIVE BY SEX, BY REASONS FOR NONUSE BY RESIDENCE

	Rural								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	82.1	-	3.6	7.1	2.7	-	0.9	-	3.6	100.0
	5.3		0.9	1.2	0.3		0.5		1.3	2.3
	(92)		(4)	(8)	(3)		(1)		(4)	(112)
1 Boy	60.4	2.4	4.9	2.7	19.2	1.8	1.1	1.6	6.0	100.0
	15.5	5.0	5.2	1.7	9.6	7.2	2.7	3.3	8.6	9.3
	(271)	(11)	(22)	(12)	(86)	(8)	(5)	(7)	(27)	(449)
1 Girl	64.8	2.4	4.4	2.0	16.4	1.7	0.5	2.2	5.6	100.0
	15.1	4.6	4.3	1.2	7.5	6.3	1.1	4.2	7.3	8.5
	(265)	(10)	(18)	(8)	(67)	(7)	(2)	(9)	(23)	(409)
1b + 1g	37.8	4.9	6.9	7.2	23.3	2.0	5.8	4.0	8.1	100.0
	7.5	7.8	5.7	3.6	9.1	6.3	10.7	6.5	8.9	7.2
	(131)	(17)	(24)	(25)	(81)	(7)	(20)	(14)	(28)	(347)
2b	37.2	5.0	7.5	3.5	30.2	2.0	2.0	5.0	7.5	99.9
	4.2	4.6	3.6	1.0	6.7	3.6	2.1	4.7	4.8	4.1
	(74)	(10)	(15)	(7)	(60)	(4)	(4)	(10)	(15)	(199)
2g	57.7	1.5	4.6	4.6	23.2	1.0	3.1	1.0	3.1	100.1
	6.4	1.4	2.1	1.3	5.0	1.8	3.2	0.9	1.9	4.0
	(112)	(3)	(9)	(9)	(45)	(2)	(6)	(2)	(6)	(194)
2B + 1g	19.3	7.8	13.0	7.8	3.1	2.2	4.5	5.9	6.3	99.9
	3.0	9.6	8.3	3.0	9.9	5.4	6.4	7.5	5.4	5.6
	(52)	(21)	(35)	(21)	(89)	(6)	(12)	(16)	(17)	(269)
1b + 2g	25.2	6.8	9.8	9.0	26.5	3.4	8.5	4.3	6.4	100.0
	3.4	7.3	5.5	3.0	6.9	7.2	10.7	4.7	4.8	4.9
	(59)	(16)	(23)	(21)	(62)	(8)	(20)	(10)	(15)	(234)
2b + 2g	9.7	7.2	15.9	16.9	29.0	4.3	7.7	5.3	3.9	100.0
	1.1	6.9	7.8	5.1	6.7	8.1	8.6	5.1	2.6	4.3
	(20)	(15)	(33)	(35)	(60)	(9)	(16)	(11)	(8)	(207)
> 2b + 2g	28.3	4.8	10.0	22.9	14.3	2.5	4.2	5.7	7.1	100.0
	38.5	52.8	56.6	78.9	38.2	54.1	54.0	63.1	54.3	49.6
	(675)	(115)	(239)	(547)	(342)	(60)	(101)	(135)	(170)	(2384)
Total	36.5	4.5	8.8	14.4	18.6	2.3	3.9	4.5	6.5	100.0
N	1751	218	422	693	895	111	187	214	313	4804

Table-4.6 (continued)

	Urban								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	100.0 4.5 (6)	-	-	-	-	-	-	-	-	100.0 1.5 (6)
1 Boy	46.7 15.8 (21)	8.9 17.4 (4)	-	6.7 5.2 (3)	24.4 11.3 (11)	-	4.4 7.1 (2)	4.4 11.8 (2)	4.4 9.5 (2)	100.0 11.4 (45)
1 Girl	51.4 15.3 (19)	5.4 8.7 (2)	2.7 6.3 (1)	2.7 1.7 (1)	29.7 11.3 (11)	-	2.7 3.6 (1)	2.7 5.9 (1)	2.7 4.8 (1)	100.0 9.4 (37)
1b + 1g	31.4 8.3 (11)	5.7 8.7 (2)	-	5.7 3.4 (2)	40.0 14.4 (14)	-	5.7 7.1 (2)	5.7 11.8 (2)	5.7 9.5 (2)	100.0 8.9 (35)
2b	18.8 2.3 (3)	6.3 4.3 (1)	-	18.8 5.2 (3)	31.3 5.2 (5)	-	12.5 7.1 (2)	6.3 5.9 (1)	6.3 4.8 (1)	100.1 4.1 (16)
2g	40.0 4.5 (6)	-	-	6.7 1.7 (1)	40.0 6.2 (6)	-	-	6.7 5.9 (1)	6.7 4.8 (1)	100.1 3.8 (15)
2b + 1g	25.0 3.8 (5)	5.0 4.3 (1)	5.0 6.3 (1)	15.0 5.2 (3)	30.0 6.2 (6)	-	10.0 7.1 (2)	5.0 5.9 (1)	5.0 4.8 (1)	100.0 5.1 (20)
1b + 2g	16.7 3.0 (4)	4.2 4.3 (1)	8.3 12.5 (2)	16.7 6.9 (4)	33.3 8.2 (8)	-	12.5 10.7 (3)	4.2 5.9 (1)	4.2 4.8 (1)	100.1 6.1 (24)
2b + 2g	6.7 0.8 (1)	6.7 4.3 (1)	6.7 6.3 (1)	20.0 5.2 (3)	33.3 5.2 (5)	-	13.3 7.1 (2)	6.7 5.9 (1)	6.7 4.8 (1)	100.0 3.8 (15)
> 2b + 2g	31.3 42.9 (57)	6.0 47.8 (11)	6.0 69.8 (11)	20.9 65.5 (38)	17.0 32.0 (31)	1.1 100.0 (2)	7.7 50.0 (14)	3.8 41.2 (7)	6.0 52.4 (11)	99.9 46.1 (182)
Total	33.7	6.3	4.4	15.9	26.6	0.5	7.1	4.3	5.3	100.0
N	133	23	16	58	97	2	28	17	21	395

Table-4.7

CHILDREN NOW ALIVE BY SEX, BY REASONS FOR NONUSE BY RELIGION

	Muslim								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	83.5 5.1 (86)	-	3.9 0.9 (4)	5.8 0.9 (6)	2.9 0.3 (3)	-	1.0 0.5 (1)	-	2.9 1.0 (3)	100.0 2.2 (203)
1 Boy	60.6 15.6 (260)	3.0 5.7 (13)	4.9 4.9 (21)	3.3 2.1 (14)	19.1 9.2 (82)	1.2 5.2 (5)	0.9 2.2 (4)	0.9 1.9 (4)	6.1 8.8 (26)	100.0 9.2 (492)
1 Girl	63.6 15.1 (252)	3.0 5.3 (12)	4.5 4.2 (18)	2.3 1.4 (9)	17.2 7.6 (68)	1.5 6.2 (6)	0.8 1.6 (3)	2.3 4.3 (9)	4.8 6.4 (19)	100.0 8.5 (396)
1b + 1g	36.6 7.5 (126)	5.2 7.9 (18)	&.0 5.6 (24)	7.3 3.8 (25)	24.7 9.5 (85)	2.0 7.2 (7)	5.2 9.7 (18)	4.4 7.2 (15)	7.6 8.8 (26)	100.0 7.4 (344)
2b	35.1 4.0 (66)	5.3 4.4 (10)	7.4 3.3 (14)	5.3 1.5 (10)	28.7 6.0 (54)	2.1 4.1 (4)	3.2 3.2 (6)	5.3 4.8 (10)	7.4 4.7 (14)	99.9 4.0 (1880)
2g	54.5 6.1 (102)	1.6 1.3 (3)	4.8 2.1 (9)	5.3 1.5 (10)	25.7 5.4 (48)	1.1 2.1 (2)	2.7 2.7 (5)	1.6 1.4 (3)	2.7 1.7 (5)	100.0 4.0 (187)
2B + 1g	19.2 3.1 (51)	8.3 9.7 (22)	13.6 8.5 (36)	7.9 3.2 (21)	32.1 9.5 (85)	1.9 5.2 (5)	4.9 7.0 (13)	6.0 7.7 (16)	6.0 5.4 (16)	99.9 5.7 (265)
1b + 2g	16.3 3.5 (58)	6.4 6.6 (15)	10.7 5.9 (25)	8.6 3.0 (20)	27.0 7.1 (63)	3.0 7.2 (7)	7.7 9.7 (18)	4.7 5.3 (11)	6.9 5.4 (16)	100.1 5.0 (233)
2b + 2g	9.6 1.1 (19)	8.1 7.0 (16)	15.7 7.3 (31)	14.7 4.4 (29)	31.0 6.8 (61)	3.6 7.2 (7)	8.6 9.1 (17)	5.1 4.8 (10)	3.6 2.4 (7)	100.1 4.2 (197)
> 2b + 2g	28.0 38.9 (650)	5.1 52.0 (118)	10.5 57.2 (243)	22.4 78.0 (521)	14.8 38.5 (344)	2.3 55.7 (54)	4.3 54.3 (101)	5.6 62.5 (130)	7.0 55.3 (163)	100.0 49.8 (2324)
Total	35.8	4.9	9.1	14.3	19.1	2.1	4.0	4.5	6.3	100.0
N	1670	227	425	665	893	97	186	308	295	4666

Table-4.7 (continued)

	Non-Muslim								Don't Know	
	DAC	HOB	REL	FEC	BFP	AVL	HTH	SID	No Reason	Total
0 Child	81.3 6.1 (13)	-	-	12.5 2.4 (2)	-	-	-	-	6.3 2.5 (1)	100.1 3.1 (16)
1 Boy	52.5 15.0 (32)	1.6 7.7 (1)	1.6 7.7 (1)	-	24.6 15.3 (15)	4.9 18.8 (3)	3.3 7.4 (2)	16.6 19.0 (4)	4.9 7.5 (3)	100.0 11.7 (61)
1 Girl	63.3 14.6 (31)	-	2.0 7.7 (1)	-	20.4 10.2 (10)	2.0 6.3 (1)	-	2.0 4.8 (1)	10.2 12.5 (5)	99.9 9.4 (49)
1b + 1g	42.1 7.5 (16)	2.6 7.7 (1)	-	5.2 2.4 (2)	26.3 10.2 (10)	-	10.5 14.8 (4)	2.6 4.8 (1)	10.5 10.0 (4)	100.0 7.3 (38)
2b	40.7 5.2 (11)	3.7 7.7 (1)	3.7 7.7 (1)	-	40.7 11.2 (11)	-	-	3.7 4.8 (1)	7.4 5.0 (2)	100.0 5.2 (27)
2g	76.2 7.5 (16)	-	-	-	14.3 3.1 (3)	-	4.8 3.7 (1)	-	4.8 2.5 (1)	100.1 4.0 (21)
2b + 1g	26.1 2.8 (6)	-	-	8.7 2.4 (2)	43.5 10.2 (10)	4.3 6.3 (1)	4.3 3.7 (1)	4.3 4.8 (1)	8.7 5.0 (2)	100.0 4.4 (23)
1b + 2g	18.2 1.9 (4)	9.1 15.4 (2)	-	18.2 4.9 (4)	27.3 6.1 (6)	4.5 6.3 (1)	22.7 18.5 (5)	-	-	100.0 4.2 (22)
2b + 2g	4.3 0.5 (1)	-	13.0 23.1 (3)	34.8 8.8 (8)	17.4 4.1 (4)	8.7 12.5 (2)	4.3 3.7 (1)	4.3 4.8 (1)	13.0 7.5 (3)	100.0 4.4 (23)
> 2b + 2g	34.2 39.0 (83)	3.3 61.5 (18)	2.9 53.8 (7)	26.3 78.0 (64)	11.9 29.6 (29)	3.3 50.0 (8)	5.3 48.1 (13)	4.9 57.1 (12)	7.8 47.5 (19)	100.0 46.5 (243)
Total	40.7	2.5	2.5	15.7	18.7	8.1	5.2	4.0	7.6	99.9
N	213	13	13	82	98	16	27	21	40	523

4.4 Conclusion

We have undertaken an analysis of the reasons for the nonadoption of family planning among ever-married women under 50 who were not using contraceptives at the time of the 1983 CPS. It is clear that constraints on the adoption of family planning include both demand constraints and supply constraints.

Among the various constraints on the use of family planning, the desire for additional children was the most important. Unless efforts are made to minimize the strength of this constraint, not much can be achieved in the way of raising the use rate. It should be noted that there is a supply constraint involved in this finding since even couples who desire more children should be provided with information concerning methods appropriate for spacing of births. Religiosity is also an important demand constraint, pointing to the importance of raising the educational level of the people so that ignorance about many of the religious injunctions can be overcome. Health reasons and the fear of side effects are major obstacles to the adoption of family planning, implying a need for both improvements in the methods available and better supply of information.

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5. FERTILITY

by

Barkat-e-Khuda
Sushil Ranjan Howlader

5.1 Introduction

Bangladesh is the eighth largest country in the world, with an estimated population of around 100 million people. At the beginning of the century the area now constituting Bangladesh had a population of less than 30 million people. In fact, during the period 1901-1951 the average annual rate of population growth was less than 1 percent. During this period the crude birth rate was consistently over 50. It dropped to the mid-40s in the 1970s and today is slightly less than 40. The crude death rate, which remained at about 40 until the 1950s, has declined appreciably and now stands at around 15. Although there is considerable debate about the reliability of various estimates, the picture that emerges is that while mortality has declined considerably, decline in fertility has been relatively small. This paper examines fertility levels, trends, and differentials in Bangladesh as estimated from the CPS data.

Two measures of fertility are considered in the present analysis. Cumulative fertility is measured by the mean number of children born to currently married women. Using the age structure of the total sample in the 1983 CPS, we have standardized the mean number of children born to currently married women in different socioeconomic groups. Current fertility is then examined using three measures: the age-specific fertility rate (ASFR), the total fertility rate (TFR), and the general fertility rate (GFR). The GFR was standardized, using the age structure of the national population in the 1983 CPS.

Measures of both cumulative and current fertility suffer from well-known difficulties of data collection. The definition of current fertility is based on a strict condition of time dimension, i.e., it must reflect the fertility of exactly 12 months. However, in practice, many Bangladeshi women are not able to provide such information precisely. Reporting and recall errors may ultimately affect the estimated level of fertility. Recall lapse or a tendency to forget events which occurred in the more distant past is a serious problem. There is also a tendency to omit very young children, particularly those who died in the early hours or days of life. Furthermore, the estimates of age or year of birth of both mothers and children may be unreliable. It is necessary to stress, however, that while caution is needed in interpretating the data, the general order of magnitude of fertility levels and differentials can be accepted.

In order to examine fertility differentials seven independent variables have been considered. These variables are categorized into three groups: (i) social - place of residence, religion, respondent's education and husband's education; (ii) economic - household landownership status and employment status of wife; and (iii) current use status of family planning.

5.2 Levels and Trends

Table-5.1 presents data on the mean number of children born to ever-married women in Bangladesh during the last two decades based on various national surveys. In general, average parity increases with age. At ages 40 years and above parity approximates the average number of live births over a woman's reproductive life span.

Table-5.1

MEAN NUMBER OF CHILDREN BORN TO EVER-MARRIED WOMEN IN BANGLADESH, 1961-1983

Age	DSEP 1961	Census 1961	BRSFM 1974	Census 1974	BFS 1975	CPS 1983
15-19	0.63	0.77	0.57	0.67	0.85	0.9
20-24	2.34	2.24	1.94	1.92	2.45	2.3
25-29	3.89	3.51	3.53	3.29	4.24	3.8
30-34	5.12	4.64	4.94	4.59	5.71	5.5
35-39	5.83	5.24	5.88	5.53	6.71	6.5
40-44	6.08	5.49	6.21	5.83	7.10	7.4
45-49	6.27	5.74	6.11	6.01	6.73	7.5

Sources: DSEP (Demographic Survey in East Pakistan) - Schultz and Da Vanzo 1970, p. 21; GOB 1977 (b), p. 66; GOB 1977b, table 22; Khan and Blacker 1979, p. 7; Hodgson and Gibbs 1980; CPS, 1983, Mitra and Kamal, 1985.

A comparison of the 1983 data with the 1975 data shows evidence of a relatively modest decline in fertility up to 39 years of age, but slightly higher fertility at ages 40 and

above. The higher fertility among the older women in 1983 compared with that in 1975 may have resulted from the relatively lower underreporting of births among the older women in 1983 than in 1975. In fact, if we look at the 1975 BFS data, we find that parity rates among women aged 40 years and above tend to behave erratically - parities decline from one age group to the next among women in their forties.

The age-specific marital fertility rates and the total marital fertility rate for Bangladesh are given in table-5.2. The evidence seems to suggest that in the 1960s and 1970s, the total marital fertility rate, i.e., the number of children a woman would bear during her reproductive life cycle if the age-specific fertility rate at each age remained constant over time, was within the range of 6.1 to 8.6. The BFS, 1975, which reflects fertility of the unsettled period of 1971-1975, reported a total marital fertility rate of 7.4. A comparison of the 1983 CPS data with 1975 BFS data shows that fertility declined by about 18 percent in 1983 compared with the 1971-1975 level.

An examination of the age-specific fertility rates shows that, with the exception of women under 20 years of age, the age-specific fertility rates were lower in 1983 than in 1975 (BFS). The largest reductions in fertility occurred among women aged 35 years and above.

5.3 Differentials

In examining fertility differentials we have considered only the currently married women under 50 and have focused on current fertility, although brief reference will be made to cumulative fertility. We shall consider three categories of variables - social, economic, and current use status - in examining fertility differentials. The social variables considered are: place of residence, religion, respondent's education, and husband's education. Urban-rural fertility differentials are not large in Bangladesh. It has been suggested that this is because living in the urban areas does not necessarily create urban life style and values among a large proportion of urban dwellers.

Data on TFR presented in table-5.3 reveal that urban fertility is about 10 percent lower than rural fertility. Among women 15 to 24 urban fertility is slightly higher than rural fertility. The standardized GFR is slightly lower among urban women than among rural women. Data on the mean number of children born to currently married women show that women living in urban areas have lower fertility than those living in rural areas in the age groups 20-39 and 45-49 (appendix table-5.1A).

Table-5.3

AGE-SPECIFIC FERTILITY RATE AMONG CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE, BY RURAL-URBAN AREAS IN BANGLADESH, 1983

Age group	Rural	Urban	National
< 15	27 (147)*	0 (11)	25 (158)
15-19	258 (1401)	265 (136)	256 (1537)
20-24	283 (1445)	290 (162)	284 (1607)
25-29	250 (1328)	211 (175)	246 (1503)
30-34	202 (892)	189 (95)	201 (987)
35-39	125 (714)	125 (80)	123 (794)
40-44	63 (522)	19 (54)	59 (576)
45-49	9 (457)	0 (39)	8 (496)
GFR	204 (6906)	198 (752)	204 (7658)
Standardized GFR	205	194	204
TFR	6.1	5.5	6.0

*Number of currently married women.

The lack of a large urban-rural fertility differential has been found in other studies. An examination of data from the Bangladesh Retrospective Survey, 1974, Bangladesh Census, 1974, and the BFS, 1975, reveals that urban fertility was marginally lower than rural fertility (GOB 1977b:144, 1977a:583, and 1978:66). Ahmed (1979) observed that the lack of substantial fertility differential between rural and urban areas could have been the result of differential omissions of infants who died immediately after birth or were misreported as still births. He further argued that better health and nutritional status of the majority of urban women may have contributed to their higher fertility, compensating for whatever effect the use of contraception might have had on urban fertility as a whole.

Consistent fertility differentials by religion are well documented (Davis 1951:80; Stoeckel and Chowdhury 1969; GOB 1977b, 1978; Obaidullah 1966; Chowdhury 1971, 1975). All these studies show that fertility is higher among Muslims than among non-Muslims. Data presented in table-5.4 show that fertility among the Muslims is about 10 percent higher than among the non-Muslims. This becomes clear if we look at the data on TFR as well as standardized GFR, although the differential gets blurred if we look at the data on age-specific fertility rates. Data on the mean number of children born to ever-married women show that the non-Muslim women have fewer children than the Muslim women in all age groups (appendix table-5.2A).

Despite early marriage among both the Muslims and the non-Muslims, different practices regarding remarriage and ritual abstinence, which may affect postpartum separation, may have contributed to lower fertility among the non-Muslims. Additionally, non-Muslims are more frequently educated at higher levels and practice contraception more frequently than the Muslims. It has been suggested that Muslims have coitus slightly more frequently than the Hindus (Maloney et al. 1980). Moreover, religiosity is more pronounced among the Muslims than among the non-Muslims. Ali (1976) reported that people with stronger religious values are more likely to be nonadoptors of family planning. They express a desire for more children and try to have them.

In general, studies have reported that education is negatively related to fertility in Bangladesh. The 1974 census of Bangladesh found an inverse relationship - women with no schooling had, on the average, 3.9 births; those with primary schooling had 3.4 live births, and those with secondary and higher education had 2.6 live births (GOB 1977a). The 1975 Bangladesh Fertility Survey reported that women with no schooling had, on the average, 4.2 live births, those with primary education had 3.4 live births, and those with secondary or higher education had 2.4 live births (GOB 1978). In one of the earliest

Table-5.4

AGE-SPECIFIC FERTILITY RATE AMONG CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE, BY RELIGION, BANGLADESH, 1983

Age group	Religion		All
	Muslim	Non-Muslim	
<15	29 (139)*	0 (19)	25 (158)
15-19	256 (1365)	256 (172)	256 (1537)
20-24	284 (1427)	291 (179)	285 (1606)
25-29	255 (1352)	159 (151)	246 (1503)
30-34	208 (854)	144 (132)	200 (986)
35-39	120 (694)	172 (99)	126 (793)
40-44	57 (508)	88 (68)	61 (576)
45-49	7 (441)	18 (55)	8 (496)
GFR	206 (6780)	186 (875)	204 (7655)
Standardized GFR	206	188	204
TFR	6.1	5.6	6.0

*Number of currently married women.

studies based on a rural sample of (Comilla), Stoeckel and Chowdhury (1969) found an inverse relation between education and fertility. In a more recent study carried out in 20 villages of Comilla - Kotwali thana, Khuda (1985b) found an inverse relationship between education and fertility -- women with no schooling had, on the average, 4.0 live births, those with primary schooling 3.2 live births, and those with secondary and higher education 2.5 live births. A village study carried out in Comilla in the early-1980s found a similar relationship (Khuda, 1985a). Some others, however, have reported an inverted U-shaped relation of fertility to education. Chowdhury (1977) found in Chittagong division that women with no formal schooling had, on the average, 3.72 live births, those with primary schooling had 4.01 live births, and those with schooling beyond primary level had 3.85 children. Maloney et al. (1980) reported that fertility is likely to increase with primary education.

The present study, based on the 1983 data, also found an inverted U-shaped relation of fertility to education. Women with no schooling had a TFR of 6.1, those with primary schooling 6.3, and those with secondary schooling and above 4.4. The standardized GFRs were 204, 216, and 115, respectively, among women with no schooling, primary schooling, and secondary schooling and above (table-5.5). The pattern is more complicated when controlling for age. Up to 29 years of age there is an inverted U-shaped relation; at 30-39 years of age there is an inverse relationship, and at age 40 and above the relationship once again gets blurred. It should be noted that in this age group there are very few women with secondary education.

Data on cumulative fertility obtained from the 1983 CPS show that the mean number of children was 4.4, 3.8, and 2.4, respectively, among women with no schooling, those with primary schooling, and those with secondary schooling and above. When considering the standardized mean, an inverted U-shaped relation of education to fertility emerges (appendix table-5.3A).

The foregoing suggests that upgrading average educational levels from no schooling to the primary level may not lower fertility; in fact, it might even raise fertility in the short run. However, increasing education to higher than primary levels would undoubtedly lower fertility to some extent. Women with primary schooling generally belong to relatively better off families than women with no schooling. Consequently, the nutritional level and hence fecundity of women belonging to the former group may be higher than those belonging to the latter group. In addition, the differential may be partially the result of more accurate reporting of births by women with primary schooling than by women with no schooling. The absence of a fertility-depressing effect of education at the primary level is related to the fact that there is virtually no differential in age at marriage

Table-5.5

AGE-SPECIFIC FERTILITY RATE AMONG CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE, BY EDUCATION IN BANGLADESH, 1983

Age group	Education			All
	No schooling	Primary schooling	Secondary schooling and above	
< 15	28 (107)*	25 (40)	0 (4)	20 (151)
15-19	253 (1011)	281 (385)	228 (158)	257 (1509)
20-24	280 (1011)	301 (402)	272 (169)	284 (1582)
25-29	244 (977)	275 (353)	211 (152)	248 (1482)
30-34	210 (713)	204 (211)	73 (55)	201 (979)
35-39	132 (562)	108 (194)	31 (32)	122 (788)
40-44	65 (449)	37 (108)	67 (15)	59 (572)
45-49	5 (400)	26 (77)	0 (12)	8 (489)
GFR	197 (5185)	224 (1770)	201 (597)	204 (7552)
Standardized GFR	204	216	115	204
TFR	6.1	6.3	4.4	6.0

*Number of currently married women.

between women with primary schooling and those with no schooling, and that the current use rate of contraception is only marginally higher among women with primary schooling than among those with no schooling (Mitra and Kamal, 1985).

The fertility-depressing effect of education is apparent at the secondary level of education and above. Age at marriage is higher and contraceptive use is considerably higher among women with secondary level of education and above compared to those with primary and no schooling. Besides, better educated mothers are better able to look after their infants, and hence ensure a higher survival of their infants (Caldwell, 1981). The lower infant mortality among the better educated mothers acts as a depressant to their desire for a large number of children and, consequently, motivates them to limit their fertility.

Evidence showing the relationship between husband's education and fertility in Bangladesh is scanty. The BFS, 1975 provides the first data base at the national level to examine this relationship. According to the 1975 BFS data, there is an inverse relationship between husband's education and fertility levels as a whole, although no clear pattern emerges when data are analyzed by age groups. The mean number of children born to women whose husbands have education above the secondary level is significantly lower than the mean for those women whose husbands have no education or primary level only. It should be recognized that husbands with higher than secondary level education comprised only 3 percent of the BFS sample. Moreover, these men are likely to have wives with higher education. Thus, these differentials in fertility may not be due to husband's education alone, but may be due to the cumulative effect of both husband's and wife's education (GOB 1978).

Table-5.6 shows that women whose husbands had no schooling had almost the same fertility as women whose husbands had primary education. Women whose husbands had more than primary education had lower fertility. This becomes clear if we look at data on TFR as well as standardized GFR, although no clear pattern emerges when data are analyzed by age groups. The mean number of children as well as the standardized mean number of children were inversely related to husband's education, and the relationship holds in all age groups (appendix table-5.4A). Fertility differentials due to husband's education largely result from the same factors that explain the similar nature of relationship between fertility and the respondent's education. In addition, the better educated men are likely to marry better educated women, who, as we have already seen, have lower fertility than the relatively less educated women.

Table-5.6

AGE-SPECIFIC FERTILITY RATE AMONG CURRENTLY MARRIED WOMEN UNDER 50 YEARS AGE, BY EDUCATION OF HUSBAND, BANGLADESH, 1983

Age group	Education of husband				
	No schooling	Primary schooling	Secondary schooling and above	Don't know	All
< 15	25 (79)*	29 (35)	29 (35)	0 (8)	25 (157)
15-19	257 (725)	2231 (268)	253 (430)	303 (99)	254 (1522)
20-24	281 (752)	291 (275)	284 (464)	300 (100)	284 (1591)
25-29	250 (709)	219 (265)	243 (412)	295 (95)	245 (1591)
30-34	197 (482)	232 (198)	161 (217)	250 (72)	200 (969)
35-39	123 (390)	181 (155)	86 (175)	117 (60)	126 (780)
40-44	74 (309)	40 (108)	47 (106)	20 (50)	59 (573)
45-49	8 (253)	9 (109)	0 (88)	23 (44)	8 (494)
GFR	201 (3699)	199 (1413)	362 (1927)	218 (528)	204 (7567)
Standardized GFR	204	204	192	229	204
TFR	6.1	6.2	5.5	6.5	6.0

* Number of currently married women.

Studies in Bangladesh are inconclusive with regard to fertility differentials by landholding. Stoeckel and M. Chowdhury (1969), using data from 20 villages of Comilla-Kotwali thana, found an inverse relationship between landholding and fertility. Latif and N. Chowdhury (1978) reported mixed results -- there was a significant positive relation of fertility to landholding in one of the study areas, but no such relation in another of their study areas. Cain (1976), analyzing data from a Bangladesh village, found that although the landless had the lowest number of births, large landowners had only a slightly higher mean, and small landowners had the highest mean. Khan (1981) reported a bell-shaped pattern of the relation between landholding and fertility. In a study of a Comilla village, Khuda (1985a) also found an inverted U-shaped relation of fertility to landholding. The most recent study undertaken in 20 villages of Commilla - Kotwali thana reported a similarly inverted U-shaped relation (Khuda, 1985b). Based on data from the 1968-69 National Impact Survey (NIS), Cain and Baastiens (1976) found almost no difference in fertility between families with and without agricultural land

According to the 1983 CPS data, the fertility level had no relationship with landholding. Fertility level was the same among women belonging to the landless households and those belonging to households with cultivable landholding. This becomes apparent if we look at data on TFR as well as standardized GFR. When the data are analyzed by age groups, we find that among women under 30 years of age and those aged 35-39 years, fertility was lower among women belonging to the landless households than among those belonging to households with cultivable landholding, while the reverse was true among women aged 30-34 years and those aged 40 years and above (table-5.7). Data on cumulative fertility show a similar relationship between fertility and landholding (appendix table-5.5A). The 1983 CPS data, however, do not permit us to examine fertility differentials by landholding in any detailed and meaningful way, because data collection on household landholding was simply confined to whether a woman belonged to a landless household or to a landed household, without obtaining any information on the amount of cultivable land area owned by the household.

The 1983 CPS data show that the employed women have a TFR of 5.0 compared to a TFR of 6.1 among the unemployed women. The standardized GFR was 186 among the employed women and 205 among the unemployed women, i.e., the employed women had a GFR of about 9 percent less than the unemployed women. In addition, the age-specific fertility rate was lower among the employed women than among the unemployed women (table-5.8). Data on cumulative fertility also show the same pattern although the relationship is less pronounced (appendix table-5.6A).

Table-5.7

AGE-SPECIFIC FERTILITY RATE AMONG CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE, BY LAND OWNERSHIP, BANGLADESH, 1983

Age group	Own land	Does not own land	All
< 15	34 (116)*	0 (42)	25 (158)
15-19	262 (1044)	243 (493)	256 (1537)
20-24	290 (1076)	272 (529)	284 (1605)
25-29	252 (986)	237 (515)	247 (1501)
30-34	183 (644)	234 (342)	201 (986)
35-39	126 (533)	123 (260)	125 (793)
40-44	56 (395)	67 (180)	59 (575)
45-49	3 (367)	23 (130)	8 (497)
GFR	203 (5161)	206 (2491)	204 (7652)
Standardized GFR	205	202	204
TFR	6.0	6.0	6.0

*Number of currently married women.

Table-5.8

AGE-SPECIFIC FERTILITY RATE AMONG CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE, BY EMPLOYMENT STATUS IN BANGLADESH, 1983

Age group	Employment status		All
	Employed	Unemployed	
<15	0 (7)*	26 (151)	25 (158)
15-19	250 (80)	257 (1457)	256 (1537)
20-24	259 (147)	286 (1459)	284 (1606)
25-29	234 (175)	248 (1328)	246 (1503)
30-34	183 (109)	201 (875)	199 (984)
35-39	99 (71)	127 (723)	125 (794)
40-44	22 (45)	62 (529)	59 (575)
45-49	0 (35)	9 (460)	8 (495)
GFR	190 (670)	205 (6982)	204 (7652)
Standardized GFR	186	205	204
TFR	5.0	6.1	6.0

* Number of currently married women.

The observed relationship between fertility and employment status is not simple or straightforward for various reasons. The category "employed" refers to those having paid employment only. All those having unpaid employment (i.e., working at home) as well as those who reported not working have been grouped under "unemployed." Moreover, less than 11 percent of the total respondents in the 1983 CPS were reportedly employed. In a traditional, conservative society such as Bangladesh, the small proportion of women having paid employment are either the poorest ones who have to supplement their family income by their earnings, the widows and the divorced who did not or could not remarry, or, in contrast, the small minority of the better educated, often professional women predominantly concentrated in the urban areas. More importantly, the lack of data giving occupational breakdown among the employed women does not permit us to undertake an analysis of fertility differentials among different occupational groups.

5.4 Current Use Status

The 1983 CPS enables us to examine the relationship between current contraceptive use and fertility. Data presented in table-5.9 show a TFR of 2.4 for women using modern methods of contraception. In contrast, the users of traditional methods have a TFR of 4.5, and those who reported not using contraceptives have a TFR of 6.9. In other words, the TFR of a woman practicing modern methods is only 53 percent that of a woman practicing traditional methods, and a TFR of only 35 percent that of a woman not using contraceptives. The TFR of a woman practicing traditional methods is 65 percent that of a woman not using contraceptives. This pattern also holds when we look at data on GFR. The age-specific fertility rates bear a similar relationship with current use status among women aged 20-44 years.

Data on cumulative fertility show that the mean number of children born was lowest among women not using contraceptives, followed by those practicing modern methods, and it was highest among those practicing traditional methods of family planning. This pattern holds in all age groups, excepting those under 20 years of age. Women already having a large number of children are more likely to use contraceptives than those having relatively few children. The 1983 CPS data show that the current use rate rises to parity 5 and then gradually falls (Mitra and Kamal, 1985). This is understandable because the more children a woman has the more she is likely to use contraceptives to limit her fertility.

Table-5.9

AGE-SPECIFIC FERTILITY RATE AMONG CURRENTLY MARRIED WOMEN UNDER 50 YEARS OF AGE, BY CURRENT USE STATUS, BANGLADESH, 1983

Age group	Current use status		Nonusers	All
	Modern method	Traditional method		
<15	0 (3)	0 (7)	27 (148)	25 (158)
15-19	178 (90)	265 (49)	260 (1398)	256 (1537)
20-24	113 (213)	273 (77)	311 (1316)	283 (1606)
25-29	69 (289)	107 (75)	298 (1139)	244 (1503)
30-34	42 (192)	113 (71)	249 (723)	199 (986)
35-39	39 (153)	50 (80)	157 (560)	124 (793)
40-44	14 (74)	28 (36)	69 (466)	59 (576)
45-49	25 (40)	59 (17)	5 (439)	8 (496)
GFR	72 (1054)	136 (412)	229 (6189)	204 (7655)
Standardized GFR	85	157	230	204
TFR	2.4	4.5	6.9	6.0

* Number of currently married women.

5.5 Concluding Remarks

We have undertaken an analysis of fertility levels, trends, and differentials in Bangladesh primarily based on the 1983 CPS data. Fertility continues to remain high among Bangladeshi women, although some decline in fertility has occurred in the recent past. For example, a comparison of the 1983 CPS data with the 1975 BFS data shows that fertility was lower in 1983 than in 1975, and the difference was more pronounced with respect to current as opposed to cumulative fertility.

In examining fertility differentials we have found that respondent's education was the most important independent variable, followed by respondent's employment status. Women with secondary or higher level of education had 30 percent lower fertility than women who had no schooling or only primary schooling. In contrast husband's education was much less important. Women whose husbands had secondary or higher level of education had 10 percent lower fertility compared to women whose husbands had no schooling or only primary schooling. The "employed" women had 18 percent lower fertility than the "unemployed" women. Women living in urban areas had 10 percent lower fertility than those living in rural areas, and the non-Muslims had 8 percent lower fertility than the Muslims. Interestingly enough, there was no differential in fertility by household landownership status.

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Appendix A

Table-5.1A

MEAN NUMBER OF CHILDREN EVER BORN PER CURRENTLY MARRIED WOMEN, BY RURAL-URBAN AREA AND AGE, BANGLADESH, 1983

Age group	Rural	Urban	National
<15	0.0 (147)*	0.0 (11)	0.0 (158)
15-19	0.9 (1401)	0.9 (136)	0.9 (1537)
20-24	2.4 (1446)	2.1 (162)	2.4 (1608)
25-29	4.0 (1329)	3.6 (175)	4.0 (1504)
30-34	5.7 (892)	5.2 (95)	5.7 (987)
35-39	6.8 (714)	6.2 (80)	6.8 (794)
40-44	7.7 (522)	7.9 (54)	7.7 (576)
45-49	7.9 (457)	6.1 (39)	7.7 (496)
All	4.0 (6908)	3.7 (752)	4.0 (7660)
Standardized Mean	4.0	3.6	4.0

* Number of currently married women.

Table-5.2A

MEAN NUMBER OF CHILDREN EVER BORN PER CURRENTLY MARRIED WOMEN, BY RELIGION AND AGE, BANGLADESH, 1983

Age group	Religion		All
	Muslim	Non-Muslim	
<15	0.1 (139)*	0.0 (19)	0.0 (158)
15-19	0.9 (1365)	0.9 (172)	0.9 (1537)
20-24	2.4 (1428)	2.1 (178)	2.4 (1606)
25-29	4.0 (1353)	3.5 (151)	4.0 (1504)
30-34	5.7 (854)	5.2 (132)	5.7 (986)
35-39	6.8 (694)	6.4 (97)	6.8 (791)
40-44	7.8 (508)	6.8 (68)	7.6 (576)
44-45	7.9 (441)	7.3 (55)	7.9 (496)
All	4.0 (6782)	3.7 (872)	4.0 (7654)
Standardized Mean	4.0	3.6	4.0

* Number of currently married women.

Table-5.3A

MEAN NUMBER OF CHILDREN EVER BORN
PER CURRENTLY MARRIED WOMEN, BY
EDUCATION AND AGE,
BANGLADESH, 1983

Age group	Education			All
	No schooling	Primary schooling	Secondary schooling and above	
< 15	0.0 (107)*	0.0 (40)	0.0 (4)	0.0 (151)
15-19	0.9 (966)	0.9 (385)	0.8 (158)	0.9 (1509)
20-24	2.5 (1011)	2.4 (403)	1.7 (169)	2.4 (1583)
25-29	4.1 (978)	4.1 (353)	3.0 (152)	4.0 (1483)
30-34	5.8 (713)	5.6 (211)	4.3 (55)	5.7 (979)
35-39	6.7 (562)	7.2 (194)	5.5 (32)	6.8 (788)
40-44	7.6 (449)	7.6 (108)	7.0 (15)	7.6 (572)
45-49	7.9 (400)	7.8 (77)	6.1 (12)	7.8 (489)
All	4.2 (5186)	3.8 (1771)	2.4 (597)	4.0 (7554)
Standardized Mean	4.0	4.0	3.2	4.0

* Number of currently married women.

Table-5.4A

MEAN NUMBER OF CHILDREN EVER BORN PER CURRENTLY MARRIED WOMEN, BY HUSBAND'S EDUCATION AND AGE, BANGLADESH, 1983

Age group	Husband's Education				All
	No schooling	Primary schooling	Secondary schooling and above	Don't know	
< 15	0.0 (79)*	0.1 (35)	0.1 (35)	0.0 (8)	0.0 (157)
15-19	0.9 (725)	0.9 (268)	0.9 (430)	1.1 (99)	0.9 (1522)
20-24	2.4 (753)	2.6 (275)	2.2 (464)	2.4 (100)	2.4 (1592)
25-29	4.1 (710)	4.1 (265)	3.7 (412)	3.9 (95)	4.0 (1482)
30-34	5.6 (482)	6.1 (198)	5.4 (217)	5.7 (72)	5.7 (969)
35-39	6.7 (390)	6.9 (155)	6.6 (175)	6.7 (60)	6.8 (780)
40-44	7.7 (309)	7.9 (102)	7.9 (106)	6.6 (50)	7.7 (567)
45-49	7.8 (253)	8.1 (109)	7.6 (88)	8.2 (44)	7 8 (494)
All	4.1 (3701)	4.3 (1407)	3.5 (1927)	4.2 (528)	4.0 (7563)
Standardized Mean	4.0	4.1	3.8	3.9	4.0

* Number of currently married women.

Table-5.5A

MEAN NUMBER OF CHILDREN EVER BORN PER CURRENTLY MARRIED WOMEN, BY LAND LANDOWNERSHIP AND AGE, BANGLADESH, 1983

	Land ownership		
Age group	Own land	Does not own land	All
< 15	0.1 (116)*	0.0 (42)	0.0 (158)
15-19	0.9 (1044)	1.0 (493)	0.9 (1537)
20-24	2.4 (1077)	2.3 (529)	2.4 (1606)
25-29	3.9 (987)	4.0 (515)	4.0 (1502)
30-34	5.7 (644)	5.5 (342)	5.7 (986)
35-39	7.0 (533)	6.6 (260)	6.8 (793)
40-44	7.7 (395)	8.3 (180)	7.9 (575)
45-49	8.0 (367)	7.3 (130)	7.8 (497)
All	4.0 (5163)	3.9 (2491)	4.0 (7654)
Standardized Mean	4.0	4.0	4.0

* Number of currently married women.

Table-5.6A

MEAN NUMBER OF CHILDREN EVER BORN PER CURRENTLY MARRIED WOMEN, BY EMPLOYMENT STATUS AND AGE, BANGLADESH, 1983

Age group	Employment status		All
	Employed	Unemployed	
< 15	0.1 (7)*	0.0 (151)	0.0 (158)
15-19	0.9 (80)	0.9 (1457)	0.9 (1537)
20-24	2.3 (147)	2.4 (1460)	2.4 (1607)
25-29	3.8 (175)	4.0 (1329)	4.0 (1504)
30-34	5.1 (109)	5.7 (875)	5.7 (984)
35-39	6.3 (71)	6.8 (723)	6.8 (794)
40-44	7.0 (46)	7.8 (529)	7.7 (575)
45-49	7.3 (35)	7.9 (460)	7.9 (495)
All	3.9 (670)	4.0 (6984)	4.0 (7654)
Standardized Mean	3.7	4.0	4.0

* Number of currently married women.

Table-5.7A

MEAN NUMBER OF CHILDREN EVER BORN PER CURRENTLY MARRIED WOMEN, BY CURRENT USE STATUS AND AGE, BANGLADESH, 1983

Age group	Current use status			All
	Modern method	Traditional method	Non-user	
< 15	0.0 (3)*	0.0 (7)	0.0 (148)	0.0 (158)
15-19	1.3 (90)	1.1 (49)	0.9 (1398)	0.9 (1537)
20-24	2.4 (213)	2.5 (77)	2.3 (1316)	2.4 (1606)
25-29	3.7 (289)	3.9 (75)	4.0 (1140)	3.9 (1504)
30-34	5.3 (192)	5.6 (71)	5.7 (723)	5.6 (986)
35-39	6.6 (153)	6.9 (80)	6.7 (560)	6.7 (793)
40-44	7.5 (74)	8.0 (36)	7.6 (466)	7.6 (576)
45-49	7.6 (40)	8.3 (17)	7.8 (439)	7.8 (496)
All	4.3 (1054)	4.6 (412)	3.8 (6190)	3.9 (7656)
Standardized Mean	3.9	4.1	4.0	3.9

* Number of currently married women.

6. INFANT AND CHILD MORTALITY

by

Mohi Uddin Ahamed

6.1 Introduction

Infant mortality is widely considered to be an important indicator of the level of health in a society. The purpose of this analysis is to estimate the general level of infant and child mortality in Bangladesh using the 1983 CPS data and to show how this level varies among socioeconomic groups and between rural and urban residents.

Various studies have suggested that infant mortality has declined in Bangladesh. Although no separate estimates are available for the area now comprising Bangladesh, there is evidence indicating that the infant mortality rate per 1000 live births per annum in the area was around 222 in 1901-1910, around 211 in 1911-1920, around 176 in 1921-1930, and around 168 in 1931-1940 (Robinson, 1967). The rate fell further to about 160 just prior to Bangladesh's becoming part of Pakistan in 1947. Studies conducted with national level data, after independence in 1971, estimated the rate to be within the range of 154-158 over the period 1971-1973; estimates derived from the Matlab data were in the range of 103-167 over the period 1971-1977 (table-6.1). However, the Matlab data may not be representative of the country as a whole since they cover only a very small rural population.

Various socioeconomic and demographic factors cause variations in infant mortality. For example, some studies have shown that education, especially education of mothers, is an important predictor of mortality differentials (Caldwell, 1979; Cochrance et al., 1982; D'Souza, 1982). Variations in infant mortality by economic status of parents and by occupation of father are commonly observed in both developed and developing countries (Mitra, 1979). The probability of dying is greater among infants of poorer parents than among those of richer parents. There are also differences by religion, type of housing, landholding, etc., in the developing countries. Infant and child mortality varies also by birth order, birth interval, parity, and breastfeeding. Infants and children of higher birth orders are more likely to die than those of lower birth orders, regardless of the age of the woman. The likelihood that a child will survive is related to the length of the previous birth interval; infants born after short intervals experience higher mortality rates (Nortman et al., 1978). A great deal of public

health experience suggests that breastfed children have lower death rates.

Table-6.1

ESTIMATES OF THE INFANT MORTALITY RATE IN BANGLADESH FROM DIFFERENT SOURCES, 1971-1977

Reference period	Rate	Source
1971-73	154	(Mitra, 1979; BFS data)
1971-72	153	(Gov't of Bangladesh, 1977; BRSFM data)
1971-72	158	(Kabir, 1977; BRSFM data)
1971-72	147	(Chen and Chowdhury, 1977, Matlab data)
1972-73	129	(Chen and Chowdhury, 1977, Matlab data)
1973-74	129	(Chen and Chowdhury, 1977, Matlab data)
1974-75	167	(Chen and Chowdhury, 1977, Matlab data)
1975-76	150	(Chen and Chowdhury, 1977, Matlab data)
1977	103	(Curlin et al., 1976; Matlab data)

The best data source for obtaining infant mortality rates is a vital registration system. But such a system, unfortunately, does not exist in Bangladesh. Although in recent years the Bangladesh Bureau of Statistics has introduced a vital registration system on a sample basis, the system is still being developed. The International Center for Diarrheal Disease Research, Bangladesh (ICDDR,B, 1985) has a vital registration system covering their field research area in Matlab, a rural subdistrict. Although the reliability of the ICDDR,B data seems high, it may not be representative of the national population. Thus, any national estimates of infant mortality rates have to be obtained by indirect methods of estimation.

6.2 Techniques

Measures of infant and childhood mortality presented in this analysis have been obtained using the Brass technique for

estimating mortality from the proportion dead of children ever born, tabulated by age of mothers. The Brass technique is based on the assumption that both fertility and mortality levels have remained constant in the population under study (Brass, 1975). Recently, several studies (Feeney, 1976; Kraly and Norris, 1976; UNO, 1983) have developed several ways to estimate infant and child mortality levels when mortality is falling. Both Sullivan (1972b) and Trussell (1975) have discussed some of the implications of using particular model life tables.

Information on children ever born and children who have died can be used to calculate the proportion of children ever born (by five-year age groups) who had died by the time of the survey. This proportion is itself an indicator of childhood mortality. However, it is affected by the age pattern of fertility and cannot be used directy as a mortality measure. Brass (1968) first proposed a way of transforming such proportions into probabilities of dying between birth and exact ages, and a number of modifications of his original procedure have been suggested (Sullivan, 1972b; Trussell, 1975; and Feeney, 1980). The proportion of children dead for a given age group of mother (D_i) depends on the length of time since the children were born and may be equated to the probability of dying between birth and some age X_i (denoted by $q(X_i)$). X_i will depend on the difference between the ages of the mothers at the date of the survey and at the age of onset of childbearing. It will also be affected by the way fertility changes with the age of the woman and by the pattern of mortality in childhood (Brass, 1975).

In order to select the right multiplying factors by age group for deriving the $q_{(x)}$ from the observed D_i, an estimate of the "location" of childbearing is needed. The obvious measure is m, the mean age of the age-specific fertility distribution. However, m does not always give a good index for the youngest ages of childbearing, the most crucial period in the estimates $q_{(1)}$, $q_{(2)}$, and $q_{(3)}$ (Brass, 1975). An alternative index is P_1/P_2 (the ratio of mean children born per woman in the 15-19 and 20-24 age group), which shows the pattern of fertility change at early years. Studies by Brass have indicated that the single indicator P_2/P_3 is an adequate choice of a location parameter.

Respondents interviewed in the 1983 CPS eligible woman sample were all ever-married women under 50 years of age. Their median age was 27.2 years. The average parity of the women was 3.9 ever-born children. Educational attainment among the women was low. Over two-thirds (68.8 percent) had never attended school. Almost 90 percent of the women were not employed. Among those employed, most had paid employment. Nearly 89 percent of the ever-married women were Muslim. One-third of the women were from families having no agricultural land. A little over 33 percent of the respondents had ever used contra-

Metropolitan Urban Area of Bangladesh," Population Studies, 32(2), London.

Davis, K.
1951 The Population of India and Pakistan, Princeton University Press, Princeton, New Jersey.

ceptives, and 19.1 percent of those currently married were current users (Mitra and Kamal, 1985).

6.3 Results

Data used in the estimation of the infant and child mortality are shown in table-6.2. These include the age-specific distribution of respondents (ever-married women) in the 1983 CPS eligible woman sample; the number of children ever born and still living, as reported by the respondents, by specific age group; and the proportion of children dead, as derived from the reported numbers of children ever born and children still living for a specific age group. Except for the age group 15-19, the proportion dead increased with the age of women up to 40-44 years. This trend is expected in view of our earlier discussions that the older women are the longer the average exposure to the risk of mortality of their children. The deviation of the 15-19 age group from the trend may be due to sampling fluctuations because of small number of births, while that of the 45-49 age group may be due to greater memory lapses among the oldest women.

Table-6.2

PROPORTIONS DEAD AMONG CHILDREN, BY AGE OF WOMEN

Age group	Number of ever-married women	Children ever born (CEB)	Children still living (CSL)	Proportions dead among children (D_i)
15-19	1661	1472	1183	.196
20-24	1723	3939	3162	.197
25-29	1624	6236	4945	.207
30-34	1083	5954	4583	.230
35-39	913	5956	4472	.249
40-44	704	5182	3722	.282
45-49	646	4854	3553	.268

Estimates of infant and child mortality derived by the Brass technique are given in table-6.3. Following the suggestion given in Brass (1975), the multiplying factors for the estimates

Khuda, B.
1985a Rural Development and Change: A Case Study of a Bangladesh Village, The University Press Ltd., Dhaka.

1985b Rural Development and Demographic Change in Bangladesh: Some Results from an On-going Study, paper presented at the Seminar on the Fertility Impact of Development Inputs, Planning Commission, Govt. of Bangladesh, Dhaka.

$q_{(1)}$, $q_{(2)}$, $q_{(3)}$, $q_{(4)}$, and $q_{(5)}$ are selected with reference to P_2/P_3, and those for $q_{(10)}$, $q_{(15)}$, and $q_{(20)}$ are selected with reference to the mean age of the fertility schedule. The probability that a child would die by exact age 1 was .175. This figure gradually increased to .277 for exact age 15. The sudden drop in the probability after exact age 15 suggests that the estimates of child mortality may be unreliable at the older ages. It should be noted in interpreting this pattern that the estimates of different probabilities refer to the mortality situation at different points in time. Furthermore, the estimates may be subject to differential reporting errors. Older women are more likely to understate the number of children than are younger women.

Table-6.3

ESTIMATES OF CHILD MORTALITY (PROBABILITY OF DYING AMONG CHILDREN)

Women's age group	Proportion dead, D_i	Multiplying factor, K_i	Probability of dying, q_x	Exact age of children
15-19	.196	.893	.175	1
20-24	.197	.961	.189	2
25-29	.207	.963	.199	3
30-34	.230	.976	.224	5
35-39	.249	1.007	.251	10
40-44	.282	.956	.277	15
45-49	.268	.954	.263	20

NOTES: Multiplying factors (K_i) for the estimates $q_{(1)}$, $q_{(2)}$, $q_{(3)}$ and $q_{(5)}$ were selected from the Brass table (table-14 of Brass, 1975) with reference to P_2/P_3 while those for the estimates $q_{(10)}$, $q_{(15)}$ and $q_{(0)}$ were selected with reference to m, the mean age of the fertility schedule. The value of P_2/P_3 for the study population was .574 and that of m was 27.4 years.

One way to examine the reliability of different estimates is to compare the age pattern of the estimated probabilities of dying in childhood to age patterns of model life tables. If child mortality has been changing, the mortality levels will not be constant; rather they will show a regular trend with the age of the mother. Table-6.4 shows the levels of

mortality as indicated by the estimates in the west model life table. Except for $q_{(1)}$ the mortality levels were between 11 and 12. The mortality level (10) indicated by $q_{(1)}$ was lower, suggesting that mortality was higher in the immediate past than in the recent past, which appears contradictory to the declining mortality trend documented in previous studies in national/sub-national studies (D'Souza and Chen, 1980; Kabir, 1980; Kabir et al., 1981; Chen et al., 1981). For the same reason, the estimates $q_{(10)}$, $q_{(15)}$ and $q_{(20)}$ for the older ages appeared unreliable. All these estimates indicated lower mortality in the remote past than in the recent past. Therefore, our subsequent analysis will be based on the more reliable estimates $q_{(2)}$, $q_{(5)}$ and $q_{(5)}$. Brass (1975) also concluded that $q_{(2)}$, $q_{(3)}$ and $q_{(5)}$ are the more reliable indicators.

Table-6.4

CHILD MORTALITY ESTIMATES AND THEIR INDICATED MORTALITY LEVELS ACCORDING TO WEST PATTERN

Exact age of children	Estimate of mortality $q_{(x)}$	Proportion surviving to age x $1-q_{(x)}$	Level
1	.175	.825	10.0
2	.189	.811	11.6
3	.199	.801	11.9
5	.224	.776	11.6
10	.251	.749	11.3
15	.277	.723	10.9
20	.263	.737	12.1

The Brass measure of $q_{(x)}$ was first modified by Sullivan (1972a) and later by Trussell (1975). While both modifications make the assumption of constant mortality and fertility, they relax the conditions that (a) the underlying mortality follows the standard pattern and (b) the underlying fertility schedule conforms to the polynomial model. In order to determine if Sullivan's and Trussell's techniques yield different results from those obtained using Brass methods, a comparison is presented in table-6.5. The computational procedures for the Trussell and Sullivan estimates are given in the appendix.

There are virtually no differences between the Brass and Trussell estimates with regard to $q_{(2)}$, $q_{(3)}$, and $q_{(5)}$. The Sullivan estimate for $q_{(2)}$ is slightly higher than that of Brass or Trussell. In contrast, Sullivan's estimates for $q_{(3)}$ and $q_{(5)}$ are slightly lower than those of Brass and Trussell. The difference between the Brass and the two other estimates does not seem to be appreciable. In subsequent analyses, only the Brass estimates will be used.

Table-6.5

COMPARISON OF MORTALITY ESTIMATES
BY VARIOUS METHODS

Estimates	Brass	Trussell	Sullivan
$q_{(2)}$	.189	.189	.193
$q_{(3)}$	.199	.199	.195
$q_{(5)}$	.224	.228	.216

Estimates of child mortality obtained from the proportion dead among children ever born do not reflect mortality at a single point in time. The deaths of the children occurred throughout the childbearing period of the women and therefore reflect the mortality rates throughout the period. The final proportion dead reflects a weighted average of the mortality rates over the period, the weights depending on the age distribution of children ever born. For example, the children born to women of a particular age have been exposed to the risk of dying for different lengths of time, and on average the older the women, the longer the period during which their children have been exposed to risk. Child mortality estimates derived from child survival information, therefore, represent an average of child mortality experience during the childbearing lives of the women. If child mortality was changing during the childbearing period of women, it is possible to generate estimates for different periods.

The Coale-Trussell procedures, which estimate the number of years before the survey when the period mortality risk was equal to that obtained from the proportion of children dead reported by each age group of women, have been applied to the data (Coale and Demeny, 1966; Trussel, 1975). Table-6.6 shows the infant mortality levels in the west model for various calendar years. Since age-specific estimates of infant and child mortality are from cohorts of women, their reference date also

varies with age. The estimated infant mortality as implied by $q_{(2)}$ refers to the mortality condition three years prior to the 1983 CPS, that is, the condition of 1980-1981. Similarly, $q_{(3)}$ reveals the mortality condition of 1978-1979 and $q_{(5)}$ that of 1976-1977.

Table-6.6

THE REFERENCE TIMES OF THE CHILD MORTALITY ESTIMATES, $q_{(x)}$

Estimates	Calculated value	Time to which the estimate refers, $t_{(x)}$	Calendar year
$q_{(2)}$	.189	3.00	1980-81
$q_{(3)}$	.199	5.04	1978-79
$q_{(5)}$	.224	7.32	1976-77

Table-6.7 presents the implied infant and child mortality among the 1983 CPS survey population corresponding to different estimates and their referenced calendar years. The infant mortality rates per 1000 live births per year, as implied by $q_{(2)}$, $q_{(3)}$, and $q_{(5)}$ according to the west model life table are 150, 146, and 150, respectively. While the estimates refer to the mortality situation over the period 1976-1981, it is obvious from the results that infant mortality in Bangladesh remained more or less unchanged at 145-150 in the recent past. Table-6.7 also shows the implied child mortality between the ages of one and four years, ${}_1q_4$. All three estimates surpris-

Table-6.7

IMPLIED INFANT AND CHILDHOOD MORTALITY RATES

Estimates	Infant mortality rates	Child mortality rates ${}_1q_4$	Calendar year
$q_{(2)}$	.150	.087	1980-81
$q_{(3)}$	.146	.086	1978-79
$q_{(5)}$	.150	.087	1976-77

ingly show the same value of $_1q_4$ - 87 per 1000, which indicates that the child mortality rate over the period 1976-1981 was around 22 per 1000 live births. This consistency suggests very little change in the recent past.

Table-6.8 compares implied infant mortality rates, as indicated by $q_{(2)}$, $q_{(3)}$, and $q_{(5)}$ for four surveys - the 1974 BRSFM, the 1975 BFS, the 1981 CPS, and the 1983 CPS. The table also shows the time period to which these estimates refer. Since the estimates are subject to different reporting errors, each set of estimates is considered separately. The $q_{(2)}$ estimates underscore a declining trend in mortality over the period 1971-1981; the probability of dying among infants is indicated as .174 in 1971-1972, .159 in 1972-1973 and .145-.150 in 1978-1981. The difference betwen 1971-1972 and 1972-1973 may be a result of overestimation of mortality by $q_{(2)}$ in the 1974 BRSFM, or of underestimation in the 1975 BFS, since the small time gap does not lend support to the hypothesis that mortality changed between the two surveys. Although there is no reason to disregard the drop between 1971-1973 and 1978-1979, the two other estimates do not support the findings. Both $q_{(2)}$ and $q_{(3)}$ show that during the period 1971-1981 mortality remained relatively stable except for the years 1974-1975 and 1976-1977. The relatively high values of the estimates in 1974-1975 and 1976-1977 are not surprising since it is likely that mortality was elevated by famine and flood conditions in 1974 and that the elevated level continued until 1977 (Chowdhury et al., 1977).

Differentials in mortality levels that have been documented between different subgroups of the population are associated not only with variation in the availability of and access to health services, but also with variations in socio-economic status. This section examines the differentials by the following variables: education of mother and father, urban-rural area, religion, landownership of family, employment status of women, parity, and contraceptive use.

Studies in many developing countries have shown an inverse relationship between parental education and infant and child mortality (Mitra, 1979; D'Souza, 1982; D'Souza et al., 1980; Chowdhury, 1981; Caldwell, 1979; Cochrance et al., 1982). This relationship is usually attributed to the fact that parental education is a proxy for socioeconomic factors that may influence the health and life chances of a child. The stronger influence of mother's education may be due to the fact that a more educated woman is better equipped and is more knowledgeable about taking appropriate measures for prevention and treatment of diseases of her child. It also may give a woman a status in the family and in the community that permits her to act more effectively on her knowledge.

Table-6.8

COMPARISONS OF INFANT MORTALITY RATES AS INDICATED BY DIFFERENT ESTIMATES IN DIFFERENT SURVEYS[1]

Survey/year	Infant Mortality Rates Indicated by Different Estimates		
	q(2)	q(3)	q(5)
BRSFM 1974	.174 (1971-72)	.152 (1969-70)	.136 (1967-68)
BFS 1975	.159 (1972-73)	.150 (1970-71)	.136 (1968-69)
CPS 1981	.145 (1978-79)	.157 (1976-77)	.145 (1974-75)
CPS 1983	.150 (1980-81)	.145 (1978-79)	.150 (1976-77)

1 In parenthesis are given the referenced time of the estimated infant mortality rate.

As can be seen from table-6.9, infant and child mortality decreased as education of father increased. The average rate[1] of implied infant mortality was .163 for fathers who had never attended school. The rate decreased with every increase in education, reaching a low of .098 among those who had college and university education. The pattern was even stronger for education of the female respondent (table-6.10). Infant and child mortality differed by 10 percent between fathers never attending school and those who had primary education, but the infant and child mortality of mothers who had never attended school was 23 percent higher than that of those who had primary education. Similar differentials were clear in the comparisons of other education subgroups.

The significant role of parental education and the greater importance of the mother's education have been previously documented (Caldwell, 1979; Preston, 1978; and Cochrance, 1980). Father's education is usually more closely related to household

1 The average rate was calculated as the simple arithmetic mean of the infant and child mortality rates as implied by $q_{(2)}$, $q_{(3)}$ and $q_{(5)}$.

Table-6.9

CHILD MORTALITY ESTIMATES AND THE AVERAGE OF THEIR INDICATED INFANT MORTALITY, BY EDUCATION OF HUSBANDS[1]

Education of husbands	Child mortality estimates			Average of indicated infant mortality rates	Relative infant mortality index
	q(2)	q(3)	q(5)		
Never attended school	.210 (816)	.222 (783)	.240 (539)	.163	100
Primary school	.175 (311)	.214 (297)	.223 (222)	.148	90
High school	.182 (228)	.178 (201)	.207 (123)	.138	85
College and university	.138 (255)	.116 (238)	.151 (120)	.098	60
All[2]	.189 (1723)	.199 (1624)	.224 (1083)	.148	91

1 The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

2 Number of ever-married women in a column may not equal the total for all because of the exclusion of "don't know" and "not stated" cases.

Table-6.10

CHILD MORTALITY ESTIMATES AND THE AVERAGE OF THEIR INDICATED INFANT MORTALITY, BY EDUCATION OF WOMEN[1]

Education	Child mortality estimates			Average of indicated infant mortality rates	Relative infant mortality index
	q(2)	q(3)	q(5)		
Never attended school	.206 (1085)	.215 (1068)	.234 (793)	.159	100
Primary school	.158 (471)	.182 (402)	.195 (233)	.129	81
High school	.117 (114)	.106 (94)	.170 (42)	.098	62
College and university	.114 (53)	.046 (57)	.076 (15)	.063	40
All[2]	.189 (1723)	.199 (1624)	.224 (1083)	.148	93

1 The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

2 Number of ever-married women in columns may not equal the total for all because of the exclusion of "not stated cases.

income than mother's education. The greater influence of mother's education in this study suggests that mother's education may be working in ways related to child care and health practices. It also may be that in a country like Bangladesh, where the level of education is extremely low, female education is a stronger indicator of social status than male education. However, studies done with data collected from the special project areas in Bangladesh show different results. In their studies of infant mortality based on data obtained from the ICDDR,B extension projects in the four upazilas, Phillips and Mazumdar (1984) reported that mother's education did not have any significant influence on either the neonatal or postneonatal mortality when a large number of other factors are simultaneously controlled for. This finding was consistent with the weak SES effects observed by Chowdhury (1981) in the Matlab data. The authors suggest that the lack of the education effect may be related to the generally poor living conditions and the nearly universal practice of breastfeeding.

In developing coutries infant and child mortality is frequently higher in rural areas than in urban areas (Mitra, 1979; Ruzicka, 1983). The rural-urban differential in infant and child mortality may be related to a wide range of social-economic conditions and environmental circumstances. Table-6.11 shows the infant and child mortality differentials by urban-rural areas. As expected, the infant and child mortality rates are higher in rural areas than in the urban areas. The implied infant mortality, as indicated by the average of $q_{(2)}$, $q_{(3)}$, and $q_{(5)}$, suggests that infant mortality is 13 percent higher in rural areas than in the urban areas. The lower mortality in the urban areas can be explained by differences in living conditions, availability and accessibility of health care services, and socioeconomic levels. It is not possible, however, to determine from this aggregate information whether the mortality advantage is uniformly distributed across all segments of the urban population poor and rich, uneducated and educated.

In Bangladesh religion plays an important role in belief and practice, which in turn may affect fertility and mortality. Table-6.12 shows the differentials in infant and child mortality by two religious groups in Bangladesh, Muslim and non-Muslim. The infant and child mortality estimates were consistently higher for the children of Muslim mothers. The difference, however, is not very large. For example, the infant mortality of the children belonging to the Muslim religion was only 7 percent higher than that of the children belonging to the non-Muslim religions.

Table-6.11

CHILD MORTALITY ESTIMATES AND THE AVERAGE OF THEIR INDICATED INFANT MORTALITY, BY RURAL-URBAN AREAS[1]

Areas	Child mortality estimates			Average of indicated infant mortality rates	Relative infant mortality index
	q(2)	q(3)	q(5)		
Rural[a]	.192 (1547)	.202 (1433)	.226 (973)	.150	100
Urban[a]	.166 (508)	.174 (552)	.197 (316)	.131	87
All[b]	.189 (1723)	.199 (1624)	.224 (1083)	.148	98

1 The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

a The number of ever-married women, unweighted.

b The number of ever-married women is weighted. The rural weight was 1 and the urban weight was .34665 (Mitra and Kamal, 1985).

Table-6.12

CHILD MORTALITY ESTIMATES AND THE AVERAGE OF THEIR INDICATED INFANT MORTALITY, BY RELIGION[1]

Religion	Child mortality estimates			Average of indicated infant mortality rates	Relative infant mortality index
	q(2)	q(3)	q(5)		
Muslim	.188 (1538)	.198 (1461)	.226 (937)	.149	100
Non-Muslim	.177 (185)	.194 (163)	.198 (146)	.138	93
All	.189 (1723)	.199 (1624)	.224 (1083)	.148	100

1 The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

Bangladesh is predominantly an agricultural country. Ownership of agricultural land is considered an important index of socioeconomic status of a family. In rural Bangladesh families without land are generally considered to be poor. This variable should, therefore, be an important determinant of infant and child mortality in our study population, provided that it is a reliable index of family socioeconomic conditions.

Table-6.13 shows the infant and child mortality differentials by family landownership. As expected children whose parents owned land had experienced consistently lower mortality risks than those whose parents owned no land. The risk of infant mortality was 12 percent higher for the children whose parents owned no land compared with the children whose parents owned land.

Table-6.13

CHILD MORTALITY ESTIMATES AND THE AVERAGE OF THEIR INDICATED INFANT MORTALITY, BY FAMILY LANDOWNERSHIP[1]

Family's landowner-ship	Child mortality estimates			Average of indicated infant mor-tality rates	Relative infant mortality index
	q(2)	q(3)	q(5)		
Family's owning land	.181 (1143)	.184 (1049)	.220 (697)	.142	100
Family's not owning land	.200 (579)	.224 (573)	.228 (385)	.159	112
All[2]	.189 (1723)	.199 (1624)	.224 (1083)	.148	104

1 The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

2 Numbers of ever-married women in a column may not equal the total for all because of exclusion of "not stated" cases.

Women's employment outside home will have a negative impact on child care only when the employment is incompatible with simultaneous childbearing or when there is no one to take care of the child. Both level of nutrition and standards of care

may be affected by the nature of the employment. There may be two groups of women working outside home: women who work outside home because of pressure of poverty and those who work as a source of pleasure or for a higher standard of living (Ware, 1984). In Bangladesh, the mobility of women, particularly in the rural areas, is severely constrained by the practice of purdah. This practice confines women to the boundary of the four walls of their home. However, tradition is gradually breaking, and the situation of women changing. The change, though slow and uneven among different segments of the population, is nevertheless significant (Ahmed, B., 1979). There is now a proportion of women who are either already employed or seeking employment outside the home. According to the 1983 CPS, about 11 percent of eligible sample women reported working for either cash or other type remuneration. Since employment of women may have either negative or positive effects on infant and child mortality, this constitutes an important research topic in Bangladesh.

Table-6.14 shows the infant and child mortality differentials by employment status of the respondents. Children of working women have higher risks of dying in infancy and childhood than those of women who are not employed. This holds true for all the mortality measures shown in table-6.14. For instance, the relative infant mortality index suggests that infant mortality is 13 percent higher for women with paid employment than for those who were not employed at the time of interview. Table-6.14 also shows that among working women who are employed for cash their children's mortality is lower than that of the children of the women who are employed without cash. This may be due to the fact that those who are employed without cash generally come from low socioeconomic strata and have little or no education.

It should be noted that the actual effect of mother's work on infant and child mortality depends on the structure of the family, particularly on the availability of other family members to take care of children in the mother's absence. The results indicate that women's employment in Bangladesh has a negative effect on child life. One explanation for this may be that the children of working women are deprived of adequate care. Another reason may be that economically worse off women work outside home and the observed differences are related to economic influences on infant and child mortality.

Table-6.14

CHILD MORTALITY ESTIMATES AND THE AVERAGE OF THEIR INDICATED INFANT MORTALITY, BY EMPLOYMENT STATUS[1]

Employment status	Child mortality estimates			Average of indicated infant mortality rates	Relative infant mortality index
	$q_{(2)}$	$q_{(3)}$	$q_{(5)}$		
Not employed	.182 (1547)	.192 (1412)	.218 (942)	.142	100
Paid employment	.200 (128)	.220 (181)	.239 (112)	.160	113
Unpaid employment	.219 (48)	.241 (31)	.261 (27)	.175	123
All[2]	.189 (1723)	.199 (1624)	.224 (1083)	.148	102

1 The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

2 Number of ever-married women in a column may not equal the total for all because of exclusion of "not stated" cases.

Table 6.15 presents infant and child mortality estimates by number of children ever born to ever-married women of childbearing ages. In the table, for women with three and four children, $q_{(3)}$ and $q_{(5)}$ are lower than $q_{(2)}$; and for those with five or more children $q_{(3)}$ is lower than $q_{(2)}$ and $q_{(5)}$ is lower than $q_{(3)}$. This trend is contrary to the natural sequence of the estimates, $q_{(2)} < q_{(3)} < q_{(5)}$. The results may be due to relatively more underreporting of dead children by women of higher parity than by those of lower parity.

Despite deviations from their natural sequence, all the estimates clearly show that with an increase in the number of children, the probabilty of dying, as well as the average implied infant and child mortality increases. The infant and child mortality index for women with five or more children is 75 percent higher than that of women with one and two children. One explanation for the higher infant and child mortality of women

ıth higher number of children is that they may have short birth ıtervals.

Table-6.15

INFANT AND CHILD MORTALITY, BY NUMBER OF CHILDREN EVER BORN[1]

ildren er rn	Probability of dying			Average implied infant mortality	Infant and child mortality index
	q(2)	q(3)	q(5)		
2	.134 (856)	.137 (311)	.201 (91)	.107	100
4	.196 (645)	.152 (676)	.161 (231)	.127	119
and above	.294 (78)	.239 (585)	.231 (748)	.188	175
12	.189 (1723)	.199 (1624)	.224 (1083)	.148	138

The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

Number of ever-married women in a column may not equal the total for all because of the exclusion of women not having ever-born children and the exclusion of "not stated" cases.

Very little is known about the relationship between ntraceptive use status and infant and child mortality in ıgladesh. Table-6.16 shows infant and child mortality differ- :ials by ever-use of contraception, and table-6.17 presents the :ant and child mortality estimates by current use status.

Table-6.16

INFANT AND CHILD MORTALITY DIFFERENTIALS, BY EVER-USE OF CONTRACEPTION[1]

Ever-use of contraception	Child mortality estimates			Average of indicated infant mortality	Relative infant mortality index
	q(2)	q(3)	q(5)		
Never users	.214 (1124)	.237 (938)	.259 (633)	.174	100
Ever users	.165 (599)	.170 (686)	.188 (449)	.135	78
All[2]	.189 (1723)	.170 (1624)	.224 (1083)	.148	85

1 The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

2 Number of ever-married women in a column may not equal the total for all because of the exclusion of "not stated" cases.

For those who ever used contraception the infant and child mortality rates were consistently lower than for those who never used contraception. Infant mortality rates of children whose mothers ever used contraception were 22 percent lower than the rates for children of women who never used contraception. The difference in infant and child mortality is even greater when current users and nonusers are compared (table-6.17).

Table-6.17

INFANT AND CHILD MORTALITY DIFFERENTIALS, BY CURRENT USE STATUS1

Current use status	Child mortality estimates			Average of indicated infant mortality rates	Relative infant mortality index
	q(2)	q(3)	q(5)		
Currently using	.145 (290)	.156 (364)	.182 (263)	.119	100
Not currently using	.193 (1433)	.209 (1260)	.233 (819)	.151	127
All2	.189 (1723)	.199 (1624)	.224 (1083)	.148	124

1 The figures within parentheses are the number of ever-married women from whose reports the estimates were derived.

2 Number of ever-married women in a column may not equal the total for all because of the exclusion of "not stated" cases.

For women who breastfeed their children, an infant death tends to shorten the infertile period following birth and thus, in the absence of contraception, reduce the birth interval. Short birth intervals are related to high infant mortality. This is reflected by the current use of contraception of the respondents. For instance, infant mortality is 27 percent higher for the women who were not using contraception at the time of survey. Infant and child mortality can shorten birth intervals, increase the number of children ever born, and further increase infant and child mortality. Spacing of births by the use of effective contraception can reduce infant mortality substantially.

6.4 Conclusions

Since both fertility and mortality in Bangladesh cannot be assumed to have remained constant over the period of analysis, care should be taken in interpreting these results. Nevertheless, the Brass estimates are relatively robust and provide a reasonable indication of level. Since the Brass estimates yield the lowest available estimates of mortality, it can be argued that infant and child mortality rates are certainly not lower.

It is clear from the evidence presented that infant and child mortality is still very high in Bangladesh.

Differentials in infant and child mortality between urban and rural populations are probably related to variations in the availability of and access to health services, but also to variations in socioeconomic and demographic status and such factors as education, literacy, income, and housing conditions. Large differentials in mortality have been documented by other studies between the low-income, illiterate, inadequately housed majority and the better off families (World Bank, 1980). In many urban areas of Bangladesh, the conditions of sanitation and hygiene for the poor are worse or at least no better than in the rural areas.

The mother's attainment of primary schooling has a significant impact on child survival. Father's education also has a bearing on mortality during early childhood but mother's education emerged as a more important determinant of child survival in Bangladesh. In general, the effects of parental education seem to be greater than those of income and access to health facilities combined. It is quite reasonable to expect that women with at least some primary education know more about proper nutrition, dangers of contamination from water, vaccination, and other preventive measures.

It appears that mother's work status has a negative impact on infant and child mortality. In Bangladesh, very poor mothers may be forced to work in order to supplement insufficient family income or even to provide the principal source of family income. Their work may result in less care for their children as well as be an indictor of the very low economic status of the family. However, this needs more research.

This analysis has shown that infant/child mortality is lower among mothers who have used contraception than those who have not. This difference increases when the mothers are distinguished on the basis of current use (as opposed to ever use) status. The 1983 CPS found that 19.1 percent of the respondents in its eligible women sample were current users of some family planning methods. Of these, 38.7 percent were sterilized. The majority of the sterilization users came from rural, landless, and uneducated families. It may not, therefore, be argued that family planning users in Bangladesh are drawn generally from higher social strata and this is the reason that they have lower infant and child mortality rates. This finding suggests that by increasing the use of contraception infant and child mortality could be greatly reduced, even without increases in medical facilities. However, the impact of use of family planning on infant and child mortality deserves more detailed analysis.

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APPENDIX A

The computational procedures for Trussell and Sullivan Estimates.

Estimation of Child Mortality Rates using Data Classified by Age.

1. Data Required

(a) The number of children ever born (CEB), classified by sex and by five-year age group of mother;

(b) The number of children surviving (or the number dead), classified by sex and by five-year age group of mother; and

(c) The total number of women (irrespective of marital status), classified by five year age group. All women, not merely ever-married women, must be considered.

Classification by sex for children ever born and surviving is desirable not essential. If it is available, child mortality for each sex can be estimated separately.

2. Computational Procedure

The steps of the computational procedure are described below.

Step 1: calculation of average parity per woman. Parity $p_{(1)}$ refers to age group 15-19, $p_{(2)}$ to 20-24 and $p_{(3)}$ to 25-29. In general $p_{(i)} = \frac{CEB(i)}{FP(i)}$ -- (i),

where $CEB_{(i)}$ denotes the number of children ever born reported by women in age group i, and $FP_{(i)}$ is the total number of women in age group i, irrespective of their marital status.

Step 2: calculation of proportion of children dead for each age group of mother: The proportion of children dead, $D_{(i)}$, is defined as the ratio of reported children dead to reported children ever born, that is $D_{(i)} = CD_{(i)}/CEB_{(i)}$.....(2) where $CEB_{(i)}$ is defined as in step 1; and $CD_{(i)}$ is the number of children dead reported by women in age group i.

Step 3: calculation of multipliers. The estimating equations according to the Trussell variant of the original Brass method are:

$k_{(i)} = a_{(i)}+b_{(i)}(p_{(1)}/p_{(2)})+c_{(i)}p_{(2)}/p_{(3)})$,
$q_{(x)} = k_{(i)}\ D_{(i)}$, where a, b and c are constants.

The values of a, b and c are taken from table 47 of the indirect techniques for demographic estimation (UNO, 1983;77). The estimating equation for the Sullivan variant is $\frac{q(x)}{DX} = a_{(i)}+b_{(i)}(p_{(2)}/p_{(3)})$,
where a and b are constants. The values of the constants are taken from Brass (1975:54). It is pertinent to mention here that in both estimating techniques only west model life table is considered.

Step 4: calculation of probabilities of dying and of surviving. Estimates of the probability of dying $a_{(x)}$, are obtained for different values of exact age x as the product of the reported proportions dead, $D_{(i)}$, and the corresponding multipliers, $k_{(i)}$. Once $q_{(x)}$ is estimated, its complement $1_{(x)}$, the probability of surviving from birth to exact age x, is readily obtained as $1_{(x)} = 1.0-q_{(x)}$.

Step 5: calculation of reference period. The reference period, $t_{(x)}$, as an estimate of the number of years before the survey date to which the child mortality estimates, $q_{(x)}$, obtained in the previous step refer. The value of $t_{(x)}$ is estimated by means of the equation $t_{(x)} = a_{(i)} + b_{(i)}\ (p_{(1)}/p_{(2)}) + c_{(i)}\ (p_{(2)}/p_{(3)})$, where a, b and c are constants. The values of the constants for the west model life table has been taken from table 48 of the indirect techniques for demographic estimation (U.N.O., 1983:78).

7. CONTRACEPTIVE CHOICES IN BANGLADESH

by

S.N. Mitra, S. Harbison,
M.S. Karim and A.J. Sufian

7.1 Introduction

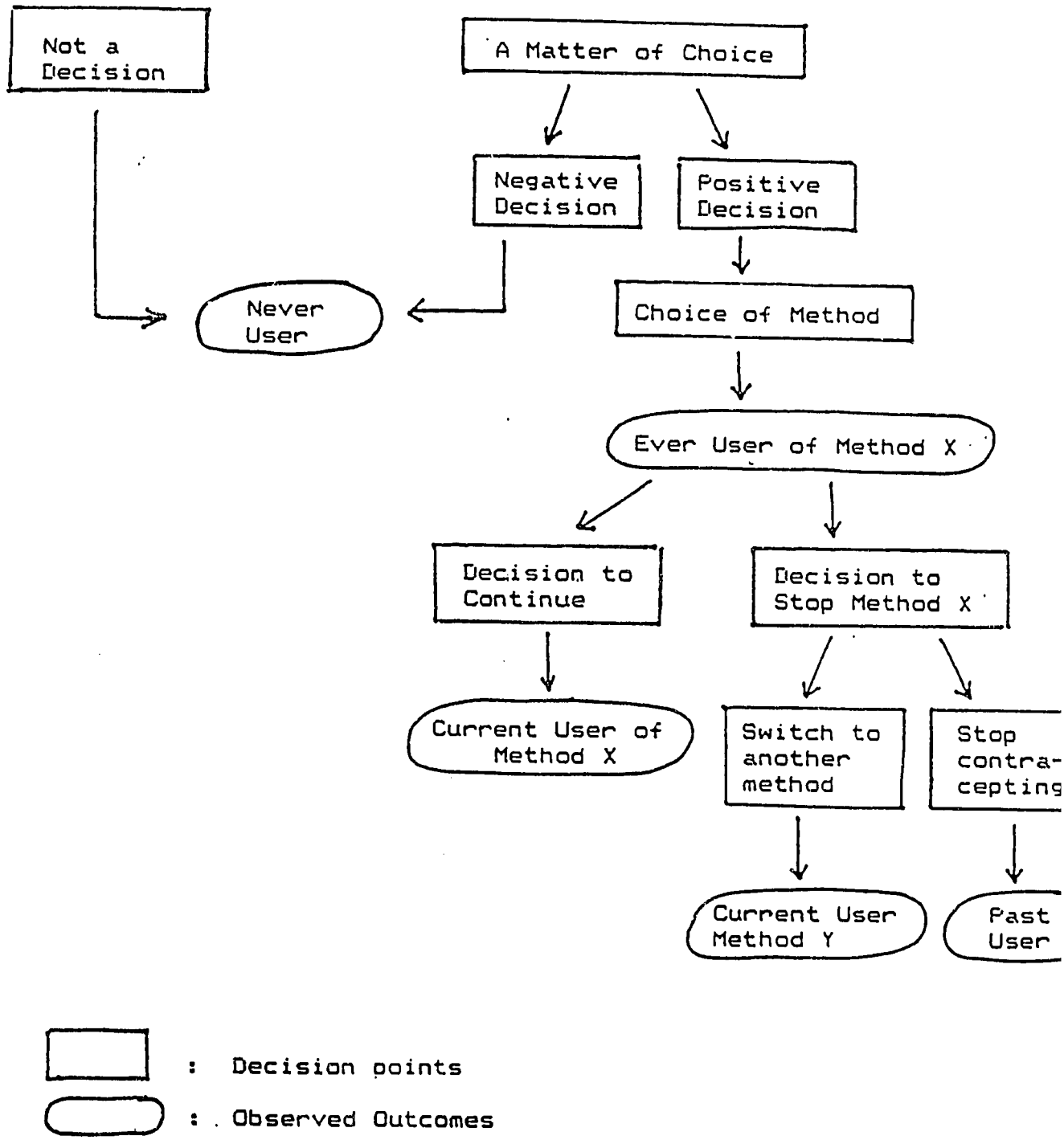
The other studies in this volume have shown that although relatively few women at risk are currently using contraception, a large number of Bangladeshi women want to control their family size. The study by Khuda and Howlader (1985) reported that approximately 37 percent of the respondents had unmet need (defined as women less than 50 years of age who said they did not want any more children but who were not currently using a modern method of contraception). This measure is conservative in the sense that it excludes women who want to space births. There are other indications of a potentially large demand for contraception from studies presented here. Almost 40 percent of the nonusers in the eligible woman sample said they intended to use contraception sometime in the future. Measures of prevailing family size norms obtained from the 1983 CPS also indicate that women desire relatively small families. Family size norms in the 1983 CPS were obtained by asking currently married respondents about how many more children they desired in addition to the children they already had. Women with two children or fewer wanted, on average, a total family size of 2.7 children. These women constituted about 47 percent of all currently married women in the sample (Mitra and Kamal, 1985).

Within the given context, it is reasonable to ask why relatively few people in Bangladesh choose to use contraception. The purpose of this chapter is to examine factors that influence contraceptive use. We assume that contraceptive choice is not a single decision but a series of decision points. One possible framework for such a set of decision points is presented in figure 7.1, which traces decision points for "never users" and for users.

A "never user" may or may not have made a conscious decision not to use contraceptives. He or she may have considered contraception and decided not to use for a wide variety of reasons. On the other hand, he or she could, in fact, not have considered contraceptive use at all. The non-decision category of nonuser can be explained in the context of prerequisites for contraceptive choice. These include (a) the motivation to regulate family size, (b) the social and cultural acceptability of such behavior, and (c) knowledge, availability, and accessibility of methods suited to social and cultural conditions and

FIGURE 7.1

CONTRACEPTIVE DECISIONS



individual preferences. If one or more of these is lacking, real decision making is precluded.

These factors are also key ingredients in the initial decision to use contraceptives. The relative importance of each of them is discussed by Bulatao (1985), Dubey and Bardhan (1985), and Johnson et al. (1985) in their reviews of the determinants of contraceptive choice. In regard to motivation, only Dubey and Bardhan suggest that if there is a strong enough motivation to regulate family size, an individual will actively seek out and use means of birth control even if such means are bothersome or not easily available. A more widely held view is that motivation alone is not sufficient to result in contraceptive behavior. Sociocultural acceptability as a factor varies widely in importance; societies can range all the way from strictly prohibiting any interference in the reproductive process to strictly prohibiting individuals from having more than two children. The main point is that it is unlikely that in societies of the first type contraceptive usage can be a meaningful choice. Availability of methods and information in all cases is an important consideration. It has been pointed out by Dubey and Bardhan (1985) that the availability of inexpensive, easy, attractive, and acceptable contraceptives and an efficient delivery system can significantly improve contraceptive use even if motivation to regulate family size is weak. Programmatically, this implies that more individuals will choose to use contraception if methods are made widely available that are medically safe and effective (and perceived to be so), simple and not considered a "nuisance," and compatible with local beliefs, customs, and religious doctrines.

The decision to use contraception and the choice of method are influenced by individual preferences, which in turn are a function of age and location in the reproductive cycle. Younger couples may be interested only in methods that are suitable for postponing birth and increasing subsequent intervals. On the other hand, older couples having large families may be interested in methods that can provide continuous protection for the rest of their reproductive life. Individual preferences may also be subject to physiological and psychological factors. For example, there may be individuals who believe that some methods are not safe, effective, or comfortable. In addition, there may be women who think that certain methods are not medically suitable for them (Johnson et al., 1985).

There are also economic considerations associated with the decision to use contraception. There may be individuals who will not use birth control if it is not free. Also, there may be individuals who will not use a method if the costs incurred in accepting the method are not reimbursed. Other individuals may believe that methods given free of cost are not of good quality

(Johnson et al., 1985). It is clear that the decision to use contraception is dependent on a large number of factors, including the availability of methods that are personally, socially, and economically acceptable.

7.2 Factors Affecting Contraceptive Use

Bangladesh has an overwhelmingly Muslim (87 percent), rural (74 percent), illiterate (80 percent) population (BBS, 1984). Infrastructure is poorly developed and communication/transportation linkages among the vast majority of rural villages are limited. To date, only 6 percent of the country has been electrified (Bangladesh Observer, 1985). A recent study showed that only 38 percent of the rural population has access to a radio (Mitra and Associates, 1984). While this profile differs markedly in the urban areas, it is in the remote rural villages that the vast majority of the population lives and it is the rural economy and rural way of life that are dominant in determining the contraceptive behavior or most Bangladeshis.

7.2.1 Religious Factors

The impact of Islam on contraceptive choice and hence fertility has been widely debated. There is no proscription in the Koran against fertility control and in fact the Koran urges that an individual be able to feed all his children, but Muslims who cannot read the Koran have it interpreted for them by the local religious leaders, who tend to be conservative. These men frequently promote the philosophy that it is not proper to take any measure to limit fertility, leaving the decision concerning the number of children to Allah in the belief that he will provide. More generally, it has been suggested that there is a fatalism associated with Islam, a passive acceptance of what good or ills may come, which discourages people from maximizing behavior in a number of regards, but especially discourages people from carefully analyzing the implications of large family size (Mitra and Associates).

7.2.2 Cultural Factors

In Bangladesh, the ideal family type is an extended, patrilineal, patrilocal group, although economic pressure has in many cases caused this group to break into smaller, single-family units. At marriage, a woman goes to live in the household of her husband. The dominant authority in that household is the senior male. Since males and females have separate functions and move in separate social spheres, it is primarily the mother-in-law to whom the girl is responsible and by whom she is dominated. The crucial point is that the individual woman, because of social

and cultural factors, may not have autonomy to make those decisions that seem most sensible to her and most beneficial to her own welfare. Even if the woman does, in fact, have a significant input into family size decisions, she may desire a large number of children to ensure that she has several living sons in her old age. When a woman's husband dies or if she is divorced, it is theoretically her son who will care for her. As population pressures grow and resources become increasing scarce, however, having a large number of children (including several sons) does not ensure support in old age.

7.2.3 Programmatic Factors

While there has been a relatively long history in Bangladesh of government support for family planning, there have been many administrative and institutional problems that have prevented services from being made available to all women in a culturally acceptable way. These problems include the following:

- Repeated integration and separation of health and family planning services, with consequent conflict among workers, confusion of responsibilities, poor supervision, and lack of logistic support;

- Failure to recognize that only female field workers can work effectively with female clients and that the geography of Bangladesh dictates a relatively high density of field workers to be effective;

- The failure to inform the majority of the population about a wide range of methods and to make these methods truly available (70 percent of currently married women were not visited in the six months before the survey). Knowledge of a method, if it is not relevant or suitable to the experience and situation of a particular woman, does not constitute grounds for meaningful choice; and

- The family planning program in Bangladesh originally espoused the "cafeteria approach" on the assumption that choice should rest with the client. However, experience has shown that prevalence of certain methods has increased over the duration of the successive plans. Table-7.1 shows trends in method specific current use rates from 1975 to 1983.

These factors suggest that for a significant number of nonusers, the lack of available and appropriate services, knowledge, and cultural acceptability may mean that contraception is not a meaningful option.

Table-7.1

NUMBER OF CURRENTLY MARRIED WOMEN IN THE TOTAL SAMPLE WHO FALL INTO EACH CATEGORY, BY RURAL AND URBAN RESIDENCE

Category	Rural	Urban	Total sample
Ever user	33.1 (2284)	55.5 (1202)	35.3 (2701)
Never user	66.9 (4624)	44.5 (965)	64.7 (4958)
N	6908	2167	7659
Past user	47.5 (1085)	35.6 (428)	45.7 (1233)
Current user	52.5 (1199)	64.4 (774)	54.3 (1467)
N	2284	1202	2700
Traditional method user	30.0 (359)	19.2 (149)	28.0 (411)
Modern method user	70.0 (837)	80.0 (627)	72.0 (1055)
N	1196	776	1466
Pill user	15.0 (177)	29.0 (225)	17.0 (473)
Tubectomy user	34.0 (403)	47.0 (201)	32.0 (473)
N (current users)	1196	776	1466

Source: Bangladesh Contraceptive Prevalence Survey - 1983 (Mitra and Kamal, 1985).

7.3 Results

In examining the issue of which factors influence the probability of having ever made the decision to use contraception, we consider "ever use" versus "never use." In the sample of eligible women there were 2,701 women who had ever used contraception and 4,958 who had never used contraception (see table-7.1). Of the ever users, about 54 percent were current users and 46 percent were past users. Of the current users, 72 percent were using modern methods.

The dependent variable considered in this analysis is ever use versus never use. The independent variables fall into four groups: demographic factors - age of the woman, number of children ever born, number of living sons, and number of children who have died; socioeconomic factors - education of the woman, religion, rural-urban residence, and employment status of the woman; programmatic factors - number of methods spontaneously mentioned, number of methods known with source, and whether there was a visit by a field worker during the past six months; and motivational factors - desire for additional children in the future. Table-7.2 indicates the method of measurement of independent variables. The means and standard deviation of the variables in the sample of the combined group of ever users and never users are given in table-7.3.

Table 7.4 presents the probability of being an ever user versus a never user, broken down by demographic, socioeconomic, and programmatic factors. The probability of having ever used contraception varied by age. It increased from 19 percent of the women in the age group <20 to 45 percent of the age group 30-39. It then dropped to 31 percent in the 40-49 age group. This follows a pattern similar to that reported by Pebley and Brackett (1982) in their analysis of WFS data from seven countries. This drop in probability of ever use in the oldest age group may be due to a combination of two factors: a significant number of these women may no longer consider themselves to be at risk of pregnancy and, second, it is likely that these women represent a cohort that was more conservative and had been exposed to family planning programs and information for less of its reproductive history. Similarly, women with two or fewer children were much less likely to have ever used contraception than those with more than two.

Table-7.2

MEASURES OF INDEPENDENT VARIABLES

Variables	Type of measures
Age	continuous variable
Number of children ever born	continuous variable
Number of living sons	dummy variable: 1=fewer than 2 sons; 0=2 or more sons
Number of children died	continuous variable
Education	continuous variable
Religion	dummy variable: 1=Muslim; 0=non-Muslim
Rural-urban residence	dummy variable: 1=urban; 0=rural
Employment status of women	dummy variable: 1=employed; 0= not employed
Number of methods spontaneously mentioned	continuous variable
Number of methods known with source	continuous variable
Field worker's visit	dummy variable: 1=visited; 0= not visited
Desire for additional children	dummy variable: 1=wanted no more children; 0=wanted more children

Table-7.3

MEAN AND STANDARD DEVIATION OF INDEPENDENT VARIABLES IN THE COMBINED GROUP OF EVER USERS AND NEVER USERS

Independent variable	Mean	Standard deviation
Age	27.62	9.04
No. of children ever born	3.94	3.01
No. of living sons[a]	.56	.50
No. of children died	.89	1.34
Rural-urban residence[b]	.24	.42
Religion[c]	.89	.32
Employment status[d]	.07	.26
Education	.73	1.23
Number of methods known (spontaneous)	2.21	1.52
Field worker's visit[e]	.30	.45
Number of methods known with source	3.48	2.19
Desire for additional children[f]	.54	.48

[a] Dummy variable: 1=fewer than 2 sons; 0=2 or more sons

[b] Dummy variable: 1=urban; 0=rural

[c] Dummy variable: 1=Muslim; 0=non-Muslim

[d] Dummy variable: 1=employed; 0=not employed

[e] Dummy variable: 1=visit; 0=no visit

[f] Desire for additional children: 1=wanted no more children; 0=wanted more children

Table-7.4

PERCENTAGE OF CURRENTLY MARRIED WOMEN 50 YEARS OF AGE WHO ARE EVER USERS AND NEVER USERS

Factor	Ever users	Never users	Total
All women	35.3 (2701)	64.7 (4958)	100.0 (7659)
Demographic			
Age group			
<20	19.4 (329)	80.6 (1366)	100.0 (1695)
20-29	39.8 (1239)	60.2 (1873)	100.0 (3112)
30-39	44.7 (796)	55.3 (984)	100.0 (1780)
40-49	31.3 (336)	68.7 (736)	100.0 (1072)
Living children			
<2	26.7 (969)	73.3 (2662)	100.0 (3631)
3-5	43.2 (1204)	56.8 (1580)	100.0 (2784)
6	42.4 (528)	57.6 (716)	100.0 (1244)
Dead children			
0	40.6 (1279)	59.4 (1870)	100.0 (3149)
1	36.5 (668)	63.5 (1162)	100.0 (1830)
2	35.2 (626)	64.8 (1154)	100.0 (1780)
Not applicable[1]	14.1 (127)	85.9 (772)	100.0 (899)
Living sons			
1	28.4 (1215)	71.6 (3067)	100.0 (4282)
2	44.0 (1486)	56.0 (1891)	100.0 (3377)

[1] Not applicable category comprises women who did not give birth to any live children.

Table-7.4 (continued)

Factor	Ever users		Never users		Total	
Socioeconomic						
Education of women						
Never attended school	27.5	(1019)	70.7	(3668)	100.0	(5187)
O-IV	38.2	(526)	61.8	(850)	100.0	(1376)
V and above	60.1	(653)	39.9	(433)	100.0	(1086)
Education of husband						
Never attended school	27.5	(1019)	72.5	(2681)	100.0	(3700)
O-IV	34.7	(288)	65.3	(542)	100.0	(830)
V and above	48.1	(1146)	51.9	(1239)	100.0	(2385)
Residence						
Rural	33.1	(2284)	66.9	(4624)	100.0	(6908)
Urban	55.5	(1202)	44.5	(965)	100.0	(2167)
Religion						
Muslim	34.1	(2313)	65.9	(4469)	100.0	(6782)
Non-Muslim	44.2	(387)	55.8	(489)	100.0	(876)
Landownership of family						
Own land	35.8	(1847)	64.2	(3317)	100.0	(5164)
Don't own land	34.2	(851)	65.8	(1639)	100.0	(2490)
Employment status						
Employed	65.5	(4652)	34.5	(2445)	100.0	(7097)
Not employed	54.5	(305)	45.4	(255)	100.0	(560)

Table-7.4 (continued)

Factor	Ever users	Never users	Total
Programmatic			
Methods spontaneously mentioned			
0	12.6 (164)	87.4 (1136)	100.0 (1300)
1	25.7 (431)	74.3 (1244)	100.0 (1675)
2	32.2 (655)	67.8 (1377)	100.0 (2032)
3+	54.6 (1449)	45.4 (1203)	100.0 (2652)
Methods known with source			
0	7.3 (87)	92.7 (1102)	100.0 (1189)
1	20.3 (170)	79.7 (668)	100.0 (838)
2	25.0 (282)	75.0 (846)	100.0 (1128)
3+	48.0 (2160)	52.0 (2342)	100.0 (4502)
Intention to use method in future			
Yes	32.4 (755)	67.6 (1574)	100.0 (2329)
No	12.4 (340)	87.6 (2402)	100.0 (2742)
Don't know	12.3 (138)	87.7 (982)	100.0 (1120)
Visit by family planning workers			
Visited	46.1 (1064)	53.9 (1244)	100.0 (2308)
Not visited	30.6 (1637)	69.4 (3715)	100.0 (5352)
Attitudinal			
Children wanted in future			
Yes	20.4 (735)	79.6 (2867)	100.0 (3602)
No	51.0 (1890)	49.0 (1816)	100.0 (3706)
Undecided	21.1 (74)	78.8 (275)	100.0 (349)

The probability of having ever used contraception did not show any discernible variation by child mortality. The probability was only slightly higher among those who had no dead child (41 percent) than those who had one dead child (37 percent) or more (35 percent).

As expected, there was considerable variation in the probability of having used contraception by number of living sons. Women having fewer than two sons (28 percent) were much less likely to have ever used contraception than were those who had two or more living sons (44 percent).

Not surprisingly, the probability of contraceptive use increased dramatically with urban residence: 33 percent of rural women had ever used contraception while 56 percent of urban women had. Religion as well affected the probability of use: 34 percent of all Muslim women had ever used contraception while 44 percent of other women had. Landownership did not seem to have an important effect on the probability of ever use. Employment status of women did have a bearing on the probability of use. Fifty-five percent of the women who were unemployed were ever users while 66 percent of those who were employed were ever users.

The probability of ever use was affected the same way by husband's and wife's education: as education went up, the probability of having ever used contraception went up. One might have expected that in Bangladesh, where males tend to be dominant in family decision making, the relationship would be stronger for male education than female education. In fact, the opposite was true. The relationship was much stronger with wife's education than husband's. The probability of a woman with more than five years of education having ever used contraception was more than twice as great as for those women who never attended school. One possible explanation for this is that women who had more than five years of education comprised a much more select group than men who had a similar level of education.

A third set of variables examined are related to the family planning program, delivery of services, and knowledge of those services. Number of methods the individual woman knew spontaneously was strongly related to the probability of ever use. The probability rose steadily from 13 percent among women who could spontaneously mention no method to 55 percent among those who could spontaneously mention three or more methods. Not surprisingly, desire for additional children was related to ever use versus never use of contraception. While 80 percent of women indicating that they wanted additional children had never used contraception, 49 percent of those who did not desire additional children had never used contraception.

The results of the multivariate logit regression, which shows the influence of each of the independent variables on the probability of ever having decided to use contraception, are presented in table-7.5. The logit regression used for this analysis was developed by David Leon of The Population Council/Bangkok under funding from The Population Council and USAID. The likelihood ratio statistic (x^2 with 11 degrees of freedom for the overall equation) is highly significant at $p = .001$. The predicted probability of having ever used contraception computed from the fitted function by fixing all the independent variables at their mean values was 0.35, which was almost the same as the observed probability. The model appears to be reasonably successful in representing individual effects of each independent variable on ever use versus current use decisions.

Each of the independent variables had a significant independent effect on the proportion having ever used contraception, suggesting that decisions to contracept in Bangladesh are influenced by demographic, social, programmatic, and attitudinal factors. Among the demographic variables, age had a negative impact, indicating younger women were more likely to use contraception than were the older women. This supports the theory that a desire to regulate family size is increasing in the cohort of women just starting their childbearing years. Family size, however, remains a key influence in contraceptive decision making. Women are not interested in using family planning methods unless they have achieved their desired family size. Not surprisingly, the number of children ever born has a positive impact on the proportion having ever used contraception. Also, a preference for sons and child mortality appear to play important roles in the contraceptive decision-making process. Women were less likely to ever use contraception if they had experienced more child deaths or if they had fewer than two living sons.

Each of the socioeconomic and programmatic factors had independent influences on the ever use versus never use decision. The probability of having ever used contraception was higher for women who were living in an urban area and for those who were employed than for those living in a rural area and who were unemployed.

Muslim women were less likely to be ever users of contraception. Women who knew more methods had a greater probability of having ever decided to use contraception than those who knew fewer methods. Similarly, chances of ever using contraception were greater among women who knew more method sources than those who knew fewer method sources, and were greater among women who were visited by the field worker than those who were not.

Table-7.5

MULTIVARIATE LOGISTIC FUNCTION REGRESSION ANALYSIS OF EVER VERSUS NEVER CONTRACEPTIVE USERS

Factor	Coefficient	Standard Error	T-Value	Standardized coefficient
Constant	-2.2864	.1369	-16.706**	
Demographic				
Age[2]	-0.0296	.0049	-6.003**	-.2672
No. of living sons[3]	-0.1125	.0579	-1.943*	-.0558
No. of children died[2]	-0.1705	.0269	-6.330**	-.2279
No. of children ever born[2]	0.1602	.0184	8.715**	.4828
Socioeconomic				
Rural-urban residence[3]	0.3348	.0626	5.345**	.1400
Education[2]	0.2403	.0244	9.869**	.2963
Religion[3]	-.4856	.0798	-6.082**	-.1541
Employment status[3]	0.3775	.0972	3.883**	.0986
Programmatic				
No. of methods known[2] (spontaneously)	0.2153	.0209	10.278**	.3262
Field workers visit[3]	0.2872	.0559	5.142**	.1301
No. of methods known[2] with source	0.2666	.0140	19.039**	.5825
Attitudinal				
Desire for additional[3] children	1.3394	.0680	19.702**	.6369

1 With 2 d.f.; significant at P=.001
2 Continuous variable.
3 Dummy variables.

* Significant at P=.05
** Significant at P=.001

Of all the independent variables, however, desire for additional children had the strongest impact upon the probability of being an ever user, followed by number of methods known and number of methods known with source. Among the socioeconomic factors, education had the greatest impact.

The foregoing analysis confirms our view that contraceptive decision making is subject to many constraints in Bangladesh. Bangladesh is a country characterized by strong preference for sons and high child mortality. Both child mortality and son preference have negative effects on the proportion having ever used contraception. Socioeconomic conditions do not appear to support widespread use of contraceptives. The religious conservatism of Islam, unemployment of women, illiteracy, and rural residence are among the factors reducing the chances of having been an ever user.

The strong influences of program factors clearly suggest that lack of knowledge of family planning methods and lack of accessibility to contraceptive supplies and services present another set of constraints to the contraceptive decision. Only 35 percent of currently married women had spontaneous knowledge of three or more methods. Perhaps most importantly, only 30 percent were visited by a field worker in the last six months. The strength of the attitudinal variable "desire for more children" highlights the importance of motivational and educational campaigns not only to influence family size norms, but also to convince women that it is realistically possible for them to implement their contraceptive decision. After deciding to use contraception, choice of method forms the second level of contraceptive decisions. Having decided to use contraception, an individual couple is faced with the problem of finding an appropriate method for use. Determinants of method choice are analyzed by evaluating the impact of different factors on the probability of a current user selecting a particular method.

There are a wide range of contraceptive methods available in Bangladesh - oral pill, condom, vaginal methods, tubectomy, vasectomy, IUDs, injection. In addition, many couples rely on traditional methods, such as safe period, withdrawal, and abstinence.

Influences of demographic, socioeconomic, attitudinal, and programmatic factors on the choice of method are shown in table-7.6 in terms of the multivariate logit regression coefficients. The coefficients were evaluated by fitting a logistic function to the dichotomized dependent variable, current users of a specific method versus current users of any other method. Thus, a separate logit regression was run for each method. The

Table-7.6

MULTIVARIATE LOGISTIC FUNCTION REGRESSION ANALYSIS OF CHOICE CONTRACEPTIVE METHODS

Factor	Method-specific values of regression coefficients			
	Tubectomy	Vasectomy	IUD	Injection
Constant	-.686*	-8.291**	-2.865**	-6.067
Demographic				
Age	.022* (.169)	.108** (.827)	-.039 (-.301)	-.066 (-.508)
No. of living sons	.297 (.144)	.295 (.144)	-.199 (-.097)	.397 (.194)
No. of children died	-.009 (-.011)	.176 (.214)	.142 (.173)	-.156 (-.191)
No. of children ever born	-.001 (-.003)	-.431** (-1.164)	-.053 (-.142)	.236 (.638)
Socioeconomic				
Rural-urban	.077 (.038)	-1.014** (-.492)	-.512** (-.250)	.618 (.302)
Education	-.549** (-.897)	-.359** (-.612)	.108 (.185)	.014 (.025)
Religion	-.554** (-.204)	2.047** (.755)	-.509* (-.188)	1.606 (.594)
Employment status	.708** (.221)	.154 (.048)	.028 (.009)	-.335 (-.105)
Programmatic				
No. of methods known (spontaneously)	-.083* (-.144)	-.119 (-.208)	.150* (.263)	.095 (.167)
Field worker's visit	-.424** (-.205)	-.104 (-.051)	.458 (.222)*	-.323 (-.157)
No. of methods known with source	.057 (.122)	-.024 (-.051)	.153* (.329)	-.066 (-.142)
Attitudinal				
Desire for additional children	-	3.085** (-1.214)	.201 (.079)	1.016 (.402)

* Significant at P=.05
** Significant at P=.001

Table-7.6 (continued)

Factors	Method-specific values of regression coefficients			
	Oral pill	Condom	Vaginal methods	Traditional methods
Constant	-.571	-4.244	-8.676**	-.017
Demographic				
Age	-.070** (-.532)	.021 (.159	-.031 (-.240)	.012 (.090)
No. of living sons	-.242 (-.118)	.403* (.197)	.384 (.187)	-.119 (-.058)
No. of children died	-.212** (-.257)	-.193 (-.234)	-.140 (-.171)	.006 (-.007)
No. of children ever born	.204** (.547)	-.063 (-.160)	.244 (.660)	.010** (.296)
Socioeconomic				
Rural-urban	.726** (.350)	.476** (.231)	-.250 (-.122)	-.580** (-.281)
Education	.127** (.214)	.246** (.411)	.194 (.331)	.060 (.104)
Religion	.096 (.036)	.905** (.334)	1.573 (.581)	-.202 (-.075)
Employment status	-.056 (-.018)	-.625 (-.196)	.309 (.097)	-.567* (-.178)
Programmatic				
No. of methods known (spontaneously)	.012 (.022)	.059 (.103)	.123 (.217)	.017 (.029)
Field worker's visit	.574** (.278)	.643** (.311)	-.202 (-.098)	-.360** (-.175)
No. of methods known with source	.036 (.076)	.040 (.086)	.465** (.995)	-.108** (-.231)
Attitudinal				
Desire for additional children	-.589** (-.230)	-.796** (-.311)	-1.034** (-.409)	-1.046** (-.412)

figures written outside parentheses in the table are the unstandardized beta coefficients and those within the parentheses are the standardized beta coefficients.

Most of the demographic factors had a significant influence on the choice of oral pill versus other methods. In the multivariate logistic regression fitted to the probability of a current user selecting the pill, the coefficients of age, children ever born, and number of children who had died were highly significant. The probability of using oral pill was relatively higher among younger women but lower among women with fewer children and those having experienced more child deaths. The number of living sons had no impact on the choice of oral pill. The socioeconomic factors having influence on the choice of oral pills were the rural-urban residence and education. The probability of using oral pills was higher among current users in urban areas and among those who were more educated. The two other socioeconomic factors, religion and employment status, were insignificant.

The likelihood of choosing the oral pill was greater among current users who had been visited by a field worker in the last six months than among those who were not. The other two programmatic factors, number of methods spontaneously mentioned and number of methods known with source, were not significantly related to pill use. Desire for additional children had a negative effect on the choice of oral pills. The likelihood of choosing oral pills was lower among current users desiring no more children. Considering the standardized coefficients, the number of children ever born and age had the largest influences on the likelihood of selecting oral pills, followed by rural-urban residence status, field worker's visit, desire for children, and education.

In contrast to oral pills, the decision to use condoms was not significantly influenced by age, number of children ever born, or number of children who had died. The only demographic factor affecting the choice of condom was the number of living sons. The proportion of couples using condoms was greater among couples who had fewer than two sons than among those who had two or more sons. All the socioeconomic factors except employment status significantly affected condom use. The likelihood of selecting condoms was greater in urban than in rural areas, was greater among current users who were more educated than among those who were less educated, and was greater among non-Muslims than among Muslims. As was the case for oral pills the only programmatic factors that had a significant impact on the probability of condom use was field worker visits. The likelihood of selecting condoms was greater if a woman had been visited by a field worker in the previous six months than if she had not been visited.

Desire for additional children had significant impact on the probability of using condoms. The likelihood of choosing condoms was greater among current users who desired more children than among those who had no desire for any more children. Of all the factors, education had the greatest impact on the likelihood of choosing condoms. The next most influencing factors were religion, desire for additional children, and field worker's visit.

The choice for vaginal methods was influenced by only two factors - number of methods known with source and desire for additional children. None of the other factors had any significant impact on the probability of a current user relying on vaginal methods. Current users who knew more methods with source were more likely to choose vaginal methods than were those who knew fewer methods with source. The likelihood of using these methods was greater among current users desiring more children than among those who had no desire for any more children.

The likelihood of selecting a traditional method varied with the number of children ever born. A current user was more likely to use traditional methods if she had more children ever born than if she had fewer children ever born. The use of traditional methods was not influenced by the other demographic factors, age, number of children died, and number of sons.

The likelihood of selecting traditional methods was not related to education or religion, but it did vary significantly with rural-urban residence and employment status. The use of traditional methods was greater among current users in rural areas than in the urban areas, and was greater among current users who were not employed than among those who were employed. Traditional methods were more frequently used by current users who were not visited by a field worker in the last six months than by those who were visited. Number of methods spontaneously mentioned did not have any significant relationship with traditional method use.

Analysis of the determinants of tubectomy, vasectomy, and IUD use should be carefully interpreted since the independent variables pertained to characteristics of the user at the time of survey rather than at the time of method selection. Age was the only significant demographic factor affecting the probability of a current user relying on tubectomy. A current user was more likely to have had a tubectomy if she was older. Among the sociceconomic factors, the proportion of current users relying on tubectomy varied with education, religion, and employment status. The proportion of tubectomies was greater among current users who were less educated than among those who were more educated, greater among current users who were Hindus than among

those who were Muslims, and greater among current users who were employed than among those who were not employed. Tubectomy users were likely to know of fewer methods than current users relying on other methods. Not surprisingly, tubectomy users were less likely to have been visited by the field worker in the last six months than were users relying on other methods.

The proportion of current users depending on the vasectomy of husband was positively related to age and number of children ever born. Probability of vasectomy was greater among current users in rural areas than in urban areas, greater among the less educated than among the more educated, and greater among Muslims than among Hindus. None of the programmatic factors showed any influence on the selection of vasectomy.

The probability of a current user selecting the IUD was not associated with any of the demographic factors. This method was relatively less used by current users if they were in rural areas than if they were in urban areas. The chance of accepting the IUD was greater among Hindus than among Muslims. The IUD users were more likely to have been visited by a field worker in the last six months. They also knew of more methods.

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8. MAJOR FINDING AND POLICY IMPLICATIONS

by

S. Harbison

In addition to providing information on the current level of contraceptive prevalence in Bangladesh, the 1983 Contraceptive Prevalence Survey collected extensive information regarding characteristics of users and nonusers and characteristics of the program. The analysis of this data provides important insights into the successes and failures of the family planning program in Bangladesh, as well as policy implications.

Each of the papers in this volume deals in some way with how individual characteristics interact with program characteristics in the present sociocultural and demographic context of Bangladesh to produce contraceptive decisions.

Although the current use of contraception is still relatively low, the family planning program seems to have been successful in contributing to a large potential demand for contraception in the target population. The study of unmet need among CPS respondents (Chapter 2) indicated that approximately 37 percent of currently married women of reproductive age said they wanted no more children and yet were not using an effective method of contraception. This is a highly significant finding since the measure includes only limiters, that is women who wish to terminate childbearing, and not spacers. It should be noted, however, that not wanting additional children does not necessarily constitute demand for contraception and, conversely, it is possible for a woman to want additional children and still have demand for contraception in the form of spacing. The authors analyzed in detail differentials in unmet need by demographic, socioeconomic, and program variables. Unmet need rose steadily with age and parity, but declined with increases in education and with employment. Women coming from landowning households had a larger unmet need than women coming from landless households. Not surprisingly, unmet need was lower in urban areas than in rural areas.

The policy implications of this study are quite strong in terms of program strategies and realistic goals. Since this study focused on women who said they wanted no more children (that is limiters rather than spacers) the women with unmet need (or their husbands) are appropriate candidates for sterilization. It is clear that a very large number of women want no more children and field workers should renew their efforts to locate these women and provide them with such contraceptive services as they desire. This estimate of unmet need is conserv-

ative since it does not include women who want to space births. It appears therefore that raising the current use rate to around 40 percent by the end of the third plan period should not be an impossible task, provided the reported response about wanting no more children is reliable and the program can be energized to meet at least 50 percent of the reported unmet need.

There are other indications as well of the large potential demand for contraceptive use in Bangladesh. When nonusers were asked about their intention of use in the future, almost 40 percent of them said "yes" and another 18 percent said "don't know" or "uncertain." Perhaps the major policy implication is that there is an urgent need to improve services in rural areas where unmet need is the greatest and where 90 percent of the population lives.

A. J. M. Sufian, in examining levels and determinants of contraceptive availability, highlighted the complexity of the methodological issues related to the variable (Chapter 3). The study considers three measures of availability: number of contraceptive methods mentioned spontaneously; number of contraceptive methods mentioned (after prompting) for which the source was known; and whether the respondent received a field worker visit in the past six months. Sufian found in general that socioeconomic variables are associated significantly with each of the three measures of availability but frequently not in a linear manner. For example, although there are some exceptions, the general pattern of the relationship of all three measures with age is U-shaped. Women in their middle years (ages 25-34) were able both to mention more methods spontaneously and were more likely to have received a field worker visit than either younger women (25 years or under) or older women (over 35).

The relationship of education to all three measures is positive: more educated women mention more methods spontaneously, know the source of more methods, and also are more likely than less educated women to have received a field worker visit during the past six months. Although employment did not show a significant relationship with contraceptive availability, this may be the result of methodological problems with the employment variable. Since the category "employed" is a very small percentage of the total sample (about one-tenth) and also includes both very poor women who work in the most menial, low-paying jobs and the tiny group of women who are highy educated and working in professional occupations. Despite this problem, however, it appears that employed women are more likely to have been visited by a field worker during the past six months than unemployed women.

Landownership is also a variable that requires refinement in its measurement. The landless - landholder dichotomy is simply not sufficient to measure economic status. Fragmentation of landholdings has meant that the amount of land owned by many families is far too small to support all members of the family. Nevertheless, women who came from landholding families were more likely to have received a visit from a field worker than women who came from landless households. Finally, contrasting rural and urban residents, women who live in urban areas know more methods and their sources. Quite surprisingly, however, women living in rural areas were slightly more likely to have received a field worker visit, although the difference is not significant. Measurement issues mentioned above preclude extremely strong statements, but this study does provide evidence that should cause programmatic concern. It appears that visits are being made to more educated women, relatively wealthier women, and women who have already given birth to three to four children. In contrast the women least likely to be visited are those most in need; that is, uneducated, less wealthy women of low parity, who should be targeted as potential users of contraception for spacing. The most basic finding - that 70 percent of eligible women did not receive a field worker visit within the past six months - constitutes a serious critique of the service delivery system. If women are not being visited on a regular basis (at least once every three months), it cannot be said that contraceptives are available.

In Chapter 4, Khuda and Howlader analyzed reasons for nonuse of contraception. They suggest that use may be constrained by supply factors (information and services may not be generally available) or by demand factors (although available, women may not want to use contraception). The study analyzed responses from women who were not currently using contraception to the question "why are you not using any family planning method now?" The question was open ended and only the main response was coded. Responses included desire for additional children, husband's objections, religion, perceived infecundity, breastfeeding or postpartum amenorhoea, nonavailability of services, health reasons, and fear of side effects. When the sociodemographic characteristics of the repondents were analyzed for their impact on reasons for nonuse, in each case responses were also classified by the number and sex of living children on the assumption that both a larger number of children per se, and also a larger number of sons, will increase the probability of contraceptive use.

In analyzing the impact of age on reasons for nonuse, women were divided into two groups - those under 30 and those over 30. Among the younger women, desire for additional children was the major reason for non-use, while many of the women over 30 (37 percent) reported that they were not using contraception

because they thought they were infecund. Considerably more of the older women than the younger women reported religion or fear of side effects as a reason for nonuse.

Regarding education, more-educated women were less likely to cite unavailability or fear of side effects as reasons for nonuse than less-educated women. Although more-educated women were more likely to say that they were not using contraception because they desired additional children, this variable was compounded by age since the more-educated women were also the younger women. There were no clear-cut patterns in the cross--classification of employment and reasons for nonuse. The relationship might be clarified by refinement of the measurement of the employment variable as discussed earlier.

There were important contrasts between reasons cited for nonuse by residents of rural as opposed to urban areas. Many more rural women than urban women cited the desire for additional children as the main reason for nonuse of contraception. Similarly, health reasons and fear of side effects were mentioned more frequently by rural than urban women. On the other hand, there were not significant rural-urban differences in the frequency with which women cited nonavailability of services as a reason for nonuse. In general, the study of nonuse revealed fewer major socioeconomic differentials in reasons for nonuse than might have been expected. In all cases the breakdown of responses by number of living male and female children revealed strong "son preference."

Taken on face value, this study indicates that desire for additional children is by far the most important reason for nonuse of contraception in Bangladesh. On this basis it might be asserted that use is demand constrained - in other words, that the reason contraceptive prevalence is so low is that women do not want to use contraception - and that therefore program efforts should be focused on increasing motivation to use contraception. These are certainly possible inferences from the data, but they are not necessary conclusions. Since demand is based on knowledge of supplies and services as well as information, it can be said if these things are lacking, that demand itself is supply constrained. For example, if a large percentage of women only know about sterilization - a method that may not be relevent to their age and parity, then it may be said that demand is constrained by the supply of information. Relatively few women, however, mentioned unavailability as the main reason for nonuse of contraception. This fact must be evaluated against the finding that about 70 percent of eligible women had not received a visit from a family planning field worker in the last six months.

Fertility levels, trends, and differentials by socio-

economic variables were analyzed in Chapter 5. Comparing the 1983 data with the 1975 BFS indicates that fertility declined by about 18 percent. With the exception of women under 20, age-specific fertility for each age group was lower in 1983 than rates calculated on the basis of the 1975 BFS. The larger reductions in fertility were among women 35 years of age and older.

Urban fertility was approximately 10 percent lower than rural fertility. This is somewhat greater than has been reported by previous studies and may be increasing. There was also a difference of approximately 10 percent in fertility of Muslims and non-Muslims. The relationship between education and fertility is an inverted U-shaped pattern: women with primary school education had slightly higher fertility than women with no schooling at all and women with secondary schooling or higher had by far the lowest fertility. The pattern of husband's education and fertility was similar but the relationship was not as strong. Finally, employed women had fertility substantially below that of unemployed women (5.0 as compared with 6.1). As discussed earlier, a further breakdown of this variable into at least two or three skill and wage levels is necessary to elucidate this relationship.

In Chapter 6, Brass techniques were applied to the CPS data to estimate levels of infant and child mortality. No evidence of any substantial decline in infant mortality in recent years was found. Infant mortality is estimated to be about 150. The results of the analysis of differentials are not surprising: education of women is negatively related to infant and child mortality; mortality is lower in urban areas than in rural areas; mortality is lower for children from landowning households than landless households; and it is lower for women who are not employed than for those who are employed. It is interesting to note that women who had ever used contraception had substantially lower levels of infant and child mortality than did women who had never used contraception.

In the final paper in this volume, Mitra et al. discuss the nature of contraceptive choice and evaluate the impact of multiple factors on the probability that a woman will have ever made the decision to use contraception. The multivariate analysis simultaneously controls for the impact of a large number of socioeconomic variables while estimating the impact of the particular variable in question.

Each of the socioeconomic and programmatic factors had independent influences on the ever use versus never use decision. The probability of having ever used contraception was higher among urban women and among those who were employed. It was lower among women who were Muslim than non-Muslim. Women who

knew more methods were more likely to have decided to use contraception than those who knew fewer methods. Similarly, chances of ever using contraception were greater among women who knew more method sources than those who knew fewer sources. Women who had been visited by the field worker were more likely to have ever used contraception. Of all the independent variables, however, the desire not to have additional children had the strongest impact on the probability of being an ever user, followed by number of methods known and number of methods known with source. Among the socioeconomic factors, education registered the greatest impact.

All in all, the studies add substantially to our understanding of contraceptive use in Bangladesh and point to certain programmatic improvements that could be made. The studies also highlight the necessity of refinement of survey questionnaires designed to measure socioeconomic status if we are to understand how these variables relate to contraceptive decisions.

Appendix 1

CPS SAMPLING DESIGN AND PROCEDURE

The 1983 CPS followed a two-stage stratified clustered sampling, the two strata being the rural stratum and the urban stratum. At the first stage, 200 sample areas were selected - 120 from the rural stratum and 80 from the urban stratum. At the second stage, households were selected, taking about 63 households from each rural stratum and 31 households from each urban stratum. Ever-married women under 50 years of age who had slept in a sample household the night preceding the interview were selected for the survey. A total of 10,117 women were successfully interviewed, 7,677 from the rural stratum and 2,440 from the urban stratum.

The questionnaire followed a format similar to the Westinghouse model, with detailed modules added on fertility, availability, and accessibility of services. The questionnaire is included as Appendix 2.

APPENDIX 2

BANGLADESH CONTRACEPTIVE PREVALENCE SURVEY--
1983: HOUSEHOLD QUESTIONNAIRE

Appendix 2

BANGLADESH CONTRACEPTIVE PREVALENCE SURVEY-1983

HOUSEHOLD QUESTIONNAIRE

SAMPLE IDENTIFICATION

NAME OF HOUSEHOLD HEAD _____

OCCUPATION OF HOUSEHOLD HEAD _____

SAMPLE H.H. NO. [ ][ ][ ] CONVERTED H.H. NO. [ ][ ][ ][ ][ ]

DISTRICT _____ THANA _____

UNION _____ VILLAGE/ MOHALLAH/BLOCK _____

STRATUM [ ][ ][ ] PSU NO. [ ][ ] TS [W][H][C]

INTERVIEW INFORMATION

INTERVIEW CALL	1	2	3	4
DATE				
RESULT CODE*				

INTERVIEWER CODE [ ][ ][ ]

*RESULT CODES

Completed	1	Dwelling vacant	5
No competent Respondent	2	Address not found	6
Deferred	3	Address not existing	7
Refused	4	Other _____ (specify)	8

Scrutinized [ ] Reinterviewed or spot checked [ ]

By [ ][ ][ ] By [ ][ ][ ]

Date _____ Date _____

BATCH NO. _____

HOUSEHOLD FEMALE MEMBERS

Please tell the names of all females (including very young babies) who spent last night in this household

Line No.of women	Name of women	How old is she (completed year)	Has she ever been married Yes/No	Applicable only for husband/ couple sample			Interview eligibility (Please tick)	Identification No. of husbands
				Is she currently married Yes/No	What is her husband's name	Can he be contacted?		
01								
02								
03								
04								
05								
06								
07								

NUMBER OF ELIGIBLE WOMEN _____ NUMBER OF COUPLES _____ NUMBER OF HUSBANDS _____

BANGLADESH CONTRACEPTIVE PREVALENCE SURVEY-1983

INDIVIDUAL QUESTIONNAIRE

VILLAGE/MOHALLAH/BLOCK _____ TIME STARTED _____

LINE NO.OF ELIGIBLE WOMEN [ ][ ] ID NO.OF RESPONDENT [ ][ ]

CONVERTED H.H. SERIAL NO. [ ][ ][ ][ ][ ] TS [W][H][C]

INTERVIEW INFORMATION				
INTERVIEW CALL	1	2	3	4
DATE				
RESULT CODE*				
INTERVIEWER CODE	[ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]	[ ][ ][ ]

INTERVIEWER : FOR EACH CALL ENTER THE APPROPRIATE RESULT CODE AS FOLLOWS :

Completed	1
Incomplete	2
Respondent not available	3
Deferred	4
Refused	5
Other (specify)	8 _____

Scrutinized [ ]	Reinterviewed or spot checked [ ]	Edited [ ]	Coded [ ]
By [ ][ ][ ]	By [ ][ ][ ]	By [ ][ ][ ]	By [ ][ ][ ]
Date _____	Date _____	Date _____	Date _____

SECTION - I

BACKGROUND CHARACTERISTICS

101. How old are you ? (PROBE)

Age _____ (completed year)

102. Did you ever attend school ?

Yes [ ] No [1]

(SKIP TO 105)

103. Was it a Primary school, Madrasa, Secondary school or higher that you attended last ?

Primary school [2] High school [3]

College/ University [4] Madrasa [5]

Others _____ (specify) [8]

104. What was the highest class you passed at that level ? _____ class

105. What is your religion ?

Islam [1] Christianity [3]

Hinduism [2] Buddhism [4]

Other _____ (specify) [8]

106. Aside from doing normal housework, do you do any other work (for cash or kind) on a regular basis such as agricultural work, making things (for sale), selling things in the market, or anything else ?

Yes [1] No [2]

(SKIP TO 108)

107. Did you earn any money from this work during the last year ?

Yes [1] No [2]

108. Does your family own any agricultural land ?

Yes [1] No [2]

109. Did your husband ever attend school ?

Yes [ ] No [1]

(SKIP TO 201)

110. Was it a Primary school, Madrasa, Secondary school or higher that he attended last ?

Primary school [2] High school [3]

College/ University [4] Madrasa [5]

Don't know [6] Other _____ (specify) [8]

(SKIP TO 201)

111. What was the highest class that he passed at that level? _____ class

SECTION - II

FERTILITY

201. Now I would like to ask you some questions about childbearing. Have you ever given birth to a child ? (Interviewer: If the response is 'No' read out the following statement:- I mean even a child who died immediately after its birth)

Yes [1] No [2]

(ASK 208 THEN SKIP TO 215)

202. How many of your children are living with you ? (Interviewer: be sure that the respondent includes her own children only) _____ (Number)

203. How many of your children do not live with you now ? (Interviewer: be sure that the respondent includes her own children only) _____ (Number)

INTERVIEWER: TOTAL THE NUMBER OF CHILDREN IN 202 AND 203 AND WRITE THE TOTAL IN 204
IF TOTAL IS ZERO SKIP TO 205

204. Thus, you now have _____ (Total) living children; how many are boys and how many are girls ?

_____ Boys _____ Girls

205. Have you ever given birth to a boy or a girl who later died, including those children who died immediately after their birth ?

Yes [1] No [2]

(Write Zero in the space kept for response to 206 and then SKIP TO 207a)

206. How many of your children have died? _____
(Number)

207a. INTERVIEWER: TOTAL THE NUMBER OF CHILDREN IN 204 AND 206, AND WRITE THE TOTAL IN 207b

207b. I find from your responses that so far you have had _____ live births. Is it the correct information ?

Yes [1] No [2]

(Correct answers with assistance of the respondent)

208. Now I want to know about your current marital status. Are you now married, widowed, divorced or separated ?

Currently married [1] Widowed [2]

(SKIP TO 213)

Divorced [3] Separated [4]

209. How long ago did you become widowed/divorced/separated ?

2 years ago or less than 2 years ago [1] More than 2 years ago [2]

(SKIP TO 301)

210. Were you pregnant at the time you became widowed/divorced/separated ?

Yes [1] No [2]

(SKIP TO 301)

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211. Did you given birth to any (live) child out of this pregnancy ? (Interviewer: If the response is 'No' read out the following statement. I mean even a child who immediately died after birth)

Yes [1] No [2]

(SKIP TO 301)

212. Was the child born in the last one year period, i.e., in between _____ month and
(Beginning month)

now ?

Last year [1] Earlier than the last year [2]

(SKIP TO 214a) (SKIP TO 215)

213. Did you give birth to a child in the last one year period, i.e. in between _____
(Beginning month)
month and now ? (Interviewer: If the response is 'No' read out the following statement: I mean even a child who immediately died after birth.)

Last year [1] Earlier than the last year [2]

(SKIP TO 215)

214a. In what month, was the child born ?

_____ Month

214b. Interviewer: If the date of birth falls in the fourth quarter, ask the following question; otherwise SKIP TO 214c. A woman may give childbirth twice in a year; therefore, I want to know if you had given birth to any other (live) child in the period between _____ month and now ?
(Beginning month)

Yes [1] (SKIP TO 214d)

No [2] (SKIP TO 215)

214c. Interviewer: If the respondent is currently married and if the date of birth falls in the first quarter, ask the following question; otherwise SKIP TO 215. A woman may give childbirth twice in a year; therefore, I want to know if you had given birth to any other (live) child in the period between _____ month and now ? (Beginning month)

Yes [1]

No [2] (SKIP TO 215)

214d. In what month, was the child born ?

_____ month (2nd child)

215. INTERVIEWER: CHECK 208 AND TICK THE APPROPRIATE BOX

Currently married [1] Not currently married [2]

(SKIP TO 301)

216. Are you pregnant now ?

Yes [1] No [2] Don't know [3]

217a. Would you like to have more children in the future in addition to the one you are now expecting

217b. Interviewers: Check 204. If the respondent has no living children SKIP TO 218. Otherwise ask the following question. Would you like to have more children in future ?

Yes [1] No [2] Not decided [3]

(SKIP TO 301) (SKIP TO 301)

218. How many (more) children would you like to have in future ? _____ (Number)

SECTION - III

FERTILITY REGULATION

301. You may know that there are various ways a couple can delay the next pregnancy or avoid having children if they do not want them . Do you know or have you heard of any of these family planning methods ?

Yes [1] No [2]

(SKIP TO 303)

RECORD RESPONSES TO 302-304 IN TABLE I BELOW

302. What family planning methods do you know ? PROBE any other ?

CIRCLE CODE 1 (YES) IN COLUMN (A) FOR EACH METHOD THE RESPONDENT HAS MENTIONED

FOR EACH METHOD NOT CIRCLED IN COLUMN(A), ASK:

303. Just to be sure, have you ever heard of _____ ? (Method)

CIRCLE RESPONSE IN COLUMN B

TABLE I

Methods	A Knowledge (Unprompted) 302	B Knowledge (Prompted) 303	C Ever Use 304
01 Pill	1 Yes	2 Yes 3 No	1 Yes 2 No
02 *Condom	1 Yes	2 Yes 3 No	1 Yes 2 No
03 Foam tablet/ Jelly/Emko/ Cream/Diaphragm	1 Yes	2 Yes 3 No	1 Yes 2 No
04 Injection	1 Yes	2 Yes 3 No	1 Yes 2 No
05 I.U.D.	1 Yes	2 Yes 3 No	1 Yes 2 No
06 Female sterilization	1 Yes	2 Yes 3 No	1 Yes 2 No
07 *Male sterilization	1 Yes	2 Yes 3 No	1 Yes 2 No
08 M.R.	1 Yes	2 Yes 3 No	1 Yes 2 No
09 Safe period	1 Yes	2 Yes 3 No	1 Yes 2 No
10 *Withdrawal	1 Yes	2 Yes 3 No	1 Yes 2 No
11 Abstinence	1 Yes	2 Yes 3 No	1 Yes 2 No
12 Other_____	1 Yes	2 Yes 3 No	1 Yes 2 No

304. FOR FACH METHOD CIRCLED 'YES' IN COLUMN A OR COLUMN B ASK:

Have you (*has your spouse) ever used _____ ?
(Method)

CIRCLE RESPONSE IN COLUMN C

305. INTERVIEWER: CHECK 208 AND TICK THE APPROPRIATE BOX

Currently married [1]

Not currently married [2]

(SKIP TO 601)

306. INTERVIEWER: CHECK 216 AND TICK THE APPROPRIATE BOX

Not currently pregnant or don't know [1]

Currently pregnant [2]

(SKIP TO 502)

307. Are you (or is your husband) currently using some family planning method or doing something to avoid a pregnancy ?

Yes [1]

No [2]

(SKIP TO 501)

308. What is that method ?

CIRCLE BELOW THE METHOD THE RESPONDENT HAS MENTIONED

01 Pill
02 Condom
03 Vaginal methods[a]
04 Injection
05 I.U.D.

(SKIP TO 313)

06 Femaler sterilization
07 Male sterilization

(SKIP TO 401)

09 Safe period
10 Withdrawal
11 Abstinence
12 Other _____ (specify)

309. Do you (or does your husband) use any other method except the one your have mentioned ?

Yes [1] No. [2]

(SKIP TO 312)

310. What is that method ? _____

311. INTERVIEWER: TICK THE APPROPRIATE BOX ACCORDING TO THE RESPONSE IN 310

Modern method [1] Traditional method [2]

(SKIP TO 313)

312. Why are you not using any modern family planning method ?

(PROBE) _____

_____

_____

[a] Foam tablet, Jelly, Emko, Cream, Diaphragm.

313. If it were entirely up to you, what would you prefer to use now: --- your present method or some other method ?

Present method [1]

No method [2]

Some other method [3]

(SKIP TO 401)

314. What method would you rather use ?

01 Pill
02 Condom
03 Vaginal methods[a]
04 Injection
05 I.U.D.
06 Female Sterilization
07 Male sterilization
08 M.R.
09 Safe period
10 Withdrawal
11 Abstinence
12 Other _____ (specify)

315. Why are you not using that method now ?

(PROBE) _____

_____

_____

[a] Foam tablet, Jelly, Emko, Cream, Diaphragm.

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SECTION - IV
SOURCE OF SUPPLIES/SERVICES
(Only for current users)

401. Check 308 and 310 and Tick the appropriate code below, then follow the skip instructions.

01 Pill
02 Condom
03 Vaginal methods[a] (SKIP TO 408)
04 Injection
05 I.U.D.
06 Female sterilization
07 Male sterilization
(SKIP TO 409)
09 Safe period
10 Withdrawal
11 Abstinence
12 Other _____ (specify)
(SKIP TO 601)

402. Have you any _____ (method) in your house now ?

Yes [1] No [2]

(SKIP TO 405)

403. Can you show them to me ?

Able to show [1] Unable to show [2]

(SKIP TO 407)

[a] Foam tablet, Jelly, Emko, Cream, Diaphragm.

404. What is the reason that you are unable to show the method, although you have told me that you have the method in your house ? (PROBE)

_____

_____

_____

(SKIP TO 406)

405. Why do you not have any _____ in your house now ? (PROBE)
method

_____

_____

_____

406. INTERVIEWER: Show samples and then ask this question; is it one of these ? (PROBE)

407. INTERVIEWER: Write down the brand name below

_____
Brand

408. Who usually obtains the method that you are (or your husband is) currently using ?

01 Wife

02 Husband

03 Other _____
(specify)

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409. Now I would like to ask you some questions about the source of your family planning method. From where do (did) you (your husband) (usually) obtain the supply/service ?

- [ ] Pharmacy
- [ ] Shop (specify the type below)
  _____
  _____
- [ ] Quack
- [ ] Qualified doctor
- [ ] Mobile camp
- [ ] Other source_____ (specify)

(SKIP TO 416)

- [ ] Clinic/hospital(_____) Name
- [ ] Field worker (SKIP TO 413)
- [ ] Don't know (SKIP TO 601)

410. You may know that there are three categories of clinic/hospital in our country - government, voluntary, and private. Was it a private, voluntary or government clinic/hospital, from where you (your husband) obtain(s)/obtained the supply service ?

- [ ] Private
- [ ] Voluntary
- [ ] Government

(SKIP TO 416)

- [ ] Don't know

411. Where is the clinic/hospital located ?

Knows [1] Don't know [2]

(SKIP TO 416)

INTERVIEWER: Write the location identification here

_____

_____

412. INTERVIEWER: If possible, try to ascertain from any available local FP personnel, the category of the clinic/hospital and if ascertained, write the category here

_____

(SKIP TO 416)

413. Was the field worker a government or non-government employee ?

Government [1] Non-government [2] Don't know [3]

414. Was the worker male or female ?

Male [1] Female [2] Don't know [3]

415. Do you (your husband) collect the supply from the worker's house or does this worker come to your house to give you the supply ?

The supply is given at home [1]

The supply is collected from the worker [2]

(SKIP TO 601)

416. How would you (your husband) get to _____ (source) (by walking or using some means of transportation) ?

- [ ] Walking
- [ ] Using some means of transportation
- [ ] Don't know/not sure

417. How much time does it take to get there ?

- [ ] Less than 10 minutes
- [ ] 10 minutes - 19 minutes
- [ ] 20 minutes - 29 minutes
- [ ] 30 minutes - less than 1 hour
- [ ] 1 hour - less than 2 hours
- [ ] 2 hours and more
- [ ] Not sure/don't know

418. Do you think, this place is difficult or not difficult to get to ?

- [ ] Not difficult
- [ ] Difficult
- [ ] Don't know

(SKIP TO 601)

SECTION - V

REASONS FOR NON-USE AND FUTURE INTENTION TO USE

(only for not current users)

501. What is the main reason that you are not using any family planning method now ?

01 Want additional children
02 Husband objects
03 Health reasons
04 Fear of side-effects
05 Religious reasons
06 Wife believes she is unable to have children
07 Methods not available
08 Breast-feeding
09 Post amennorhoea
10 Other _____ (specify)
11 Don't know/no reason (SKIP TO 502)

PROBE: Are there any other reasons in addition to the first one ?

_____

_____

_____

502. Do you think, you or your husband will do something in the future to avoid getting pregnant ?

Yes [1] No [2] Don't know/ not sure [3]

(SKIP TO 504)

503. What is the principal reason that you will not try to use any family planning method in the future ?

1 Want additional children
2 Husband objects
3 Health reasons
4 Fear of side-effects
5 Religious reasons
6 Wife believes she is unable to have children
7 Methods not available
8 Other _____ (specify)
9 Don't know/no reason (SKIP TO 601)

PROBE: Are there any other reasons in addition to the first one ?

_____

_____

_____

(SKIP TO 601)

504. If you were to use family planning some day in the future, what methods would you choose ?

01 Pill

02 Condom

03 Vaginal methods [a]

04 Injection

05 I.U.D.

06 Female sterilization

07 Male sterilization

08 M.R.

09 Safe period

10 Withdrawal

11 Abstinence

12 Other _____ (specify)

97 Undecided/it depends
98 None
99 Don't know
(SKIP TO 601)

505. When will you begin using it ?

1 Within one year

2 From one to two years

3 After two years

4 Don't know/not sure

[a] Foam tablet, Jelly, Emko, Cream, Diaphragm.

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SECTION - VI
AVAILABILITY

601. CROSS OUT (X) THE METHOD CODE IN THE FIRST ROW OF TABLE II-PAGE _____

1. IF A CODE 3 IS CIRCLED FOR THAT METHOD IN COLUMN [B] OF TABLE 1 (SEE PAGE ____)

2. IF THE CODE FOR THAT METHOD IS CIRCLED IN 308 OR IS THE METHOD MENTIONED IN 310

IF ALL METHODS ARE CROSSED OUT, GO TO 617 PAGE _____

602. FOR EACH METHOD NOT CROSSED OUT ASK :

From where would you obtain _____ ?
method

Field worker [ ] (SKIP TO 603)

Clinic/hospital [ ] (SKIP TO 605)

Any other source [ ]

Don't know [ ]

CIRCLE THE RESPONSE IN TABLE II. IF THE QUESTION FOR EACH METHOD NOT CROSSED OUT, HAS BEEN ASKED, SKIP TO 606; OTHERWISE ASK THE QUESTION 602 FOR THE NEXT METHOD NOT CROSSED OUT

603. Is the field worker a government or non-government employee ?

Government ☐ Non-government ☐ Don't know ☐

604. Would you have to collect the supply from the worker's house or would the worker come to your house to give you the supply ?

The supply would be given at home (home delivery) ☐ → CIRCLE THE RESPONSE OF 603 UNDER 'HOME DELIVERY' IN TABLE-II

The supply would be collected from the worker (field worker) ☐ → CIRCLE THE RESPONSE OF 603 UNDER 'WOULD BE COLLECTED FROM FIELD WORKER' IN TABLE-II

IF THE QUESTION FOR EACH METHOD NOT CROSSED OUT, HAS BEEN ASKED, SKIP TO 606; OTHERWISE ASK THE QUESTION 602 FOR THE NEXT METHOD NOT CROSSED OUT

605. Is it a government, private or voluntary clinic ?

Government ☐ Voluntary ☐

Private ☐ Don't know ☐

CIRCLE THE RESPONSE IN TABLE-II. IF THE QUESTION FOR EACH METHOD NOT CROSSED OUT, HAS BEEN ASKED, SKIP TO 606; OTHERWISE ASK THE QUESTION 602 FOR THE NEXT METHOD NOT CROSSED OUT

TABLE II

Source \ Method	01 Pill	02 Condom	03 Foam tablet Jelly/Emko/ Cream etc.	04 Injection	05 I.U.D.	06 Female Sterilization	07 Male Sterilization	08 M.R.
☐ Pharmacy	1	1	1	1	1	1	1	1
☐ General store	2	2	2	2	2	2	2	2
☐ Pan/cigarette shop	3	3	3	3	3	3	3	3
☐ Quack	4	4	4	4	4	4	4	4
☐ Qualified doctor	5	5	5	5	5	5	5	5
☐ Mobile camp	6	6	6	6	6	6	6	6
Clinic/hospital								
☐ Government	7	7	7	7	7	7	7	7
☐ Voluntary	8	8	8	8	8	8	8	8
☐ Private	9	9	9	9	9	9	9	9
☐ Don't know	10	10	10	10	10	10	10	10
Would be collected from field worker								
☐ Government	11	11	11	11	11	11	11	11
☐ Non-government	12	12	12	12	12	12	12	12
☐ Don't know	13	13	13	13	13	13	13	13
Home delivery by field worker								
☐ Government	14	14	14	14	14	14	14	14
☐ Non-government	15	15	15	15	15	15	15	15
☐ Don't know	16	16	16	16	16	16	16	16
☐ Other source (specify)	17	17	17	17	17	17	17	17
☐ Don't know any source	18	18	18	18	18	18	18	18

606.	IF NO SOURCE IS CIRCLED IN TABLE II SKIP TO 617	
607.	CIRCLE AT THE TOP OF TABLE III EACH SOURCE MENTIONED IN TABLE II	
608.	CHECK 409, CROSS OUT (X) IN TABLE III (▶) THE SOURCE MARKED IN 409. THE SOURCE MARKED IS IF CLINIC/HOSPITAL, CHECK 410 AND IF FIELD WORKER, CHECK 413 AND 415 IF NO OTHER SOURCE IS CIRCLED IN TABLE III SKIP TO 617	
609.	ASK 610-616 FOR EACH SOURCE CIRCLED BUT NOT CROSSED OUT AT TOP OF TABLE III(▶)	

TABLE III

▶	Pharmacy ☐	General store ☐	Pan/Cigarette shop ☐	Quack ☐	Qualified doctor ☐	Mobile camp ☐	Clinic/hospital: Government ☐	Clinic/hospital: Voluntary ☐	Clinic/hospital: Private ☐	Clinic/hospital: Don't know ☐	Would be collected from field worker: Government ☐	Would be collected from field worker: Non-government ☐	Would be collected from field worker: Don't know ☐	Other source ☐	Home delivery by field worker ☐	Don't know any source ☐
610. You mention _____ (source) How long would it take to get there ? (WRITE HRS. AND MINUTES)	Hrs. Mins *D.K	Hrs. Mins D.K	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	Hrs. Mins D.K.	SKIP TO 614	SKIP TO 617
611. Would you walk there or use a means of transportation																
1 Walk	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
2 Use transportation	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
8 Not sure/don't know	8	8	8	8	8	8	8	8	8	8	8	8	8	8		

* D.K. means don't know.

612. Is it difficult or easy to get there ?															
1 Difficult/some times difficult	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2 Easy *	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	
8 Not sure/ don't know *(SKIP TO 614)	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	
613. Why is it difficult ?															
614. Do you think that there is any reason why persons interested in family planning would not want to obtain services at this source ?															
1 Yes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2 No *	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*	2*
8 Not sure/does not know (SKIP TO 616)	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*	8*

615. What reason would they have ?																
616. Have you ever obtained family planning information or service there ?																
1 Yes	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
2 No	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	

GO TO 610 FOR NEXT SOURCE AFTER LAST SOURCE GO TO 617

617. INTERVIEWER: CHECK 208 AND TICK THE APPROPRIATE BOX

Currently married [1] Not currently married [2]

(SKIP TO 627)

618. INTERVIEWER: CHECK 307 AND TICK THE APPROPRIATE BOX

Currently using family planning [1] Not currently using family planning [2]

(SKIP TO 620)

619. INTERVIEWER: CHECK 415 AND TICK THE APPROPRIATE BOX

Mentioned Home delivery by field worker [1] Others [2]

(SKIP TO 626)

620. During the last six months, has any one visited you in your home to talk to you about family planning or to give you any family planning methods ?

Yes [1] No [2]

(SKIP TO 622)

621. Who was this person ? (PROBE)

01 Field worker (SKIP TO 624)

02 Others _____
(specify).

622. Do you know any one who works for family planning in your locality ?

Yes [1] No [2]

(SKIP TO 627)

623. I want to know, specifically, if the family planning worker had visited you in your home anytime in the last six months.

Visited [1] Not visited [2]

(SKIP TO 627)

624. Do you know if this worker is a government worker or non-government worker ?

Government worker [1] Non-government worker [2]

Don't know [3]

625. Is the worker male or female ?

Male [1] Female [2]

626. INTERVIEWER: READ OUT THE STATEMENT WITHIN BRACKETS, ONLY IF THE RESPONDENT IS A CURRENT USER, AND HAS MENTIONED HOME DELIVERY BY FAMILY PLANNING WORKERS

(You have mentioned that family planning worker comes to your home to give supply of your method.) When was the last time the worker visited you in your home ? (PROBE)

- [1] Last 1 month
- [2] Last 1-2 month
- [3] Last 2-3 month
- [4] Last 3-4 month
- [5] Last 4-5 month
- [6] Last 5-6 month
- [8] Don't know

627. TERMINATE THE INTERVIEW. WHEN YOU TERMINATE THE INTERVIEW (AND BEFORE YOU LEAVE THE RESPONDENT):

CHECK BACK OVER THE SCHEDULE AND MAKE SURE THERE IS AN ANSWER TO ALL APPLICABLE QUESTIONS, SKIP INSTRUCTIONS ARE CORRECTLY FOLLOWED AND THAT THE RESPONSES ARE ENTERED LEGIBLY AND IN THE CORRECT FORM.

THANK THE RESPONDENT FOR HER TIME AND COOPERATION.

TIME ENDED _____

INTERVIEWER'S COMMENTS:

SUPERVISOR'S COMMENTS: