

COMPARATIVE STUDIES 5

UNMET NEED AND THE DEMAND FOR FAMILY PLANNING



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**Demographic and Health Surveys
Comparative Studies No. 5**

**Unmet Need and
the Demand for
Family Planning**

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Preface

An important part of the DHS program is the comparative analysis and further analysis of data obtained from DHS surveys. Standard recode files have been prepared for most surveys and researchers worldwide are encouraged to use the datasets for further analysis.

Much of the comparative analysis of DHS data, particularly for major topics such as fertility, mortality, contraceptive use, and maternal and child health, is being carried out by DHS staff in Columbia, Maryland. The results of these analyses are published in the *DHS Comparative Studies* series. A total of 15 *Comparative Studies* are planned.

The studies in this series are based on the standard recode files which were available in early 1990. These include datasets for 25 standard DHS surveys carried out from 1985 to 1989. Data for El Salvador, Ondo State (Nigeria), and Sudan may not be included in all reports because some of the El Salvador and Ondo State data are not comparable with data from other DHS surveys and the Sudan survey was not completed until mid-1990.

Reports in the *DHS Comparative Studies* series provide detailed tables and graphs comparing the results of DHS surveys for countries in sub-Saharan Africa, the Near East/North Africa, Asia, and Latin America/Caribbean. The reports also discuss various issues such as questionnaire comparability, survey procedures, and data quality. Where appropriate, data from previous survey programs, primarily the World Fertility Survey (WFS) and the Contraceptive Prevalence Surveys (CPS), are used to evaluate trends over time.

The *DHS Comparative Studies* series is intended to provide analysts and policymakers with readily available comparisons of data from developing countries. The studies will also be useful to others in the fields of international population and health.

During the second phase of the DHS program (1988-1993), data will be collected for a further 25 countries. An update of the information in many of the *Comparative Studies* reports (including data from DHS-II countries) will be published later in the program.

Martin Vaessen
Project Director

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1 Introduction

Determining the magnitude of the demand for family planning in a population is critical to the success of population and family planning programs. Such information allows administrators and managers to estimate the market for services and, in addition, to assess program effectiveness.

In this comparative report, the demand for family planning is estimated as the sum of unmet need and the current prevalence of contraceptive use. These estimates are for 25 countries in-

cluded in the first round of the Demographic and Health Surveys (DHS-I) for which standard recode data files were available at the time the report was prepared.¹ Particular attention is focused on the unmet need component of the demand for family planning and on the characteristics of the women in need.

¹ An update including data from the second phase of the DHS program between 1988-1993 (DHS-II) will be published later.

2 The Measurement of Unmet Need

At any given time in a population, there are some women or couples who are not using contraception but who wish to control their fertility—either to postpone the next wanted birth or to prevent unwanted childbearing after having achieved the desired number of children. Estimating the fraction of the female population that these women comprise is the object of developing a measure of "unmet need." Together with the women who are currently using contraception either for spacing or limiting births, the women not using contraception, but with an unmet need, constitute the total demand for family planning.

This ostensibly simple measurement of *unmet need* becomes increasingly complicated when various categories of women who are not exposed to the risk of conception are taken into account.

2.1 UNION STATUS

The first distinction to be drawn is between women who are or who are not currently in union. Married women obviously are exposed more to the risk of conception than are unmarried women, but this distinction has weakened in recent years in many countries. Therefore, an argument can be made to include all women who are exposed to the risk of conception, regardless of marital status. The measure developed in this report, however, is limited to women currently in union (either formal or informal) for two reasons: it is difficult to obtain reliable data on sexual activity from unmarried women, and it seems peculiar to question single women about their childbearing intentions. Thus, the never married and the formerly married are both excluded. In the future, measures of unmet need will undoubtedly grow to encompass the population of "all women."

2.2 FECUNDITY STATUS

Next, nonusers who are either currently pregnant or amenorrheic must be distinguished from those who are not. (The pregnant and amenorrheic women will be discussed at length in the following section.) Of the women who are neither pregnant nor amenorrheic, only some are fecund, however, and thus exposed to the risk of conception. Others are infecund, but they are difficult to identify. Past research has taken various approaches to the problem of determining fecundity for women who are not currently pregnant, including the women's self-assessment of their own reproductive capability. The measure used in DHS is more behavioral in nature: nonpregnant women in union for at least five years who have not used contraception and who have not been fertile are classified as infecund, as are nonpregnant women who have not menstruated in the past twelve weeks. Thus, these groups of women are excluded from the "unmet need" category.

The proportion estimated to be "infecund" in any population is not independent of the proportion using contraception. In populations where contraceptive prevalence is high, the proportion classified as infecund will be underestimated simply because some users will be infecund but unaware of it—for example, women who are contraceptively sterilized around age 30 and then become infecund in later years. In populations where little contraception is practiced, such natural processes can be detected more readily.

Even among presumably fecund women, the risk of conception varies with coital frequency. Some women who wish to avoid pregnancy do not use contraception because their coital activity is infrequent or, in some cases, nonexistent. Although questions about coital frequency were included in the DHS surveys, this information has not been incorporated into the basic measure of unmet need. Not all countries used the questions, and, in addition, there is some concern about the quality of such data. An analysis described in Section 6 explores the possible reduction in the risk of conception that results from limited coital frequency.

Fecund women who are not using contraception can be classified in terms of their reproductive intentions. They are defined as having an unmet need for family planning (1) if they report wanting to postpone the next birth by at least two years from the time they are interviewed, or (2) if they report wanting no more births. The first is termed an unmet need for spacing; the second is an unmet need for limiting.

2.3 PREGNANT AND AMENORRHEIC WOMEN AND UNMET NEED

Women who are currently pregnant or amenorrheic following childbirth present a special problem in the measurement of unmet need. Pregnant women—like infecund women—clearly are not currently exposed to the risk of pregnancy. Indeed, some earlier classification schemes simply exclude them from the measure of unmet need, arguing that such women are not currently in the market for family planning. This report follows a different logic based on the consideration that some fraction of these women are pregnant just because their need for family planning was not met. The logic becomes apparent when taken to the extreme: suppose *all* women were unintentionally pregnant because they had been unable to obtain contraception. Clearly, this situation reflects an unmet need for family planning. Yet, if pregnant women were excluded from the analysis because they are not at risk of conception, it could only be concluded that there was no unmet need for family planning in the population.

The classification of amenorrheic women is based on a similar line of reasoning. Most of these women have recently given birth; some are experiencing short-term postpartum amenorrhea (frequently accompanied by short durations of postpartum abstinence), while others have not resumed ovulation because they are breastfeeding. Admittedly, these temporarily infecund women are at higher risk of pregnancy than women who are pregnant, but the probability that they will conceive is greatly reduced. In addition, despite the risk, many amenorrheic women will not be interested in using a contraceptive method until they see some evidence of the resumption of ovulation. All amenorrheic women should not be excluded from the unmet need calculation, however, for exactly the same reason that currently pregnant women are not excluded: some of the women owe their amenorrheic condition to an unintentional pregnancy which reflects an unmet need for family planning.

The challenge here is to find some basis for determining what proportion of pregnant or amenorrheic women should be part of the estimate of unmet need. Two possibilities exist: (1) to follow the same procedure used for the fecund nonusers who are neither pregnant nor amenorrheic, that is, to classify them according to their future reproductive intentions, or (2) to estimate the fraction of pregnant or amenorrheic women that would not be in that condition if their earlier need for family planning had been met and they were able to avoid an unintentional pregnancy.

The second alternative has been adopted here because it is more consistent with the current status rationale. Moreover, the recent or current pregnancies of these women heavily influence their reproductive intentions. The responses of pregnant women may be especially misleading, since the survey question asking women when they would like their next child to be born did not take into account their pregnant status and thus was ambiguous.

The measure of unmet need used here relies on the reported planning status of the pregnancy. If a woman reported wanting the pregnancy at the time it occurred, she is not included in the unmet need category. If she responded that it was wanted but had occurred earlier than desired, she is counted as part of the unmet need for spacing. Finally, if she reported that the pregnancy was not wanted, that at the time she became pregnant she had wanted no more children at all, she is counted as part of the unmet need for limiting. These three categories correspond to the three categories of reproductive intentions used to classify fecund women who are neither pregnant nor amenorrheic: *want soon*, *want later*, and *want no more*.

These criteria for defining unmet need follow the measurement concepts outlined in an earlier report (Westoff, 1988b). Some

minor changes and corrections were subsequently incorporated (Westoff and Moreno, in press) and one new refinement has been added here. While the earlier formulation of unmet need included pregnant or amenorrheic women who had failed with a contraceptive method, the measure used here excludes these women. This is consistent with the fact that only nonusers are included in the whole scheme. It is true that contraception can fail, but that is not part of the concept of unmet need outlined here. If every woman were pregnant because her method failed, there would be an unmet need for more *reliable* contraception, not an unmet need for family planning in general. Therefore, those pregnant or amenorrheic women whose unintentional pregnancy resulted from method failure are excluded from the definition of unmet need. They are, however, included in the measure of total demand (the sum of those using a method and those with an unmet need).²

The same logic applies to the distinction between modern and traditional methods. One point of view would define users of traditional methods as in need of contraception on the grounds that their failure rates are high. The procedure followed here, however, is to combine users of all methods regardless of their efficacy. Prolonged abstinence is not regarded as a contraceptive method in DHS questionnaires.

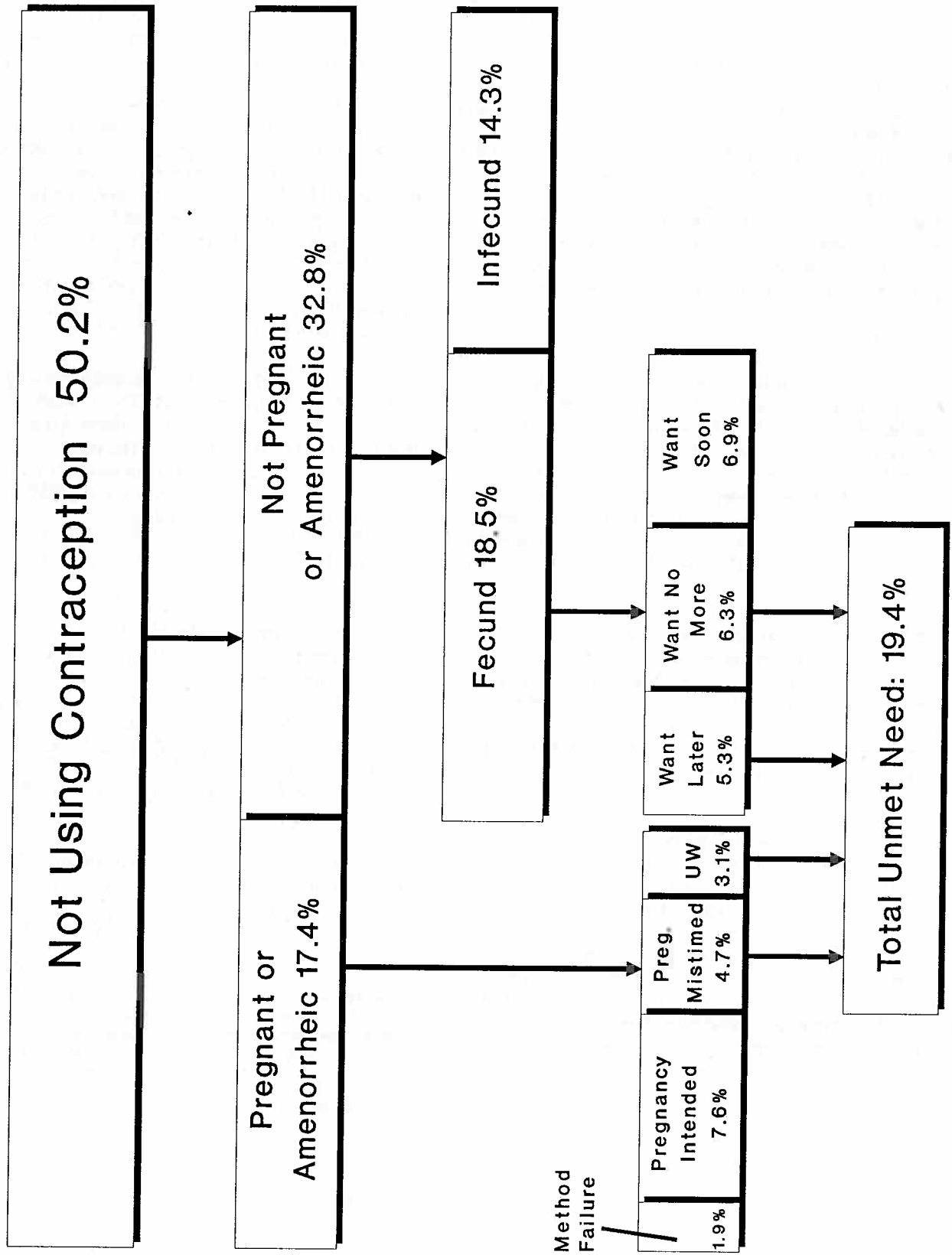
Thus, the following categories of women are considered to be *not in need*:

- women who are not currently in union,
- women who are currently using contraception,
- currently pregnant or amenorrheic women who were using contraception at the time they became pregnant,
- currently pregnant or amenorrheic women whose pregnancy was reported as intentional,
- infecund women, and
- fecund women who want their next child in less than two years.

To illustrate the way in which this report measures unmet need, Figure 2.1 applies the concepts just discussed to the Dominican Republic. Each successive subdivision of the sample is shown, ending with the estimate of total unmet need.

² This will only affect estimates for high contraceptive prevalence countries since in low contraceptive prevalence countries the questionnaire did not ask whether women had been using a method at the time they became pregnant. In fact, that questionnaire in DHS-I did not determine the planning status of the pregnancy for currently pregnant women (now included in the DHS-II questionnaire). The solution adopted here is to rely on the distribution of planning status for the amenorrheic women in these countries.

Figure 2.1 Components of Unmet Need for Family Planning: Dominican Republic, 1986



3 Other Measurement Approaches

There have been various approaches to the measurement of unmet need. In one analysis (Westoff and Pebley, 1981), no fewer than 12 current status measures were defined that involved different exclusions due to several exposure variables (see also Boulier, 1984). These included pregnancy, breastfeeding, effectiveness of methods, and fecundity. In another approach (Nortman, 1982), unmet need was measured over a one-year time period in which fractions of exposure were calculated, a method that permitted pregnant women to become exposed to risk again. In a recent paper (Bongaarts, 1991), the author conceives unmet need as the increase in contraceptive prevalence required to reduce fertility to intended levels. Bongaarts proposes to adjust estimates obtained with the procedure used here to take into account the fact that: (1) women whose need for spacing is satisfied will sooner or later interrupt contraception in order to become pregnant; and (2) women whose spacing needs are satisfied will therefore experience reduced periods of exposure to the risk of having an unwanted birth which implies that the total unmet need will be lower than that estimated here. Although this view is correct over time or in the steady state, the current status measure used here is preferred because it seems more appropriate for immediate program purposes.³

A further reason for perhaps erring on the high side is that the proportion of women who want no more children or who want to space their births is expected to rise in many countries over the next decade by a magnitude more than enough to compensate for the lower level of need implied by the Bongaarts' procedure. Elsewhere (Westoff, 1991), the percentage of women who want no more children is estimated to increase across 28 countries by 12 percent over the next five years; the increase is 35 percent in the 11 sub-Saharan countries. Moreover, these estimates consider only intentions to limit childbearing; a significant increase in intentions to space births can also be expected in countries where there is already a high level of preference for terminating childbearing.

³ The distinction between these two approaches is particularly relevant to the interaction between spacing and limiting. Women whose spacing needs become satisfied will themselves experience a reduced need for limiting only at some time later in their reproductive lives. This saving in time cannot be transferred from current spacers to current limiters because they are different women. The current status measure may overestimate unmet need in the steady state by perhaps as much as 5 percentage points. This estimate is based on the 15 countries analyzed by Bongaarts and is calculated by comparing the average value of the unmet need measures used here with the average of the mid-point of the maximum and minimum values estimated by his procedure. The correlation between the two measures across the 15 countries is .96.

4 Estimates of Unmet Need and Demand

The distributions in Table 4.1 provide a description of the various categories of married women relevant to the classification of demand. All married women are represented in this table, including several categories excluded in the measures of unmet need and total demand calculated below.

The contraceptive prevalence rates—the percentage of married women currently using a contraceptive method—vary substantially across these countries, ranging from a high of about two-thirds in Brazil, Colombia, and Thailand, to a low near five percent in Liberia, Mali, and Uganda. The factors related to contra-

Reproductive and contraceptive-use status, intention status of current or most recent pregnancy, and fertility intentions

Table 4.1 Percent distribution of currently married women by reproductive and contraceptive-use status, intention status of current or most recent pregnancy, and fertility intentions, Demographic and Health Surveys, 1985-1989

Country	Infecund	Current Users	Pregnant or Amenorrheic			Fecund			Total	Number of Women	
			Method Failure	Intended Pregnancy	Mistimed Pregnancy	Unwanted Pregnancy	Want Child Soon	Want Child Later			Want No More Children
SUB-SAHARAN AFRICA											
Botswana	15.8	33.0	1.7	12.9	8.8	0.9	9.8	10.6	6.5	100.0	1708
Burundi	13.1	8.7	NA	45.6	10.4	2.3	7.6	7.3	5.1	100.0	2669
Ghana	12.3	12.9	NA	27.4	10.7	2.0	12.2	15.6	7.0	100.0	3156
Kenya	13.3	26.9	NA	15.9	12.0	4.0	5.9	10.5	11.5	100.0	4765
Liberia	18.2	6.4	NA	28.4	1.7	8.4	14.1	18.2	4.6	100.0	3529
Mali	19.3	4.7	NA	38.0	4.2	1.4	15.2	13.0	4.3	100.0	2948
Togo	9.1	12.1	NA	27.2	11.7	3.1	11.4	16.7	8.5	100.0	2454
Uganda	15.5	4.9	NA	33.4	11.7	2.1	19.0	8.2	5.2	100.0	3180
Zimbabwe	8.2	43.1	NA	14.6	5.0	3.5	12.4	5.1	8.1	100.0	2643
NORTH AFRICA											
Egypt	15.4	37.8	1.8	13.6	3.6	5.2	6.2	6.5	9.8	100.0	8221
Morocco	15.5	35.9	2.8	15.5	6.2	3.1	8.1	6.2	6.5	100.0	5447
Tunisia	10.5	49.8	1.6	13.3	4.6	3.3	5.1	6.0	5.8	100.0	4012
ASIA											
Indonesia	19.9	47.8	0.9	11.5	2.7	0.9	3.9	7.4	5.0	100.0	0907
Sri Lanka	11.4	61.7	2.0	7.4	2.3	1.0	5.3	4.8	4.1	100.0	5442
Thailand	12.3	65.5	0.5	6.7	1.8	1.1	3.9	3.8	4.3	100.0	6236
LATIN AMERICA/CARIBBEAN											
Bolivia	17.6	30.3	3.8	9.4	6.3	11.0	3.2	3.2	15.2	100.0	4941
Brazil ^a	6.6	66.2	2.2	6.9	2.6	2.3	5.4	2.2	5.7	100.0	3471
Colombia	8.2	64.8	2.7	6.5	3.3	2.1	4.4	1.8	6.2	100.0	2850
Dominican Republic	14.3	49.8	1.9	7.6	4.7	3.1	6.9	5.3	6.3	100.0	4133
Ecuador	12.1	44.3	2.3	12.8	4.4	2.9	4.4	6.3	10.5	100.0	2957
El Salvador	13.5	47.3	0.6	8.2	3.7	4.0	4.5	10.2	8.1	100.0	3164
Guatemala ^a	10.4	23.2	0.9	30.1	5.8	4.0	6.1	10.6	9.0	100.0	3377
Mexico	11.0	52.7	2.2	8.6	4.0	3.8	1.5	7.0	9.3	100.0	5662
Perú	12.4	45.8	4.3	7.0	5.2	6.5	2.8	2.9	13.1	100.0	2900
Trinidad&Tobago	18.6	52.7	2.2	4.5	1.9	1.2	5.9	6.3	6.7	100.0	2617

Note: The ratio of intended to mistimed pregnancies for currently pregnant and amenorrheic women in Mexico and Zimbabwe was estimated from regional figures.

NA = Not applicable

^a Figures are for women 15-44.

ceptive prevalence rates for DHS-I data are analyzed in another comparative study (Rutenberg et al., 1991); here the focus is on the demand for family planning which includes both use and unmet need.

As noted earlier, the proportion of women classified as infecund in different populations cannot be interpreted independently of the proportion practicing contraception, since infecundity will become more evident in populations where little contraception is practiced. Nevertheless, the proportion infecund falls between 10 and 20 percent for most countries. In Brazil and Guatemala, the samples were defined as women 15-44 rather than 15-49, which implies that the rates of infecundity shown in Table 4.1 are underestimates for these two countries relative to the other countries.

The percentage of women who are currently pregnant or amenorrheic due to contraceptive failure is also shown in Table 4.1,

although, as noted earlier, these women are excluded from the assessment of unmet need because they were users at the time they became pregnant. The questions needed to establish this category were not included in most of the sub-Saharan countries because of the low contraceptive prevalence rates. In the remainder of the DHS-I countries, the percentage who failed while using a method ranges between one and four percent. This statistic is used in a current status measure of contraceptive failure rates (Bongaarts and Rodríguez, 1988) and has been applied to produce estimates for most of the DHS-I countries by Moreno and Goldman (1991).

Among sub-Saharan populations, spacing is the predominant family planning concern, both for current use and unmet need; in the North African countries, the unmet need for spacing and limiting is more balanced (Table 4.2). In sharp contrast to other regions, the total demand for family planning is greatest for spacing purposes in sub-Saharan Africa, except for Kenya,

Total demand and its components

Table 4.2 Total demand and its components for currently married women, Demographic and Health Surveys, 1985-1989

Country	Demand for Contraception ^a			Unmet Need			Current Use			Percentage of Demand Satisfied		
	Total	For	For	Total	For	For	Total	For	For	Total	For	For
		Spacing	Limiting		Spacing	Limiting		Spacing	Limiting		Spacing	Limiting
SUB-SAHARAN AFRICA												
Botswana	61.6	38.6	23.0	26.9	19.4	7.4	33.0	17.9	15.1	53.6	46.4	65.7
Burundi	33.8	23.5	10.3	25.1	17.7	7.4	8.7	5.8	2.9	25.8	24.7	28.2
Ghana	48.1	34.2	13.9	35.2	26.2	9.0	12.9	8.0	4.9	26.8	23.4	35.3
Kenya	64.9	31.0	33.9	38.0	22.4	15.5	26.9	8.6	18.3	41.5	27.7	54.0
Liberia	39.3	23.4	15.8	32.8	19.8	13.0	6.4	3.6	2.9	16.4	15.4	18.4
Mali	27.6	21.2	6.4	22.9	17.2	5.7	4.7	4.0	0.7	17.0	18.9	10.9
Togo	52.2	36.4	15.8	40.1	28.5	11.7	12.1	8.0	4.1	23.2	22.0	25.9
Uganda	32.1	22.0	10.1	27.2	19.9	7.3	4.9	2.1	2.8	15.2	9.5	27.7
Zimbabwe	64.8	37.6	27.2	21.7	10.1	11.6	43.1	27.5	15.6	66.5	73.1	57.4
NORTH AFRICA												
Egypt	64.8	16.5	48.3	25.2	10.1	15.0	37.8	5.9	31.9	58.4	35.8	66.0
Morocco	60.8	26.4	34.4	22.1	12.5	9.6	35.9	12.7	23.2	59.1	48.1	67.4
Tunisia	71.1	24.9	46.2	19.7	10.6	9.1	49.8	13.5	36.3	70.0	54.2	78.6
ASIA												
Indonesia	64.7	28.5	36.1	16.0	10.1	6.0	47.8	17.8	29.9	73.8	62.5	82.8
Sri Lanka	75.9	21.5	54.4	12.3	7.2	5.1	61.7	13.1	48.6	81.3	60.9	89.3
Thailand	77.1	21.8	55.3	11.1	5.6	5.5	65.5	15.9	49.6	85.0	72.9	89.7
LATIN AMERICA/CARIBBEAN												
Bolivia	69.8	17.5	52.3	35.7	9.5	26.2	30.3	6.5	23.8	43.4	37.1	45.5
Brazil ^b	81.1	24.2	56.9	12.8	4.8	8.0	66.2	17.9	48.3	81.6	74.0	84.9
Colombia	80.9	22.1	58.9	13.5	5.1	8.3	64.8	15.4	49.4	80.1	69.7	83.9
Dominican Republic	71.2	20.8	50.4	19.4	10.0	9.4	49.8	9.6	40.1	69.9	46.2	79.6
Ecuador	70.8	23.8	47.0	24.2	10.8	13.4	44.3	11.6	32.7	62.5	48.7	69.6
El Salvador	73.8	22.3	51.5	26.0	13.9	12.1	47.3	8.1	39.2	64.1	36.3	76.1
Guatemala ^b	53.4	22.1	31.4	29.4	16.4	13.0	23.2	5.1	18.1	43.3	23.1	57.6
Mexico	79.0	25.9	53.1	24.1	11.0	13.1	52.7	13.5	39.2	66.7	52.1	73.8
Perú	77.8	21.7	56.1	27.7	8.1	19.6	45.8	11.2	34.6	58.8	51.6	61.7
Trinidad&Tobago	71.1	28.6	42.5	16.1	8.3	7.9	52.7	18.9	33.8	74.2	66.1	79.5

^a Demand includes method failure, current use and unmet need.

^b Figures are for women 15-44.

where spacing and limiting are more evenly divided. Exactly the opposite is found in the Asian and Latin American countries, where limiting is the predominant concern both for current use and unmet need.

The total demand for family planning in the sub-Saharan countries ranges from a low of 28 percent in Mali to a high of 65 percent in Kenya and Zimbabwe (Table 4.2 and Figure 4.1). Botswana also shows a high demand. Demand is considerably lower in the other countries; it is lowest in Burundi, Mali, and Uganda. In Liberia, the total demand appears slightly greater; this largely reflects unmet need, since the contraceptive prevalence rate in that country is very low.

Of the three Asian countries included in DHS-I, unmet need is lowest in Sri Lanka and Thailand. The total demand for family planning ranges from 65 percent in Indonesia to 76 percent in Sri Lanka and 77 percent in Thailand.

In the Latin American region, total unmet need is particularly high in Guatemala, Peru, and especially Bolivia, which shows the highest percentage of any country in the *want no more children* and *unwanted pregnancy* categories (Table 4.1). These three countries offer interesting contrasts. Total unmet need ranges from 28 to 36 percent, but in Bolivia and Peru, over 70 percent of this unmet need is for limiting births, while in Guatemala more than half is for spacing. Unmet need is lowest in Brazil and Colombia, and these two countries accordingly show the highest percentage of demand satisfied (prevalence divided by the total demand).

Throughout the Latin American region, total demand averages three-quarters for all currently married women, with the excep-

tion of Guatemala, where it is only about half (Table 4.2 and Figure 4.2).

The estimated total demand for the 25 countries included in this report averages 63 percent. When the sub-Saharan countries are excluded, the average increases to 71 percent. This figure corresponds closely to the average contraceptive prevalence rate of 70 percent estimated for developed countries over the last fifteen years.⁴

Table 4.2 also estimates the percentage of the total demand for family planning that is currently satisfied (the prevalence rate divided by the sum of unmet need and the prevalence rate). In the three North African countries, the percentage of demand satisfied ranges from 58 percent in Egypt to 70 percent in Tunisia. In the sub-Saharan countries, the percentage of demand satisfied is, of course, much lower. Only in Botswana and Zimbabwe does it exceed 50 percent; it exceeds 40 percent in Kenya, but ranges between 15 and 27 percent in the remaining countries in the region.

In the three Asian countries, the total demand satisfied ranges between 74 and 85 percent. In the Latin American region, on average, close to two-thirds of the total demand is satisfied. It varies from less than 50 percent in Bolivia and Guatemala to around 80 percent in Brazil and Colombia.

⁴ To lend an additional perspective to these estimates of total demand, similar calculations were undertaken for the United States, based on data from the 1988 National Survey of Family Growth. The estimate of total demand for the United States is 80 percent, of which 4 percent is unmet need, a value probably similar to other developed countries as well as to the more developed countries in DHS-I. However, because of the higher prevalence rate in the United States, the percent of total demand satisfied is estimated at 95 percent, which is considerably higher than for the DHS-I countries.

Figure 4.1 Total demand for family planning: unmet need and current use of contraception

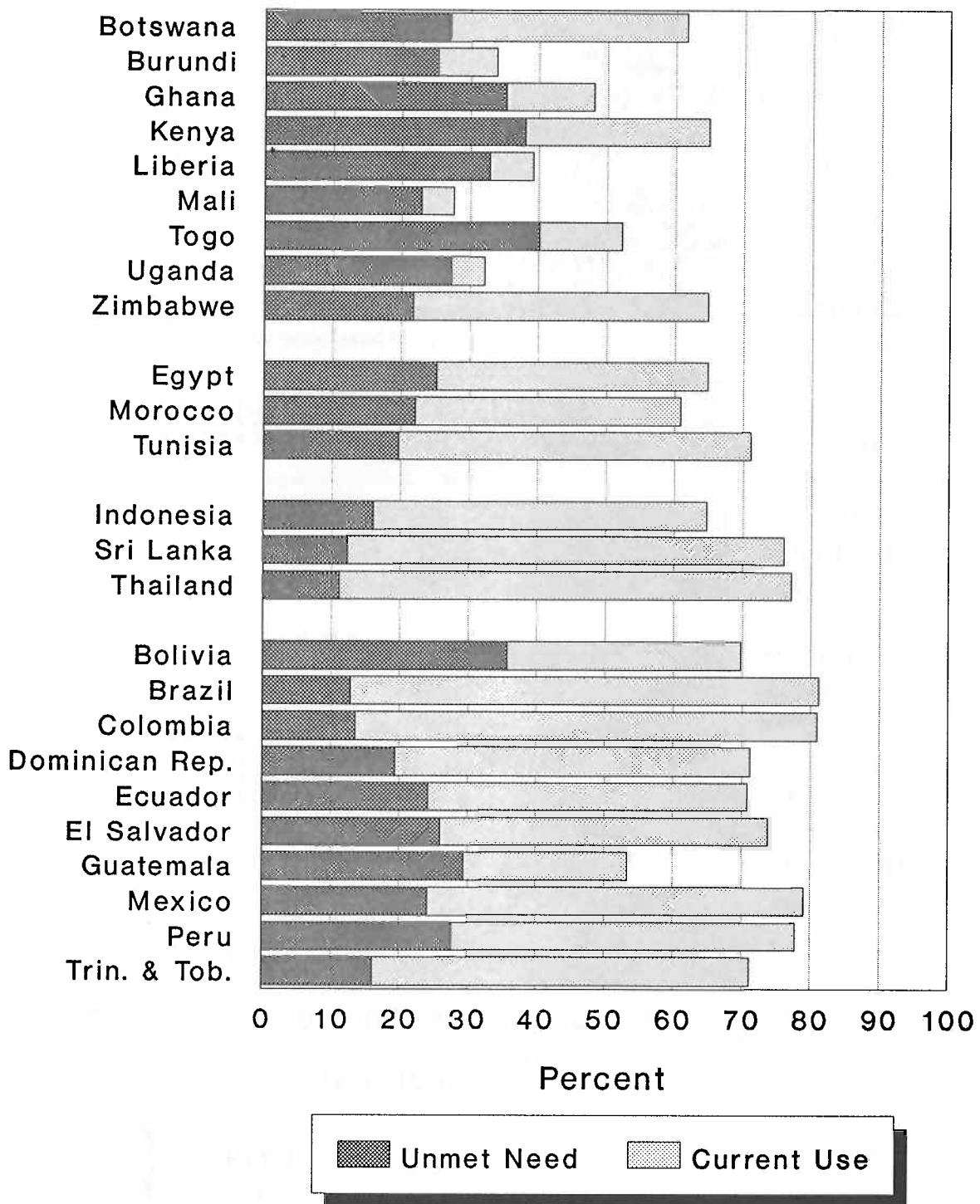
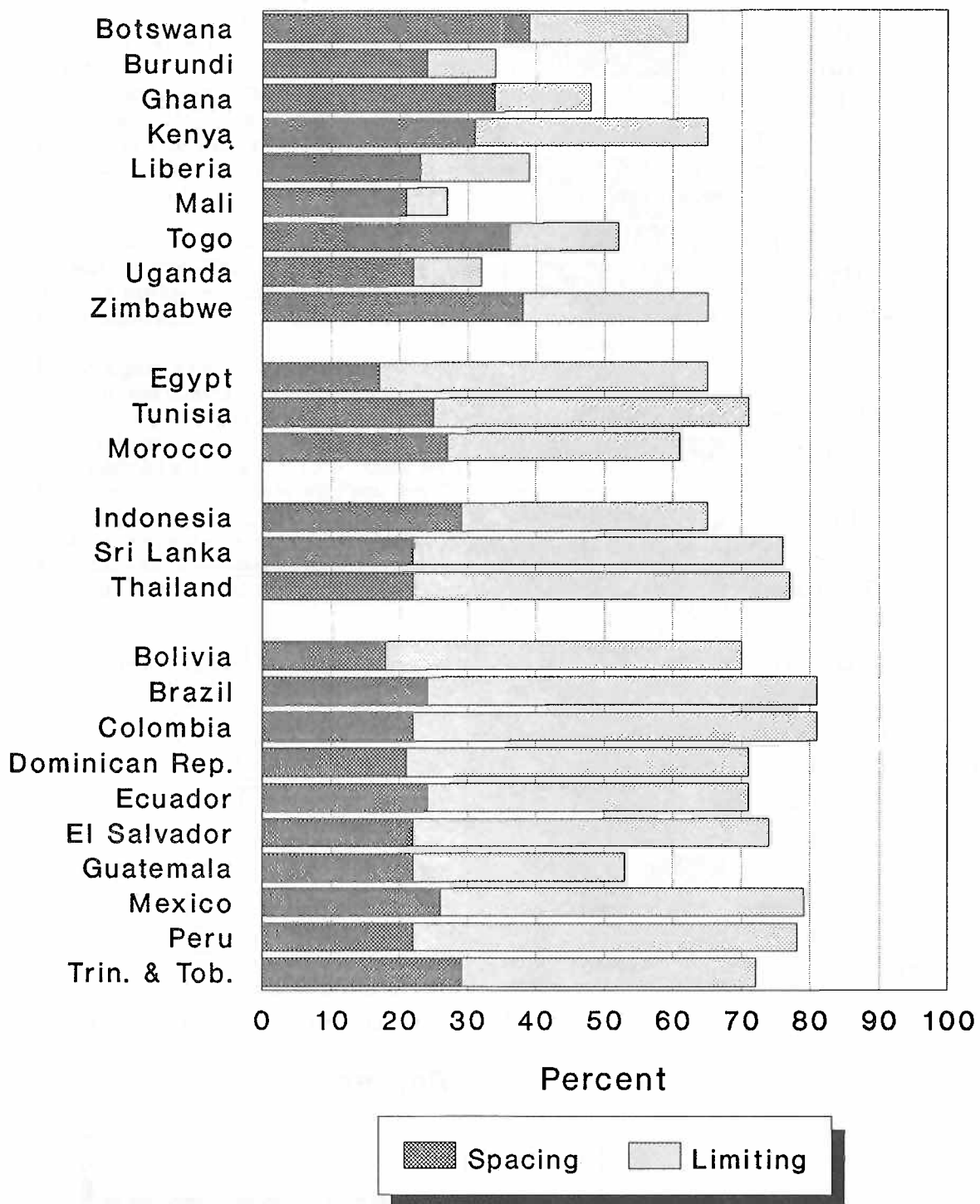


Figure 4.2 Total demand for family planning: spacing and limiting births



5 Covariates of Unmet Need

The magnitude of unmet need for family planning varies not only across countries, but within countries. It is associated with stages in the life cycle that are demarcated by age and by number of children; it also varies with position in the social structure, indicated here by urban-rural residence and by the woman's level of education. The distributions of these demographic and social variables are presented for total unmet need in Table 5.1, for spacing in Table 5.2, and for limiting in Table 5.3.

5.1 AGE

The unmet needs for spacing and limiting show the different age patterns that would be expected. The unmet need for spac-

ing is concentrated in the younger ages and declines with advancing age (Table 5.2), while the unmet need for limiting covaries with age in precisely the opposite direction (Table 5.3). These relationships tend to offset each other, with the net result that total unmet need in most countries shows little association with age (Table 5.1).

5.2 NUMBER OF CHILDREN

The number of living children follows exactly the same pattern as age: women who are in the early stages of childbearing are more in need of family planning for spacing purposes than women with larger families who, in turn, are focused more on limiting fertility. Again, as with age, the result is largely to neu-

Differentials in total unmet need for family planning

Table 5.1 Total unmet need for family planning among currently married women, selected background characteristics, Demographic and Health Surveys, 1985-1989

Country	Age Group						Number of Children					Residence		Level of Education			
	15-19	20-24	25-29	30-34	35-39	40+	0	1	2	3	4+	Urban	Rural	No Education	Pri-ary	Second-ary	Higher
SUB-SAHARAN AFRICA																	
Botswana	32.3	35.7	23.7	26.3	31.5	19.9	23.3	16.7	22.5	22.1	33.2	22.2	29.0	31.3	27.1	—18.8—	
Burundi	22.6	24.8	23.4	22.4	26.0	30.0	17.2	11.9	23.9	21.6	30.6	29.9	25.0	23.4	33.2	—36.5—	
Ghana	47.7	37.8	34.4	35.8	36.1	28.6	20.3	34.7	30.7	35.4	38.2	35.4	35.1	32.3	39.0	—27.8—	
Kenya	40.7	43.2	39.8	37.8	35.5	31.3	29.0	24.4	37.0	31.8	41.3	33.6	38.7	36.5	40.8	—32.5—	
Liberia	43.2	33.5	31.5	35.1	35.2	22.9	19.9	27.2	26.4	29.6	43.0	37.6	30.1	29.8	40.9	—45.1—	
Mali	32.5	21.5	19.5	20.5	22.2	23.5	17.8	19.1	16.9	20.9	29.3	30.6	20.3	21.8	29.9	—28.3—	
Togo	40.4	40.0	35.5	40.8	44.8	41.1	31.5	35.3	34.9	36.7	46.4	44.3	38.7	36.9	50.6	—39.0—	
Uganda	28.5	24.9	28.0	25.5	30.9	25.0	9.6	21.1	21.6	25.6	34.2	30.2	27.0	24.4	28.9	—35.5—	
NORTH AFRICA																	
Egypt	25.9	28.8	29.4	27.5	26.5	16.0	15.7	23.7	23.5	24.5	28.7	18.6	31.5	29.3	23.6	17.9	13.3
Morocco	24.3	24.5	24.2	20.4	23.6	18.5	14.5	17.7	18.3	21.2	26.3	15.7	26.6	23.7	15.6	11.7	8.3
Tunisia	30.2	22.8	22.5	20.6	18.8	14.6	14.7	16.7	18.5	20.1	21.5	14.0	27.7	23.2	17.0	10.0	10.0
ASIA																	
Indonesia	28.9	18.8	17.2	15.2	14.9	11.0	18.4	16.7	13.3	13.5	17.9	13.4	17.0	16.1	16.9	12.9	12.2
Sri Lanka	25.1	23.2	16.9	11.5	8.9	5.0	13.0	18.5	14.2	9.8	8.5	11.7	12.4	15.2	12.1	12.0	11.5
Thailand	21.9	17.4	10.7	7.6	9.3	9.0	17.9	12.2	7.8	6.6	13.7	10.1	11.3	14.5	11.1	8.9	6.5
LATIN AMERICA/CARIBBEAN																	
Bolivia	40.0	41.9	40.8	38.4	35.3	24.7	15.5	26.3	34.0	35.3	42.6	29.5	43.3	45.1	40.8	24.4	12.5
Brazil ^a	20.4	16.5	11.9	9.6	12.8	12.0	13.4	10.0	9.4	9.6	20.0	9.5	21.4	29.6	12.4	5.7	3.8
Colombia	21.4	16.2	12.6	11.9	12.3	12.3	11.9	11.3	11.2	10.6	17.9	10.8	19.0	22.0	15.2	9.2	2.9
Dominican Republic	30.1	30.8	21.6	17.2	12.4	8.8	16.7	24.1	23.6	16.9	17.5	16.6	23.9	29.6	20.1	17.7	8.7
Ecuador	32.6	30.8	26.0	22.4	19.7	19.0	13.1	25.3	23.3	18.9	28.8	18.8	31.0	36.6	27.3	18.0	8.0
El Salvador	41.7	37.6	27.4	21.0	22.4	12.3	21.6	35.6	26.6	16.0	27.3	19.3	33.3	31.7	25.4	18.6	10.0
Guatemala ^a	29.0	29.1	30.2	30.4	29.6	26.4	17.4	23.0	28.1	24.7	35.8	23.7	32.0	34.5	27.8	10.9	9.7
Peru	42.2	30.9	27.7	27.0	25.4	25.5	21.0	22.0	21.4	24.1	34.7	18.0	44.3	48.9	31.6	16.5	9.2
Trinidad&Tobago	33.1	20.7	19.1	16.0	14.1	6.2	15.3	15.7	16.1	14.8	17.7	15.3	16.8	14.8	16.6	15.7	10.2

Note: Estimates are not available for Mexico and Zimbabwe.

^a Figures are for women 15-44.

tralize any association between total unmet need and number of children.

The pattern is different in sub-Saharan Africa, however (Table 5.2). There the unmet need for spacing varies little with the number of children; elsewhere it declines markedly. This difference is understandable, however, since in the sub-Saharan countries the number of children is much higher and spacing accounts for a greater proportion of total demand than elsewhere.

The estimates in Table 5.2 show a considerable unmet need for spacing among married women with no children. This desire to postpone fertility is interesting because it may be based more on socioeconomic reasons than on health concerns, which play a prominent role in the timing of later births. The strong desire to have some children can be seen in the small proportion of childless women who are in need of family planning to prevent further childbearing (Table 5.3).

Differentials in unmet need for spacing

Table 5.2 Unmet need for spacing among of currently married women, selected background characteristics, Demographic and Health Surveys, 1985-1989

Country	Age Group						Number of Children					Residence		Level of Education			
	15-19	20-24	25-29	30-34	35-39	40+	0	1	2	3	4+	Urban	Rural	No Education	Pri- mary	Second- ary	Higher
SUB-SAHARAN AFRICA																	
Botswana	19.4	33.7	20.2	19.5	18.5	8.8	19.6	15.2	19.1	17.2	21.5	14.9	21.6	22.1	19.4	—15.0—	
Burundi	20.4	24.3	22.1	17.1	13.4	9.0	16.5	11.9	22.2	18.2	16.2	21.6	17.6	16.3	24.2	—30.5—	
Ghana	45.4	36.2	30.5	26.4	20.7	9.6	14.9	34.5	28.8	31.2	20.6	24.9	26.8	22.6	30.3	—22.2—	
Kenya	37.6	37.2	28.7	20.2	15.0	5.8	27.5	23.7	30.1	25.2	18.4	22.8	22.3	18.1	24.9	—24.4—	
Liberia	31.1	26.3	21.5	18.7	16.0	7.4	19.6	21.5	20.6	20.9	18.0	23.0	18.0	17.5	26.1	—26.5—	
Mali	30.5	19.3	17.7	14.8	14.3	9.7	16.7	18.1	14.9	17.9	16.8	24.3	14.8	15.9	25.8	—23.1—	
Togo	39.4	39.1	32.5	29.4	23.7	11.0	31.5	34.5	32.8	32.7	22.5	31.4	27.5	24.3	40.0	—31.6—	
Uganda	27.2	23.5	24.1	18.3	16.7	5.9	7.1	20.4	20.3	23.1	19.9	22.9	19.7	16.4	22.2	—29.2—	
NORTH AFRICA																	
Egypt	24.6	20.5	13.5	8.9	5.1	1.4	15.4	21.7	12.7	8.9	5.1	7.2	13.0	11.0	8.4	11.6	9.2
Morocco	23.9	22.2	16.8	11.4	8.2	3.8	14.3	16.6	14.8	14.8	9.7	9.1	14.9	13.2	9.5	8.5	6.3
Tunisia	30.2	19.4	16.1	10.4	6.9	2.6	14.7	15.4	15.0	11.8	6.8	7.2	15.4	11.4	11.3	5.2	4.3
ASIA																	
Indonesia	28.9	17.3	13.1	7.6	5.3	2.1	18.3	15.6	10.1	7.0	6.0	8.3	10.7	9.4	10.5	9.4	10.4
Sri Lanka	23.4	18.1	11.5	5.7	3.3	0.8	12.8	16.3	7.7	4.2	1.8	6.5	7.3	7.6	7.1	7.3	6.8
Thailand	18.9	12.9	6.6	3.3	2.6	0.8	16.5	8.7	3.8	2.9	2.1	5.7	5.6	5.1	5.6	5.8	5.5
LATIN AMERICA/CARIBBEAN																	
Bolivia	20.1	21.4	11.7	9.1	5.4	1.9	11.2	14.7	14.9	10.0	4.6	8.7	10.5	8.4	10.5	9.4	6.8
Brazil ^a	13.7	10.6	4.7	3.3	2.0	0.8	8.6	7.2	4.0	3.2	3.3	3.6	7.7	8.6	4.6	3.6	3.4
Colombia	18.3	11.5	4.3	3.4	2.5	0.8	11.2	8.9	5.3	2.0	3.3	4.1	7.2	5.2	5.7	4.4	1.8
Dominican Republic	25.0	21.6	11.6	5.5	2.3	0.5	15.0	20.7	15.0	5.2	3.6	9.4	11.0	12.5	9.7	12.4	5.4
Ecuador	22.7	19.4	13.2	7.9	5.7	3.4	12.6	18.8	13.0	6.9	7.3	8.0	14.3	15.4	10.8	10.6	4.9
El Salvador	28.4	23.9	14.7	9.1	9.4	3.4	17.4	26.2	15.7	7.6	9.8	10.1	18.0	16.1	13.6	11.2	8.3
Guatemala ^a	23.7	22.8	18.1	15.7	10.6	7.4	14.5	20.0	20.1	14.6	14.7	12.1	18.4	19.2	15.3	7.3	6.5
Perú	25.8	18.0	10.1	7.5	3.8	1.4	19.1	16.9	8.7	6.8	4.2	5.8	12.1	9.9	8.3	7.7	5.5
Trinidad&Tobago	26.6	13.8	11.1	7.2	3.3	0.2	14.5	12.6	7.9	3.7	4.9	8.2	8.3	7.4	7.0	10.0	4.1

Note: Estimates are not available for Mexico and Zimbabwe.

^a Figures are for women 15-44.

5.3 RESIDENCE

Without exception, the unmet need for family planning is greater in the rural than in the urban populations of the North African, Asian, and Latin American countries included in DHS-I (Table 5.1). This pattern extends both to the need for spacing and for limiting births (Tables 5.2 and 5.3). The picture is more mixed in sub-Saharan Africa, where unmet need is greater in the urban areas of some countries and varies little between urban and rural areas in other countries.

5.4 EDUCATION

In all but the sub-Saharan countries, unmet need declines with increasing level of education; it is highest among women with no formal schooling (Table 5.1).

The picture is different in the sub-Saharan countries in several respects. Except for Botswana, where the fertility transition is more advanced, higher levels of unmet need are typically observed among women with some formal education, a pattern that holds especially for the spacing component of unmet need (Table 5.2). No doubt this reflects both a greater awareness of

the possibility of controlling fertility and a more developed preference for regulating fertility, both of which are associated with literacy. It is noteworthy that the unmet need for limiting fertility in these countries generally follows (at a much lower level) the pattern of educational associations observed for the other countries.

Differentials in unmet need for limiting

Table 5.3 Unmet need for limiting among currently married women, selected background characteristics, Demographic and Health Surveys, 1985-1989

Country	Age Group						Number of Children					Residence		Level of Education			
	15-19	20-24	25-29	30-34	35-39	40+	0	1	2	3	4+	Urban	Rural	No Edu- cation	Pri- mary	Second- ary	Higher
SUB-SAHARAN AFRICA																	
Botswana	12.9	1.9	3.5	6.8	13.1	11.1	3.7	1.5	3.4	4.9	11.8	7.3	7.4	9.2	7.6	—	3.8—
Burundi	2.2	0.5	1.2	5.3	12.6	21.0	0.6	0.1	1.7	3.4	14.4	8.4	7.4	7.1	9.0	—	6.8—
Ghana	2.3	1.7	3.9	9.4	15.4	19.0	5.4	0.2	1.9	4.3	17.6	10.5	8.3	9.7	8.8	—	5.5—
Kenya	3.1	6.1	11.1	17.6	20.5	25.6	1.5	0.8	6.9	6.6	22.9	10.7	16.4	18.4	15.9	—	8.6—
Liberia	12.1	7.2	10.1	16.4	19.2	15.4	0.3	5.8	5.8	8.6	25.0	14.6	12.2	12.3	14.8	—	16.3—
Mali	1.9	2.2	1.8	5.7	8.0	13.9	1.1	1.1	2.0	3.0	12.5	6.3	5.5	5.9	4.1	—	5.1—
Togo	0.9	1.0	3.0	11.4	21.1	30.1	0.0	0.8	2.2	4.0	23.9	12.9	11.2	12.6	10.6	—	7.4—
Uganda	1.3	1.4	4.0	7.2	14.2	19.1	2.6	0.7	1.3	2.5	14.3	7.3	7.3	8.1	6.6	—	6.4—
NORTH AFRICA																	
Egypt	1.3	8.3	15.9	18.6	21.4	14.5	0.3	2.0	10.8	15.6	23.7	11.4	18.5	18.3	15.2	6.3	4.2
Morocco	0.4	2.3	7.4	9.0	15.4	14.7	0.2	1.2	3.4	6.4	16.6	6.7	11.7	10.6	6.1	3.2	2.1
Tunisia	0.0	3.4	6.3	10.2	11.9	12.0	0.0	1.3	3.5	8.3	14.8	6.8	12.3	11.8	5.8	4.8	5.7
ASIA																	
Indonesia	0.0	1.5	4.2	7.7	9.6	8.9	0.1	1.1	3.2	6.5	11.9	5.1	6.3	6.7	6.4	3.5	1.8
Sri Lanka	1.7	5.1	5.4	5.8	5.6	4.2	0.2	2.2	6.6	5.6	6.7	5.2	5.1	7.6	5.0	4.7	4.7
Thailand	3.0	4.5	4.0	4.2	6.6	8.2	1.4	3.4	4.0	3.7	11.6	4.4	5.7	9.4	5.5	3.2	1.0
LATIN AMERICA/CARIBBEAN																	
Bolivia	19.9	20.6	29.1	29.2	29.9	22.8	4.3	11.5	19.1	25.2	38.0	20.8	32.9	36.7	30.3	14.9	5.7
Brazil ^a	6.7	5.9	7.2	6.3	10.7	11.3	4.8	2.8	5.3	6.4	16.7	5.9	13.7	21.1	7.9	2.0	0.4
Colombia	3.1	4.7	8.3	8.5	9.8	11.5	0.7	2.4	5.8	8.6	14.6	6.7	11.8	16.8	9.5	4.8	1.1
Dominican Republic	5.1	9.2	10.1	11.7	10.1	8.3	1.8	3.4	8.6	11.7	13.9	7.2	12.9	17.1	10.5	5.3	3.2
Ecuador	9.9	11.3	12.8	14.5	14.0	15.6	0.5	6.5	10.3	12.0	21.5	10.8	16.7	21.1	16.5	7.4	3.1
El Salvador	13.3	3.7	12.7	11.9	13.0	8.9	4.2	9.5	10.9	8.4	17.5	9.2	15.3	15.5	11.8	7.3	1.7
Guatemala ^a	5.4	6.4	12.2	14.7	18.9	19.0	2.9	3.1	8.0	10.1	21.1	11.6	13.6	15.3	12.5	3.6	3.2
Perú	16.4	12.9	17.6	19.6	21.5	24.1	1.9	5.1	12.7	17.3	30.5	12.2	32.2	39.0	23.3	8.8	3.7
Trinidad&Tobago	6.5	6.9	8.0	8.7	10.8	6.0	0.7	3.0	8.2	11.1	12.8	7.1	8.5	7.4	9.6	5.8	6.1

Note: Estimates are not available for Mexico and Zimbabwe.

^a Figures are for women 15-44.

6 Composition of Unmet Need

Table 6.1 examines unmet need from a programmatic viewpoint. For those women in the unmet need category, Table 6.1 assembles information on women's interest in spacing as opposed to limiting births, their exposure to the risk of conception, their intentions to use contraception in the future, their prior use of family planning, and their knowledge of modern contraceptive methods.

Spacing vs. Limiting

First, total unmet need is divided into two additive components, the need for spacing and the need for limiting, which have already been discussed. The principal feature here is the dominance of the spacing component in the sub-Saharan countries (except Zimbabwe). The picture is more mixed elsewhere (Figure 6.1).

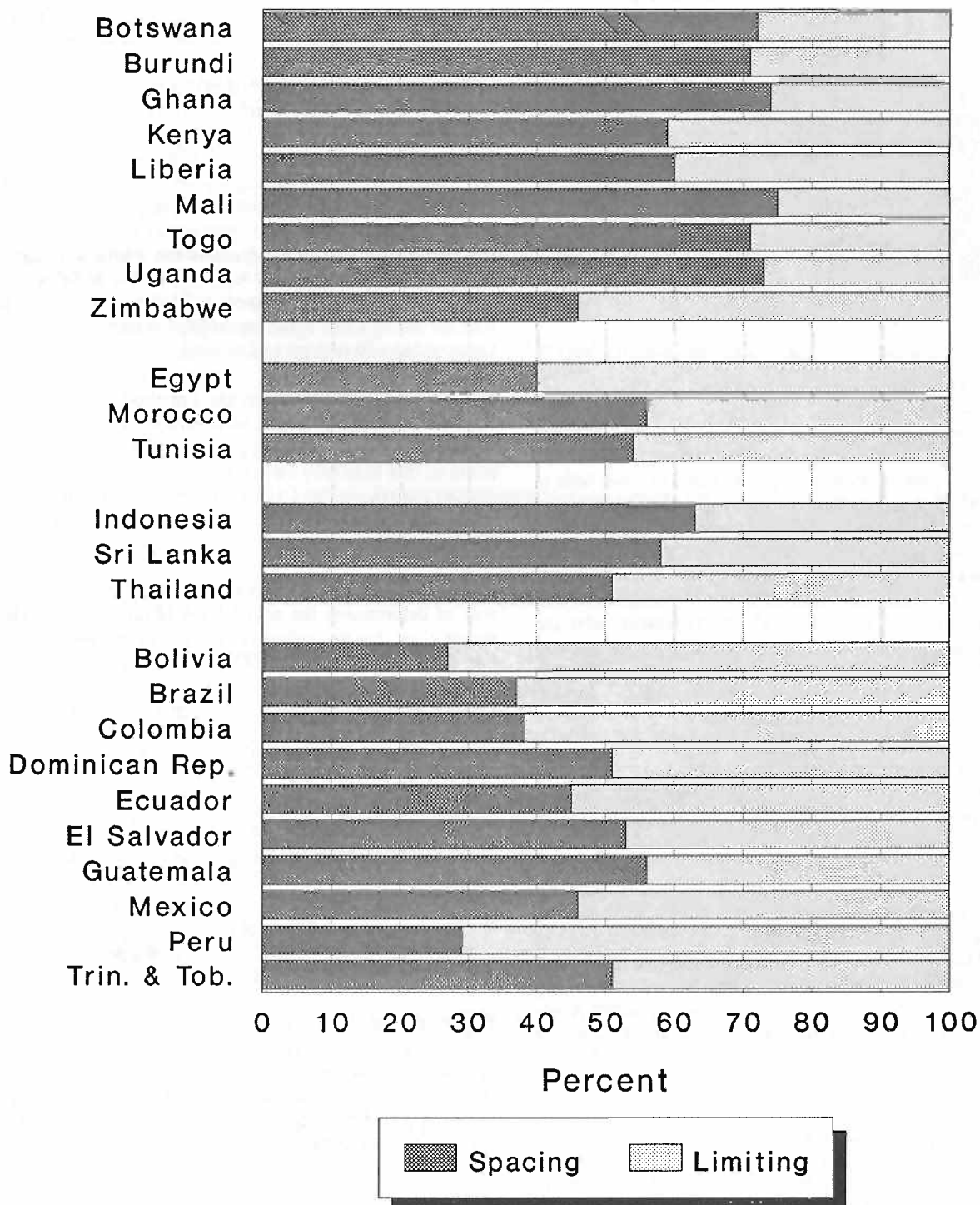
Composition of unmet need

Table 6.1 Composition of unmet need by planning status, exposure status, contraceptive intentions, prior use, and knowledge of methods, Demographic and Health Surveys, 1986-1989

Country	Planning Status		Exposure Status			Intention to Use			Prior Use		Knowledge of Methods			
	Total unmet need	For spacing	For limiting	Pregnant or amenorrhoeic	Sexually active	Sexually inactive	Don't Intend		Never used	Ever used	None	Traditional	Modern	
							Intend to use	Not sexually active						Sexually active
SUB-SAHARAN AFRICA														
Botswana	26.9	72.4	27.6	36.1	50.2	13.7	59.8	0.0	40.3	51.7	48.3	5.8	0.3	93.9
Burundi	25.1	70.5	29.5	50.7	38.2	11.1	38.0	18.7	43.3	70.8	29.2	21.3	11.8	66.9
Ghana	35.2	74.4	25.6	35.9	29.9	34.2	29.5	30.3	21.0	64.2	35.8	17.1	1.4	81.5
Kenya	38.0	59.1	40.9	42.1	42.8	15.1	62.1	11.4	26.5	70.9	29.1	6.9	1.4	91.7
Liberia	32.8	60.4	39.6	30.9	-69.1-		49.7	-50.3-		77.2	22.8	21.9	1.7	76.4
Mali	22.9	75.2	24.8	24.4	46.3	29.2	24.3	30.2	45.5	81.4	18.6	52.5	12.5	35.0
Togo	40.1	70.9	29.1	37.0	-63.0-		33.7	-66.3-		54.4	45.6	3.3	10.8	85.9
Uganda	27.2	73.2	26.8	50.5	40.2	9.3	37.1	13.0	49.9	72.8	27.2	11.8	4.9	83.4
Zimbabwe	27.2	46.5	53.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NORTH AFRICA														
Egypt	25.2	40.3	59.7	35.2	-64.8-		58.9	-41.1-		57.1	42.9	1.7	0.2	98.1
Morocco	22.1	56.5	43.5	42.3	-57.7-		49.8	-50.2-		55.4	44.6	2.0	0.6	97.4
Tunisia	19.7	53.9	46.1	40.0	-60.0-		58.3	-41.6-		58.4	41.6	1.8	0.5	97.7
ASIA														
Indonesia	16.0	62.8	37.2	22.5	61.3	16.2	48.4	11.3	40.3	56.8	43.2	7.1	0.4	92.6
Sri Lanka	12.3	58.4	41.6	27.4	47.1	25.5	50.4	17.9	31.7	67.3	32.7	2.0	0.1	97.9
Thailand	11.1	50.6	49.4	27.0	48.9	24.1	60.4	13.7	25.8	40.5	59.5	0.5	0.0	99.5
LATIN AMERICA/CARIBBEAN														
Bolivia	35.7	26.6	73.4	48.3	32.0	19.7	41.7	26.6	31.7	83.7	16.3	40.1	5.8	54.1
Brazil	12.8	37.2	62.8	38.4	51.3	10.3	63.3	6.3	30.4	47.3	52.7	0.4	0.0	99.6
Colombia	13.5	38.0	62.0	40.0	44.5	15.5	68.6	7.4	24.0	45.5	54.5	1.2	0.2	98.6
Dominican Republic	19.5	51.5	48.5	40.2	35.4	24.4	58.3	18.1	23.6	49.9	50.1	1.3	0.1	98.6
Ecuador	24.2	44.5	55.5	30.3	49.7	20.0	49.9	15.9	34.1	65.0	35.0	14.8	0.4	84.8
El Salvador	26.0	53.4	46.6	29.5	-70.5-		35.9	-64.1-		76.1	23.9	13.6	0.0	86.4
Guatemala	29.4	55.7	44.3	33.2	49.7	17.1	31.9	20.0	48.2	83.9	16.1	32.1	0.4	67.5
Mexico	24.1	45.6	54.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Perú	27.7	29.4	70.6	42.3	34.2	23.5	60.0	18.4	21.6	71.1	28.9	22.8	2.9	74.4
Trinidad and Tobago	16.1	51.2	48.8	19.2	63.0	17.8	62.6	6.6	30.8	30.3	69.7	2.1	0.2	97.6

Note: Unmet need for spacing for Mexico and Zimbabwe includes the estimate for pregnant and amenorrhoeic women from Table 4.1.
NA = Not available

Figure 6.1 Composition of unmet need: spacing and limiting births, Demographic and Health Surveys, 1985-1989



Exposure Status

Next, Table 6.1 divides women in need of family planning into three groups according to their exposure to the risk of pregnancy; the first group consists of women currently pregnant or amenorrheic, while the remainder are categorized as either sexually active or inactive. It is important to recall that the definition of unmet need used here includes pregnant or amenorrheic women who had not been using a method of family planning at the time of conception, but who reported that they had not wanted another child so soon or had not wanted any more children at all. Such women account for sizeable fractions of total unmet need in most of the countries: around 40 percent of women in need in most sub-Saharan and North African countries are pregnant or amenorrheic, about one-quarter in the three Asian countries, and around one-third in the Latin American region. These differences, of course, reflect the variations of fertility in those regions.

The remaining women in need, who are neither pregnant nor amenorrheic, are subdivided on the basis of whether or not they reported having had sexual intercourse in the four weeks preceding the interview. Such information was not collected in all countries. The validity and reliability of reports on coital frequency are, of course, subject to question even though the measure used here is based only on whether any intercourse was reported to have occurred in the last month, rather than on the number of occurrences. Moreover, the focus is on a simple, current status picture of exposure to risk; the fact that married women may not be sexually active in the past four weeks does not mean that they will not be in need of contraception in the next month (many women who are sterilized or are using an IUD may also be sexually inactive at various times). Nonetheless, it does afford an aggregate, cross-sectional, current picture of the amount of risk among women classified in need.

The proportion of women with an unmet need for family planning who are sexually inactive by this definition is substantial; it averages about 20 percent across all countries, although there is considerable variation.

Thus, in many countries less than half of the women in need are *currently* exposed to risk, that is, not pregnant, not amenorrheic, and sexually active. The total amount of unmet need exceeds the so-called KAP-Gap. To summarize these findings another way: while a significant proportion of women have an unmet need for family planning, the percentage of women, at any given time, whose behavior appears inconsistent or irrational is considerably smaller.⁵

⁵ For a description of this distinction see Westoff (1988a).

Intentions to Use Family Planning

The third panel of Table 6.1 shows the percentage of women with an unmet need who report that they intend to use a family planning method sooner or later. The table further subdivides those women who do not intend to use a method according to their sexual activity, in order to get a sense of their risk of conception. Since the women with an unmet need who are pregnant or amenorrheic have been redistributed in this tabulation, some of the sexual inactivity can be attributed to that condition.

On average, around half of the women in need intend to use a family planning method, although given the wide variation among countries, this figure can convey only a general sense of the magnitude of the intention. The proportion does not vary systematically across the different regions of the world, although there is a great deal of intra-regional variation. In sub-Saharan Africa, it ranges from a low of 24 percent in Mali to a high of 62 percent in Kenya. In the Latin American region, it varies from 32 percent in Guatemala to 69 percent in Colombia.

Women who do not intend to use a method *and* who are not sexually active probably should be regarded as reducing the actual amount of unmet need in the population, although as noted above, some of this inactivity can be attributed to pregnancy or the postpartum period. In the DHS-I countries, this portion of the female population accounts for about a third of estimated total unmet need.

Considering the various uncertainties of measurement, there is no way of determining the actual level of unmet need. However, it seems clear that the estimates here are on the high side, given the fact that a large proportion of women included in the estimates are not likely to be exposed to the risk of pregnancy, as well as for the reasons advanced by Bongaarts which were summarized earlier.

Prior Use of Family Planning

In most of the countries in DHS-I, the majority of women with an unmet need have never used contraception. There are several exceptions to this generalization, however. In Brazil, Colombia, the Dominican Republic, Thailand, and Trinidad and Tobago, the same or higher proportions of women have ever used a contraceptive method as have not. The proportions in need who have never used a method are especially high in Bolivia and Guatemala, as well as in many of the sub-Saharan countries.

Knowledge of Methods

Ignorance of contraception plays a major role in about a third of the countries. It is particularly prominent in Mali, where half of all women in need report not knowing any method. The proportion is also high in Bolivia and Guatemala.

7 Overall Demand for Family Planning and Its Covariates

7.1 COVARIATES OF TOTAL DEMAND

The next step is to examine how the demand for family planning varies with age, number of children, residence, and education. To reiterate, *demand* is defined here as the sum of contraceptive prevalence and the unmet need for family planning. Table 7.1 analyzes total demand, while Tables 7.2 and 7.3 examine its component parts, spacing and limiting.

The association of demand with age is more clearly discernible when the spacing and limiting components are separated, as in the analysis of unmet need. The demand for family planning for the purpose of spacing declines with age throughout all of the countries included here, whereas exactly the reverse is true for the demand for limiting births.

Not surprisingly, the relationship between the demand for family planning and the woman's number of children is positive both for total demand and for the demand for limiting births, but, as with age, the relationship is negative in many countries for the demand for spacing. The demand for limiting births displays the stronger pattern. In the sub-Saharan countries, this demand does not appear much before the women have had four or more children, but in the other countries demand jumps abruptly when women reach two births and increases continuously thereafter.

Although there appears to be a greater demand for family planning in urban than in rural areas, the main impression left by

Differentials in total demand for family planning

Table 7.1 Total demand for family planning by characteristics of currently married women, selected background characteristics, Demographic and Health Surveys, 1985-1989

Country	Age Group						Number of Children					Residence		Level of Education			
	15-19	20-24	25-29	30-34	35-39	40+	0	1	2	3	4+	Urban	Rural	No Education	Pri-ary	Second-ary	Higher
SUB-SAHARAN AFRICA																	
Botswana	50.7	65.2	65.5	64.1	69.8	48.4	30.3	42.3	62.6	68.5	69.8	66.8	60.1	53.5	64.1	—72.0—	
Burundi	26.9	33.9	33.0	32.6	33.1	37.0	17.7	18.7	35.2	30.6	40.6	55.4	33.1	31.1	44.2	—66.0—	
Ghana	52.3	49.0	47.5	50.2	51.3	41.9	24.1	44.8	42.4	49.7	54.0	55.0	45.1	40.8	54.2	—56.5—	
Kenya	53.8	63.3	65.9	69.3	69.7	59.2	33.7	41.3	61.2	60.3	72.6	64.1	64.9	54.8	68.6	—74.3—	
Liberia	45.3	38.9	39.2	43.2	40.3	31.0	22.5	31.0	32.0	35.9	52.9	49.2	33.5	32.6	48.2	—71.8—	
Mali	41.0	27.0	24.3	26.2	25.6	24.8	25.2	23.7	21.2	24.7	33.6	42.4	22.6	24.7	42.8	—80.3—	
Togo	45.0	53.5	50.2	54.0	56.3	51.1	36.4	47.6	48.4	50.7	58.6	63.1	48.1	45.3	66.1	—72.3—	
Uganda	30.2	27.7	32.3	31.4	39.0	33.1	10.5	23.8	25.4	30.0	41.6	48.2	30.6	26.3	34.7	—53.0—	
NORTH AFRICA																	
Egypt	31.9	55.4	70.0	78.0	82.3	53.7	16.5	48.6	69.6	75.0	76.3	73.6	57.8	58.7	71.8	73.4	73.3
Morocco	42.2	52.7	65.3	68.9	71.7	56.5	22.4	51.0	57.9	65.3	74.3	73.1	54.1	58.1	79.5	81.4	87.0
Tunisia	43.0	59.7	69.9	79.1	80.7	68.5	18.6	53.4	80.4	78.2	80.2	77.6	63.9	67.1	76.9	81.8	80.9
ASIA																	
Indonesia	54.9	66.8	73.5	77.0	71.5	45.0	26.1	60.2	71.3	75.8	70.1	69.1	63.6	49.7	67.1	77.7	77.7
Sri Lanka	49.2	71.2	79.7	82.3	84.1	70.7	20.9	67.0	83.6	89.4	86.3	77.5	77.1	70.6	78.0	78.6	76.8
Thailand	65.9	75.8	80.6	83.5	83.4	68.7	43.2	70.5	85.8	89.0	80.8	79.0	77.0	70.7	78.5	76.3	72.9
LATIN AMERICA/CARIBBEAN																	
Bolivia	60.4	71.7	82.4	85.3	74.1	48.3	28.7	57.7	73.1	79.6	76.3	73.7	67.5	59.6	71.8	78.8	76.0
Brazil ^a	73.2	76.2	84.0	88.7	84.8	79.4	44.1	72.6	88.3	94.8	89.9	82.0	84.0	79.0	83.3	82.2	81.0
Colombia	55.5	83.1	87.5	88.8	90.4	72.1	34.8	73.8	90.9	91.4	87.5	84.9	77.9	78.3	81.0	86.8	84.4
Dominican Republic	59.5	73.0	76.3	82.2	77.4	58.3	27.0	64.8	75.6	84.6	81.6	71.6	73.0	66.7	71.6	77.3	71.0
Ecuador	51.3	68.6	78.2	79.7	76.6	61.8	32.3	63.9	76.4	76.7	78.0	75.7	66.9	55.4	71.2	77.2	80.5
El Salvador	65.7	74.0	82.7	84.0	79.2	56.6	30.0	71.4	81.1	82.3	75.3	78.4	69.3	68.4	74.8	82.7	81.3
Guatemala ^a	34.8	46.2	53.0	62.2	61.1	54.3	20.3	36.5	57.2	58.6	60.5	69.1	46.4	44.3	58.9	77.5	74.7
Perú	70.6	82.5	88.5	88.9	83.8	64.2	47.1	72.6	84.7	86.9	81.2	83.0	74.4	70.6	77.5	85.8	89.6
Trinidad&Tobago	81.8	83.7	76.6	75.8	72.3	52.0	49.3	69.8	78.4	81.0	76.1	72.1	72.2	59.3	68.4	76.5	83.7

Note: Total demand includes method failures, current use and unmet need. Estimates are not available for Mexico and Zimbabwe.

^a Figures are for women 15-44.

Differentials in demand for spacing

Table 7.2 Demand for spacing among of currently married women, selected background characteristics, Demographic and Health Surveys, 1985-1989

Country	Age Group						Number of Children					Residence		Level of Education			
	15-19	20-24	25-29	30-34	35-39	40+	0	1	2	3	4+	Urban	Rural	No Edu- cation	Pri- mary	Second- ary	Higher
SUB-SAHARAN AFRICA																	
Botswana	36.8	56.1	47.1	41.7	31.2	13.7	26.6	38.9	42.6	45.2	34.7	39.1	37.1	33.1	38.2	—	44.1
Burundi	24.7	32.7	31.0	23.9	15.8	9.7	17.0	18.7	32.8	25.7	20.3	32.5	23.2	21.8	31.0	—	42.4
Ghana	50.0	46.4	41.8	35.6	27.2	12.1	17.6	44.4	39.1	42.6	26.5	36.0	33.4	27.8	39.6	—	41.9
Kenya	50.3	53.4	40.6	28.3	19.9	6.1	32.0	39.6	46.9	39.1	22.9	35.6	30.1	21.2	33.1	—	43.5
Liberia	33.2	31.0	27.4	22.3	16.8	9.7	21.6	24.9	25.8	25.2	21.1	29.7	19.6	18.8	29.1	—	46.3
Mali	38.9	24.7	22.0	18.7	16.6	10.5	23.8	22.7	19.0	20.8	19.7	33.8	17.0	18.5	36.3	—	59.2
Togo	44.1	51.1	45.6	37.4	27.8	12.5	35.9	46.8	45.7	42.8	26.7	43.0	34.0	29.4	50.6	—	56.2
Uganda	28.9	26.3	27.3	21.0	17.5	6.0	8.0	22.8	23.3	26.1	21.5	34.6	20.9	16.7	24.7	—	40.7
NORTH AFRICA																	
Egypt	29.6	34.5	24.3	14.2	6.9	1.8	15.9	42.1	26.3	13.0	5.8	16.0	16.3	13.2	14.8	27.0	25.6
Morocco	40.3	42.2	38.3	27.5	16.2	5.2	21.9	44.0	38.0	32.9	15.9	28.0	23.8	23.9	31.4	36.3	42.4
Tunisia	41.4	46.3	40.5	26.7	13.0	3.2	18.0	47.5	46.7	28.7	10.4	24.5	24.1	18.6	32.8	29.7	31.6
ASIA																	
Indonesia	51.8	54.2	42.1	23.5	11.2	3.1	25.9	54.3	39.3	21.6	9.9	25.7	28.9	19.4	29.3	34.3	37.8
Sri Lanka	40.0	45.9	34.4	20.4	11.4	2.3	17.8	53.1	28.9	10.4	3.2	19.7	20.7	12.2	14.3	21.9	29.7
Thailand	53.0	49.7	33.2	15.2	7.3	1.3	37.3	49.4	18.9	8.8	3.4	22.6	21.4	13.4	21.5	29.0	27.8
LATIN AMERICA/CARIBBEAN																	
Bolivia	28.7	33.3	21.9	18.7	8.9	2.7	19.3	32.5	25.7	16.2	5.8	18.1	14.0	9.6	14.5	23.5	24.1
Brazil ^a	51.7	47.0	32.0	17.3	6.4	3.5	34.0	49.2	22.6	11.6	7.1	21.4	27.2	15.1	22.7	31.7	21.4
Colombia	37.8	40.9	29.2	18.3	9.8	3.2	28.1	46.5	27.9	12.7	5.7	22.5	17.7	8.0	17.2	29.5	37.7
Dominican Republic	45.3	42.4	25.1	11.8	3.7	0.9	21.7	51.0	29.6	10.6	5.0	21.0	18.0	15.6	15.9	32.3	30.3
Ecuador	32.9	38.8	33.9	18.8	12.7	4.1	27.1	44.4	30.8	16.1	10.3	23.5	21.4	18.1	18.7	29.6	32.1
El Salvador	43.8	40.7	25.9	13.3	11.8	4.1	23.2	50.2	27.8	11.3	11.4	21.2	22.9	18.8	21.6	30.4	31.8
Guatemala ^a	27.3	31.3	25.6	20.5	13.4	7.9	16.4	30.3	30.9	20.3	16.1	21.5	21.6	20.5	21.4	27.4	34.0
Perú	42.2	40.2	28.6	21.4	10.0	3.8	36.8	49.3	26.9	17.2	6.4	20.7	18.3	12.2	15.5	27.7	28.7
Trinidad&Tobago	66.5	54.7	37.2	21.8	11.7	1.6	44.1	53.0	29.0	14.5	8.5	30.5	25.1	11.6	18.3	38.8	38.8

Note: Estimates are not available for Mexico and Zimbabwe.

^a Figures are for women 15-44.

these comparisons is the lack of any sharp distinctions. Demand is clearly greatest in urban areas in Burundi, Guatemala, Mali, and Uganda, where some 20 percentage points or so separate the rural and urban areas. Elsewhere the difference is smaller or nonexistent, and in some countries the pattern is reversed.

A direct association between education and the demand for family planning is the predominant pattern, but it is weak or nonexistent in several of the more developed countries (e.g., Brazil, Colombia, the Dominican Republic, Sri Lanka, and Thailand). The direct association is more pervasive in the sub-Saharan countries. In most countries, the demand for spacing shows a stronger relationship with education than does the demand for limiting.

7.2 COVARIATES OF THE SATISFACTION OF TOTAL DEMAND

Table 4.2 showed the extent to which the total demand for family planning is being satisfied, dividing contraceptive prevalence by the sum of prevalence and unmet need. This percentage of demand satisfied varied considerably, ranging from 15 percent in Uganda to 85 percent in Thailand. Table 7.4 analyzes the characteristics associated with the satisfaction of the demand for family planning. There is a modest direct association with age in most countries except in sub-Saharan Africa.⁶ Residence displays a more universal pattern: demand has been satisfied more in urban than rural areas. There is also a tendency for the satisfaction of demand to rise with the level of the woman's education, a relationship that is pronounced in many countries.

⁶ Parity is not shown in this table because it shows little association with the satisfaction of total demand.

Differentials in demand for limiting

Table 7.3 Demand for limiting among currently married women, selected background characteristics, Demographic and Health Surveys, 1985-1989

Country	Age Group						Number of Children					Residence		Level of Education			
	15-19	20-24	25-29	30-34	35-39	40+	0	1	2	3	4+	Urban	Rural	No Edu- cation	Pri- mary	Second- ary	Higher
SUB-SAHARAN AFRICA																	
Botswana	12.9	6.2	15.1	20.8	38.7	34.1	3.7	2.6	17.2	21.8	33.1	25.6	21.4	18.9	23.6	—27.0—	
Burundi	2.2	1.2	2.0	8.7	17.3	27.3	0.6	0.1	2.3	4.9	20.3	22.9	9.9	9.4	13.2	—23.5—	
Ghana	2.3	2.5	5.7	14.7	24.1	29.7	6.5	0.4	3.3	7.1	27.5	19.0	11.7	13.0	14.7	—14.5—	
Kenya	3.5	10.0	25.3	40.9	49.8	53.1	1.7	1.7	14.3	21.2	49.7	28.5	34.8	33.6	35.5	—29.3—	
Liberia	12.1	7.8	11.9	20.9	23.5	21.3	0.8	6.2	6.2	10.7	31.8	19.4	13.8	13.8	19.2	—25.5—	
Mali	2.1	2.3	2.3	7.5	9.1	14.3	1.4	1.1	2.2	3.9	13.8	8.6	5.6	6.2	6.5	—16.5—	
Togo	0.9	2.4	4.6	16.6	28.5	38.5	0.5	0.8	2.6	7.9	31.9	20.1	14.1	15.9	15.5	—16.1—	
Uganda	1.3	1.4	5.0	10.4	21.6	27.1	2.6	1.0	2.1	3.9	20.0	13.7	9.7	9.7	10.0	—12.3—	
NORTH AFRICA																	
Egypt	1.9	19.1	43.2	61.3	73.4	51.2	0.6	5.0	41.4	60.1	68.3	55.5	40.1	44.0	55.3	43.6	44.8
Morocco	1.1	8.5	23.4	37.5	51.7	49.8	0.5	5.1	17.6	29.0	54.6	41.6	27.9	31.5	44.0	41.9	42.5
Tunisia	0.0	11.9	26.9	50.2	66.0	65.0	0.3	4.0	31.3	48.0	68.4	51.1	38.6	47.4	42.1	49.5	43.6
ASIA																	
Indonesia	2.7	12.0	29.9	51.6	59.8	41.7	0.3	5.5	31.2	53.0	58.9	42.5	33.8	29.7	36.8	42.5	38.8
Sri Lanka	5.9	21.3	41.9	59.5	71.9	68.3	1.6	10.7	51.5	77.9	82.1	57.4	54.2	57.5	62.3	54.4	44.4
Thailand	12.2	25.1	46.9	67.7	75.7	67.2	5.4	20.3	66.7	79.9	76.7	55.8	55.2	57.0	56.5	46.5	44.1
LATIN AMERICA/CARIBBEAN																	
Bolivia	27.9	32.6	55.1	61.1	63.3	44.3	5.9	21.9	43.1	59.0	67.0	52.0	49.6	47.4	53.6	50.1	48.5
Brazil ^a	18.1	26.4	49.4	68.5	76.9	75.5	7.9	21.5	63.5	81.1	80.5	59.0	53.1	62.5	58.4	48.6	56.7
Colombia	13.7	36.0	54.8	68.8	79.4	68.7	4.0	23.3	59.6	76.6	80.1	60.2	56.7	66.6	61.5	53.9	46.7
Dominican Republic	10.3	27.5	48.8	67.7	73.6	57.2	2.3	11.4	43.4	72.1	75.5	48.8	52.9	50.1	54.0	42.1	37.0
Ecuador	15.6	27.0	40.2	58.7	62.2	57.3	1.9	15.9	43.8	58.8	65.5	49.8	43.1	37.0	50.5	44.8	43.0
El Salvador	20.1	32.5	55.8	70.6	67.4	52.6	6.3	19.0	53.1	70.7	63.7	56.7	45.8	49.5	52.5	51.2	49.5
Guatemala ^a	7.2	13.7	25.8	40.8	47.3	46.4	3.4	5.8	23.8	37.4	44.0	46.0	24.3	23.8	36.3	46.5	34.3
Perú	23.8	33.9	52.9	63.3	70.7	59.4	4.0	16.7	53.8	66.5	70.9	58.2	51.3	56.2	57.4	53.7	54.4
Trinidad&Tobago	11.0	24.2	37.1	52.3	59.1	50.4	3.5	13.8	47.7	63.5	65.9	39.7	44.7	36.6	48.4	35.1	44.9

Note: Estimates are not available for Mexico and Zimbabwe.

^a Figures are for women 15-44.

Differentials in satisfaction of demand for family planning

Table 7.4 Percentage of demand for family planning satisfied among currently married women, selected background characteristics, Demographic and Health Surveys, 1985-1989

Country	Age Group						Residence		Level of Education				Total
	15-19	20-24	25-29	30-35	35-39	40+	Urban	Rural	No Edu- cation	Pri- mary	Second- ary	Higher	
SUB-SAHARAN AFRICA													
Botswana	34.3	40.8	58.6	56.5	54.9	57.6	63.6	49.1	38.7	54.1	-72.6-		53.6
Burundi	16.0	26.8	29.1	31.3	21.5	19.2	46.0	24.5	24.8	25.1	-44.8-		25.8
Ghana	8.8	22.7	27.8	28.7	29.6	31.7	35.6	22.0	20.8	28.0	-50.8-		26.8
Kenya	24.2	31.8	39.6	45.5	49.1	47.1	47.6	40.4	33.4	40.5	-54.5-		41.5
Liberia	4.4	13.9	19.6	18.7	12.9	26.1	23.6	9.9	8.6	15.1	-37.3-		16.4
Mali	21.0	20.4	19.8	21.4	13.3	4.8	27.6	10.2	11.3	30.1	-73.1-		17.0
Togo	10.4	25.0	29.3	24.4	20.4	19.6	30.0	19.5	18.5	23.4	-46.1-		23.2
Uganda	5.6	10.1	13.3	18.8	20.8	24.5	37.3	11.8	7.2	16.7	-32.8-		15.2
NORTH AFRICA													
Egypt	17.2	44.8	54.4	61.5	65.4	68.9	71.9	43.1	47.5	64.6	71.8	77.9	58.4
Morocco	40.8	49.7	57.4	64.7	61.8	64.6	73.6	46.6	54.6	75.2	81.7	88.0	59.1
Tunisia	26.3	59.5	64.4	71.2	74.6	78.2	79.4	54.9	63.8	75.3	84.6	80.6	70.0
ASIA													
Indonesia	46.6	71.0	74.6	77.8	78.5	75.1	79.3	71.9	66.4	73.5	82.2	82.9	73.8
Sri Lanka	42.5	61.8	74.4	83.1	88.5	92.6	84.3	81.1	77.2	82.7	81.8	81.5	81.3
Thailand	65.7	75.7	86.2	90.3	88.4	86.8	86.5	84.8	78.9	85.4	87.3	89.7	85.0
LATIN AMERICA/CARIBBEAN													
Bolivia	27.6	33.5	43.9	48.5	49.8	46.2	55.0	29.9	20.0	38.0	62.6	79.1	43.4
Brazil ^a	67.5	74.7	82.6	86.0	83.3	84.4	86.5	70.1	60.6	82.5	90.9	91.6	81.6
Colombia	54.2	73.0	81.5	84.6	85.1	82.5	84.6	71.2	67.2	78.4	85.6	96.4	80.1
Dominican Republic	43.0	53.6	68.5	75.8	83.9	84.6	74.2	64.4	54.1	69.6	73.4	82.5	69.9
Ecuador	31.0	51.2	61.5	69.1	72.1	68.6	72.0	50.1	33.4	58.7	73.1	83.4	62.5
El Salvador	33.6	48.1	65.7	75.0	71.7	78.3	74.7	51.1	53.5	65.1	76.3	87.7	64.1
Guatemala ^a	15.5	34.4	40.0	49.7	50.9	51.4	63.4	29.7	22.1	50.8	81.2	78.4	43.3
Perú	33.7	52.4	60.8	64.8	66.1	58.7	73.5	34.0	27.6	53.2	75.5	82.5	58.8
Trinidad&Tobago	54.3	69.5	72.1	76.6	78.4	88.1	76.3	73.4	56.2	73.2	76.1	87.8	74.2

Note: Estimates are not available for Mexico and Zimbabwe.

^a Figures are for women 15-44.

8 Trends in Unmet Need and in Total Demand

It is unclear whether unmet need increased, decreased, or remained about the same over the decade from the late 1970s to the late 1980s. While the supply of services increased, the demand for family planning also rose. Almost all of the countries in the group available for trend analysis (that is, the 13 countries in which both WFS and DHS surveys were carried out) experienced substantial declines in fertility during this period. Only Ghana showed little change over the period. Two of the important intermediate factors involved in these declines also relate to unmet need: changes in contraceptive prevalence and in reproductive preferences.

The data that can be assembled to measure change in unmet need are less than ideal because WFS did not routinely collect information on spacing preferences or on postpartum amenorrhea. The second of these problems has generally been handled by inferring amenorrhea for women who had been breastfeeding for less than one year. There is no solution to lack of data on spacing intentions, however; therefore, only the unmet need for limiting births can be utilized for this trend analysis. The results are shown in Figure 8.1.

The proportion of married women with an unmet need for family planning to terminate childbearing declined dramatically in Colombia, Sri Lanka, and Thailand, all of which experienced steep drops in fertility during this period. However, there was little decline in unmet need in many other countries, such as Indonesia and Peru, where fertility also dropped sharply.⁷ Unmet

need increased in the two sub-Saharan countries represented, especially in Kenya where it more than doubled. Kenya has experienced a larger increase in the proportion of women who want no more children than in the contraceptive prevalence rate.

Figure 8.2 depicts trends in the total demand for limiting births, that is, the sum of the percentage using family planning methods to terminate fertility and the percentage with an unmet need for limiting. Demand increased over the decade in every country.

These statistics can also be used to estimate trends in the percentage of total demand for limiting births that has been satisfied. In all 13 countries there has been an increase in this measure of success (Figure 8.3). In several countries, notably Colombia and the three Asian countries, this index of success reaches about 85 percent. The largest increases in demand satisfaction are observed in Kenya, Sri Lanka, and Thailand.

It is important to emphasize that the focus here is exclusively on the *proportion* of women in need, not their absolute number. In these fast-growing populations, even in countries where the proportion of women in need is on the decline, the *number* of women needing family planning services probably is growing. In countries where the relative unmet need is on the rise, the number of women to be served is increasing even more rapidly.

⁷ For this comparison, certain provinces in Indonesia which were covered in the DHS survey but not in the WFS survey have been excluded.

Figure 8.1 Trends in the unmet need for limiting, selected WFS and DHS surveys, late 1970s and late 1980s

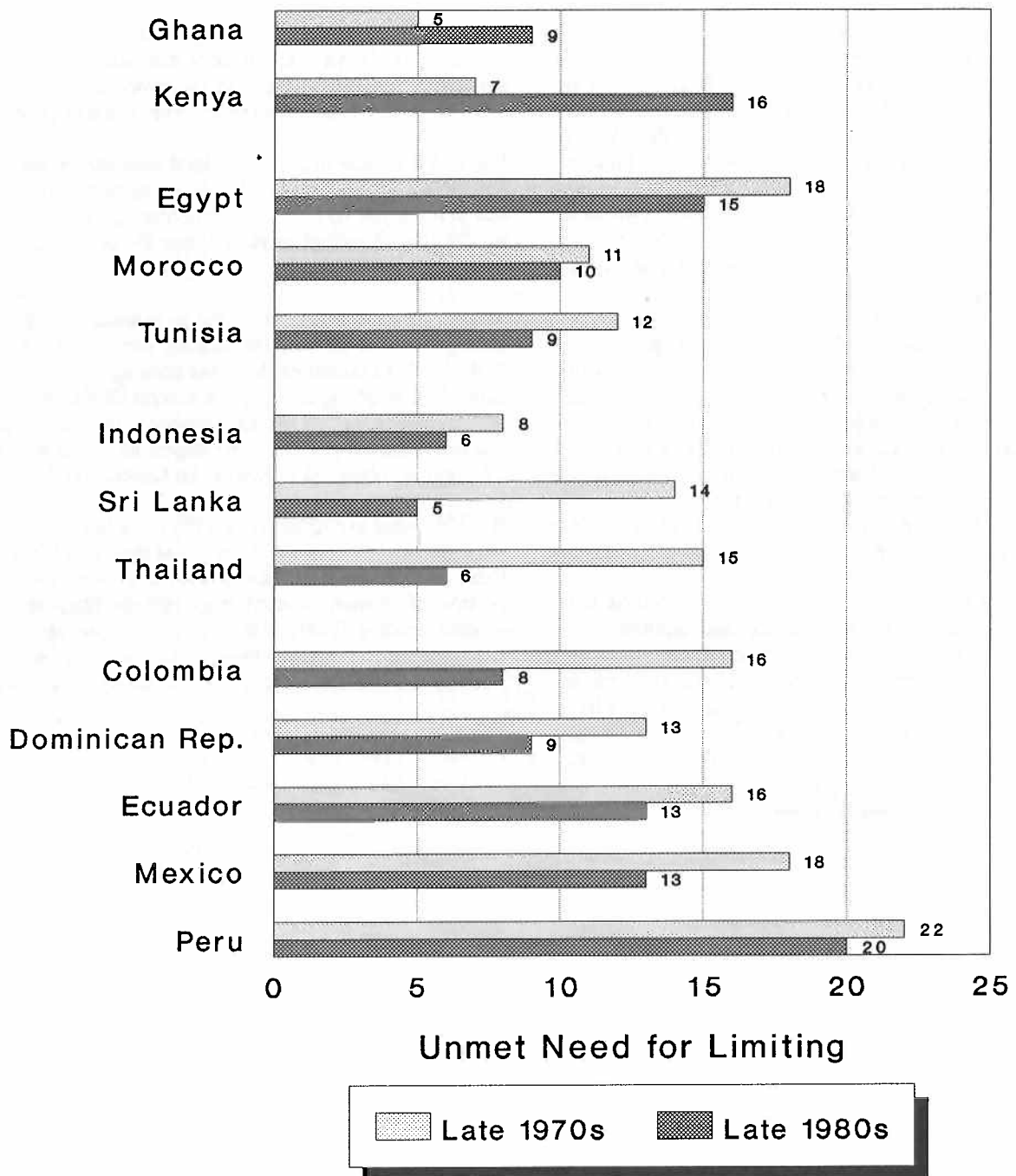


Figure 8.2 Trends in the demand for limiting, selected WFS and DHS surveys, late 1970s and late 1980s

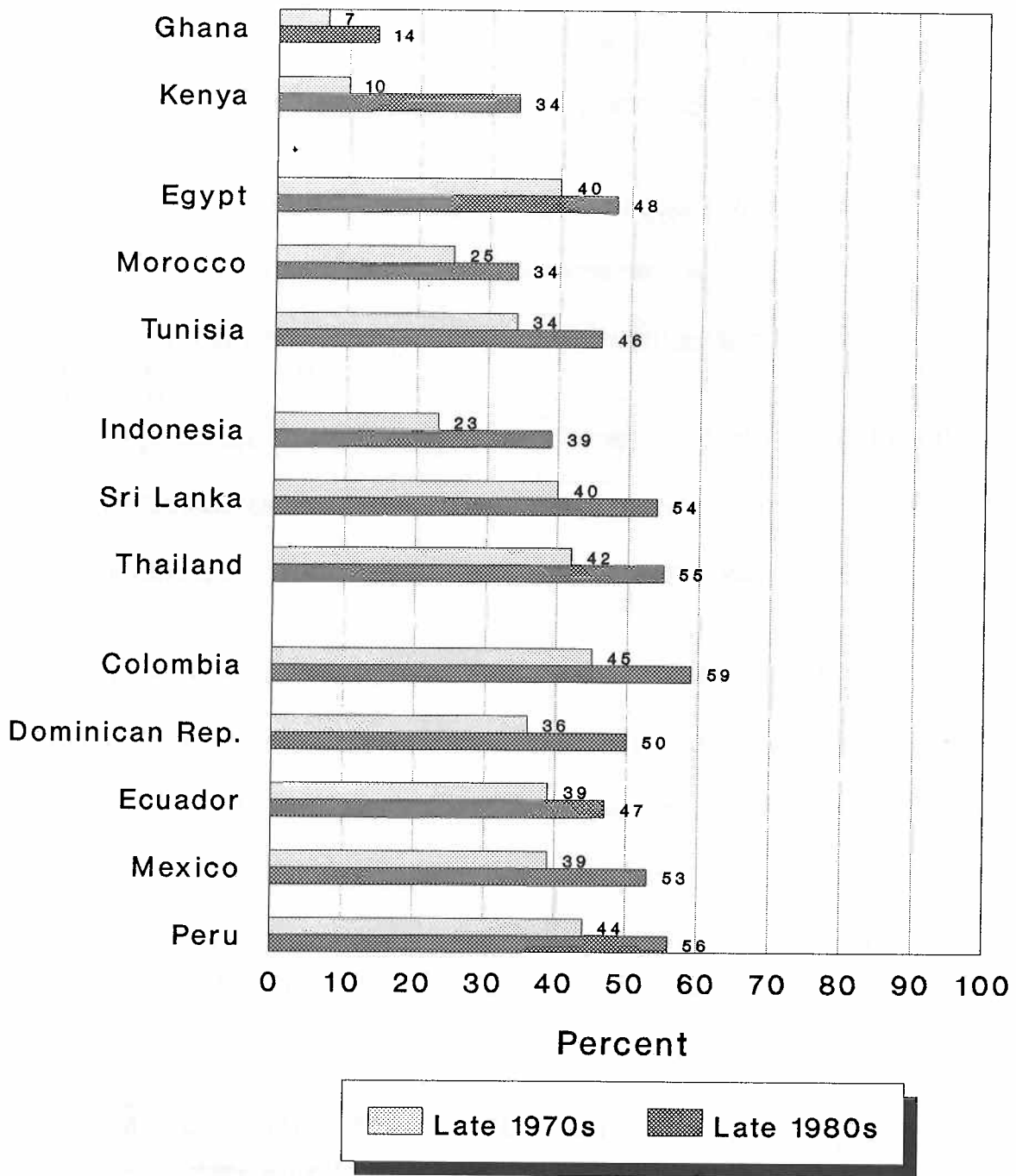
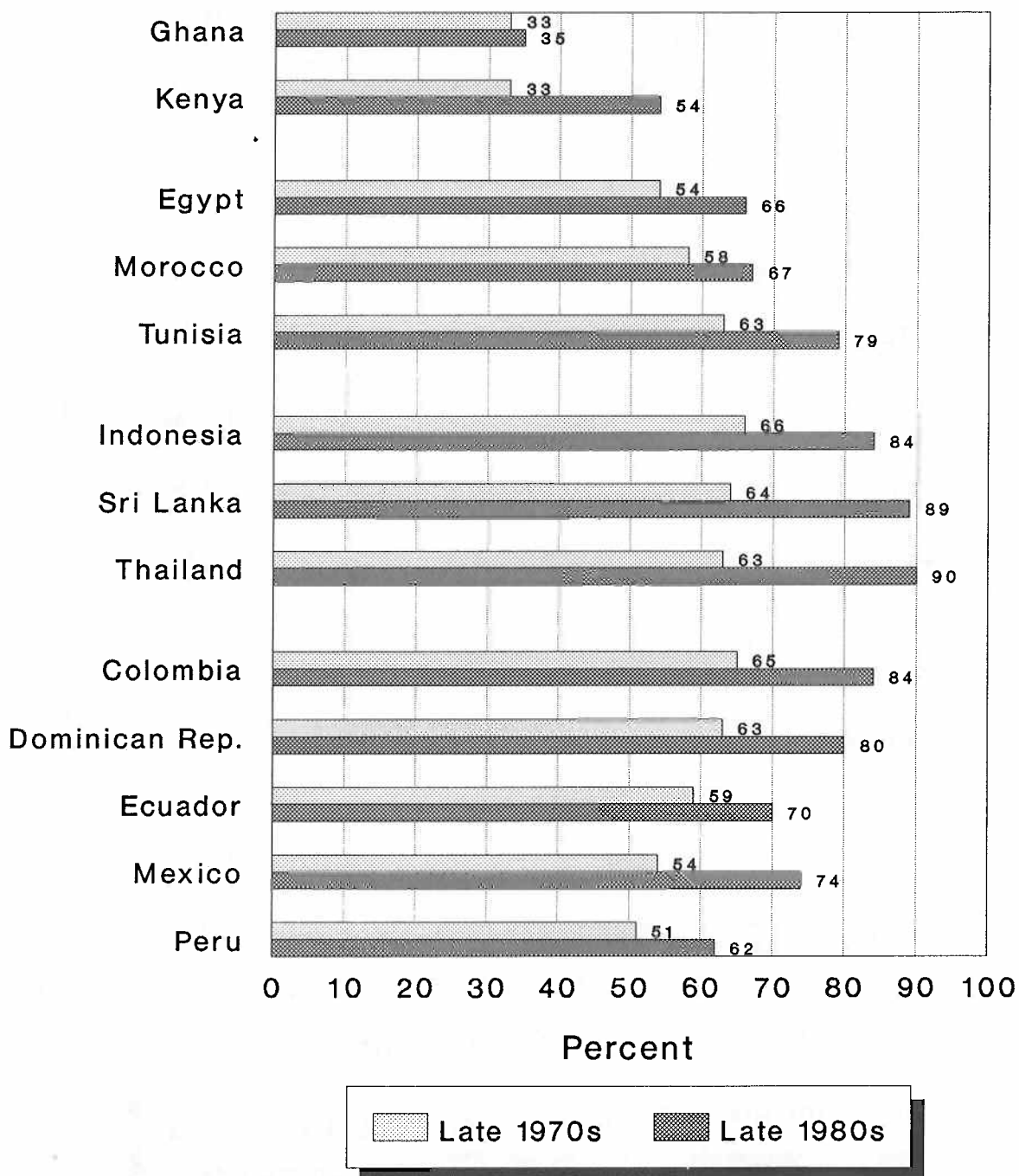


Figure 8.3 Trends in satisfaction of total demand (for limiting), selected DHS and WFS surveys, late 1970s and late 1980s



9 Unmet Need and the Fertility Transition

These trend data do not fit the fertility transition model with any degree of precision, but it seems clear that once a norm of fertility limitation develops, the need for family planning accelerates and can frequently outpace the supply of services. At a general level, four stages can be identified when unmet need is visualized in relation to the stages of the fertility transition:

- (1) The pretransition, high fertility stage during which there is little interest in regulating fertility and commensurately little unmet need;
- (2) The early transition stage, when marital fertility begins to decline as motivation to control fertility emerges but increases faster than the availability of methods. Unmet need grows rapidly in this stage.
- (3) The late transition stage during which supply of and demand for family planning both grow rapidly, approaching balance, while fertility declines sharply; and

- (4) The final stage of low fertility when unmet need has become very small.

The different stages in the fertility transition are characterized by the emergence of urban-rural and socioeconomic differentials in unmet need with a subsequent widening of such differentials as the demand for family planning increases more rapidly in the modernized sector and, later, a narrowing of such differentials as fertility control spreads and fertility declines.

Approximations of these stages can be inferred from comparisons in sub-Saharan Africa, North Africa, Latin America, and Asian countries such as Thailand and Sri Lanka. However, the model appears to be adequate only for describing the demand for *limiting* births. Although most of the world (including nineteenth century European populations) initiated contraception principally for limiting purposes—the sub-Saharan countries began the family planning transition by using contraception principally for *spacing* births.

10 Summary and Conclusions

The demand for family planning encompasses two components: current use of contraception and nonuse among women who would like to regulate their fertility. This report has focused on the second, less easily measured component, that is, the unmet need for family planning. Unmet need, as well as the total demand for family planning, has been estimated for 25 of the countries included in the first phase of the Demographic and Health Surveys program, thus permitting international comparisons of the extent of the demand, its constituent parts, and its program implications.

In most of the Latin American and Asian countries under review, the total demand for family planning approaches the level in developed countries. In many of these populations, however, unmet need makes up a considerable proportion of the total demand. Thus, the percentage of demand that is satisfied remains far below what might be expected in these more modernized of the developing countries in another five to ten years.

The demand for family planning is much lower in most of the African countries, although there are many exceptions, including the three North African countries (Egypt, Morocco, and Tunisia), as well as Botswana, Kenya, and Zimbabwe south of the Sahara. In all of the sub-Saharan countries but Kenya, the demand for family planning for spacing purposes still exceeds that for limiting births; in all other countries, limiting births is the primary reason for family planning.

Unmet need is lowest in Brazil, Colombia, Indonesia, Sri Lanka, Thailand, and Trinidad and Tobago, where it ranges from 11 to 16 percent of married women. In the remaining 20 countries, from 19 to 40 percent of married women are estimated to have an unmet need for family planning. In many countries, especially in sub-Saharan Africa, the main need is for methods to delay the next birth. The unmet need for limiting births is more balanced with that for spacing in other countries, although in Bolivia and Peru it is the main component of unmet need.

Both unmet need and the total demand for family planning are associated with age and number of children in the expected directions: there are positive associations with the limiting component and negative associations with the spacing component.

The associations with urban-rural residence and with women's education are more varied. Unmet need is consistently greater in rural areas in all but the sub-Saharan countries, where the picture is mixed. Total demand for family planning, which includes contraceptive use as well as unmet need, is greater in urban areas, but the differences are generally small. Unmet need, especially for limiting births, declines with increasing education, although the association is weak in sub-Saharan Africa. The total demand for family planning increases with education in all countries except those in which the fertility transition is most advanced, where it is uniformly high in all educational strata.

Of the women classified as being in need of family planning, between a quarter and a half are currently pregnant or amenorrheic, while about a fifth, on average, are sexually inactive. Substantial proportions of those in need intend to use a method at some time in the future. Most of the women, except in Mali, report knowing at least one modern method, although large proportions in many countries have never used any method. Because some women classified as having an unmet need may not be regularly exposed to the risk of conception, as well as for various methodological reasons, the levels of unmet need and demand estimated here probably err on the high side.

It was possible to evaluate trends in unmet need and the total demand for family planning only for 13 countries that participated in both the WFS and DHS surveys and, because of data restrictions in the WFS, only for birth limitation, not for spacing. The unmet need for limiting births declined from the late 1970s to the late 1980s in most of the countries. In Ghana and in Kenya, however, unmet need actually increased considerably over the decade, as women's preferences to terminate childbearing outpaced the increases in contraceptive prevalence. It seems clear from these data that when a norm of fertility limitation develops, the need for family planning can frequently increase more rapidly than its availability. It is important to remember that even if the proportion with unmet need is stable or declining, the actual number of women who need to be served may be increasing because of rapid population growth in these countries.

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Appendix A

Estimates of Unmet Need and the Demand for Family Planning by Country and Regions within Countries

In order to provide information of operational value for program administrators and policymakers in the countries in which DHS surveys have been conducted, estimates of unmet need and the demand for family planning for the regions within each country are presented in Tables A.1-A.4. Specifically, the tables present estimates of the demand for family planning, unmet

need, and current use of contraception, in each case subdivided into spacing and limiting components. The tables also include the percentage of total demand satisfied. It should be emphasized that there will be a considerable amount of sampling error in these regional estimates because of the smaller numbers involved.

Table A.1 Demand for family planning by country and regions within countries: sub-Saharan Africa

Total demand for family planning and its components for currently married women, by country and regions within countries, sub-Saharan Africa, Demographic and Health Surveys, 1986-1989

Country	Demand for Contraception			Unmet Need			Current Use			Percent of Total Demand Satisfied
	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	
<u>BOTSWANA</u>	61.6	38.6	23.0	26.9	19.4	7.4	33.0	17.9	15.1	53.6
Urban	65.9	40.3	25.6	22.2	14.9	7.3	41.6	23.7	17.9	63.2
Villages over 2,000 population	62.9	39.8	23.0	26.0	20.6	5.4	35.0	17.9	17.1	55.6
Villages under 2,000 population	59.0	39.0	20.0	34.3	21.9	12.4	22.9	16.2	6.7	38.7
Scattered population	56.2	35.1	21.0	30.6	22.5	8.1	24.3	12.0	12.3	43.3
<u>BURUNDI</u>	33.8	23.5	10.3	25.1	17.7	7.4	8.7	5.8	2.9	25.8
Imbo	47.6	31.0	16.6	30.3	20.9	9.4	17.3	10.1	7.2	36.3
Mumirwa	37.3	23.1	14.2	29.7	19.7	10.0	7.6	3.4	4.2	20.3
Mugamba	32.5	21.8	10.7	23.1	15.0	8.0	9.5	6.8	2.7	29.1
Plateaux Centraux	32.6	24.1	8.5	23.9	17.9	6.0	8.7	6.2	2.5	26.6
Depressions	30.1	19.6	10.5	25.0	15.8	9.2	5.2	3.8	1.4	17.2
<u>GHANA</u>	48.1	34.2	13.9	35.2	26.2	9.0	12.9	8.0	4.9	26.8
Western	44.3	34.6	9.7	36.0	29.9	6.1	8.2	4.7	3.6	18.6
Central	42.1	30.2	11.9	32.4	24.7	7.7	9.7	5.5	4.3	23.1
Greater Accra	59.3	35.0	24.3	32.1	21.4	10.7	27.2	13.6	13.6	45.9
Eastern	52.2	36.1	16.2	40.9	29.4	11.5	11.4	6.7	4.7	21.8
Volta	51.8	35.4	16.4	37.2	26.7	10.5	14.6	8.7	5.9	28.2
Ashanti	49.0	33.5	15.5	38.9	26.6	12.3	10.1	6.9	3.3	20.7
Brong Ahafo	50.6	39.0	11.6	38.7	30.8	7.9	12.0	8.2	3.7	23.6
Upper West/East/Northern	35.1	30.1	5.1	24.5	20.8	3.7	10.7	9.3	1.4	30.4
<u>KENYA</u>	64.9	31.0	33.9	38.0	22.4	15.5	26.9	8.6	18.3	41.5
Nairobi	66.4	31.4	35.0	32.8	19.3	13.6	33.5	12.1	21.4	50.5
Central	79.0	29.1	50.0	39.5	19.7	19.8	39.5	9.3	30.2	50.0
Coast	46.3	28.1	18.2	28.1	21.1	7.0	18.1	7.0	11.2	39.2
Eastern	73.8	28.5	45.3	33.6	15.4	18.2	40.2	13.1	27.1	54.5
Rift Valley	65.1	31.1	34.0	35.5	21.2	14.3	29.6	9.9	19.7	45.5
Western	62.2	39.1	23.1	48.6	35.0	13.5	13.7	4.1	9.6	22.0
<u>LIBERIA</u>	39.3	23.4	15.8	32.8	19.8	13.0	6.4	3.6	2.9	16.4
Sinoe	35.0	21.3	13.6	30.6	19.1	11.5	4.4	2.3	2.1	12.5
Grand Gedeh	35.8	22.7	13.1	32.8	21.4	11.4	3.0	1.3	1.7	8.4
Montserrado	49.5	30.7	18.8	37.5	22.9	14.6	12.0	7.9	4.2	24.3
Rest of country	36.3	21.1	15.3	31.4	18.7	12.7	4.9	2.4	2.5	13.5

Table A.1—Continued

Country	Demand for Contraception			Unmet Need			Current Use			Percent of Total Demand Satisfied
	Total	For Spac- ing	For Limit- ing	Total	For Spac- ing	For Limit- ing	Total	For Spac- ing	For Limit- ing	
MALI	27.6	21.2	6.4	22.9	17.2	5.7	4.7	4.0	0.7	17.0
Kayes/Koulikoro	27.2	21.2	6.0	23.4	17.9	5.4	3.8	3.3	0.5	14.0
Sikasso/Segou	26.8	20.0	6.8	22.7	16.2	6.5	4.1	3.8	0.3	15.4
Mopti/Gao/Tombouctou	21.2	16.1	5.2	19.3	14.7	4.6	1.9	1.4	0.6	9.2
Bamako	47.8	39.4	8.4	31.2	26.1	5.1	16.6	13.3	3.3	34.6
TOGO	52.2	36.4	15.8	40.1	28.5	11.7	12.1	8.0	4.1	23.2
Maritime	59.4	40.3	19.1	43.0	29.6	13.4	16.4	10.7	5.7	27.6
Des Plateaux	60.8	42.8	18.0	48.0	34.5	13.4	12.8	8.2	4.6	21.1
Centrale	45.0	34.4	10.6	39.2	29.8	9.5	5.8	4.7	1.2	12.9
De la Kara	44.4	30.3	14.1	30.5	21.4	9.1	14.0	9.0	5.0	31.4
Des Savanes	29.8	22.1	7.7	28.9	21.2	7.7	3.9	0.9	3.0	13.1
UGANDA	32.1	22.0	10.1	27.2	19.9	7.3	4.9	2.1	2.8	15.2
West Nile	21.3	17.0	4.2	20.4	17.0	3.4	4.8	0.8	4.0	22.5
East	30.4	22.4	8.0	26.8	21.2	5.7	3.5	1.2	2.3	11.7
Central	35.3	25.4	9.9	30.6	23.6	7.0	4.7	1.8	2.9	13.4
West	34.3	21.7	12.6	27.5	20.0	7.5	6.8	1.7	5.1	19.8
South West	30.2	18.1	12.1	26.6	16.6	10.0	3.6	1.5	2.1	11.9
Kampala	53.1	36.6	16.5	28.5	20.2	8.3	24.6	16.4	8.2	46.4
ZIMBABWE^a	64.8	37.6	27.3	21.7	10.1	11.6	43.1	27.5	15.6	66.5
Manicaland	66.2	34.1	27.2	29.1	13.6	15.5	32.1	20.5	11.6	48.5
Mashonaland Central	64.9	44.9	20.0	17.4	8.0	9.4	47.5	36.9	10.6	73.2
Mashonaland East ^b	68.9	39.1	29.7	21.1	10.1	11.0	47.8	29.0	18.8	69.4
Mashonaland West	67.8	37.8	30.1	19.6	7.4	12.2	48.2	30.4	17.9	71.1
Matabeleland North ^c	44.7	26.2	18.5	17.4	10.6	6.8	27.3	15.6	11.7	61.1
Matabeleland South	58.9	30.3	28.5	30.7	15.6	15.1	28.2	14.7	13.5	47.9
Midlands	65.0	37.6	27.4	20.3	9.2	11.1	44.7	28.4	16.3	68.8
Masvingo	67.2	41.1	26.0	19.4	8.7	10.7	47.8	32.4	15.4	71.1
Harare/Chitungwiza	69.7	44.1	25.5	18.2	10.8	7.4	51.5	33.3	18.1	73.9
Bulawayo	69.0	33.7	35.3	25.1	9.6	15.7	43.7	24.1	19.6	63.3

^a The ratio of intended to mistimed pregnancies for currently pregnant and amenorrheic women was estimated from national figures.

^b Excludes Harare/Chitungwiza

^c Excludes Bulawayo

Table A.2 Demand for family planning by country and regions within countries: North Africa

Total demand for family planning and its components for currently married women, by country and regions within countries, North Africa, Demographic and Health Surveys, 1987-1989

Country	Demand for Contraception			Unmet Need			Current Use			Percent of Total Demand Satisfied
	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	
<u>MOROCCO</u>	60.8	26.4	34.4	22.1	12.5	9.6	35.9	12.7	23.2	59.1
South	49.6	29.2	20.5	23.4	17.0	6.4	24.8	11.2	13.6	50.0
Tensift	61.5	26.5	35.0	23.7	14.5	9.2	35.0	11.5	23.5	56.9
Centre	62.6	23.1	39.5	15.2	7.1	8.1	44.0	14.5	29.5	70.3
Northwest	60.0	23.2	36.7	23.8	11.9	11.8	33.5	10.1	23.5	55.9
Centre-North	60.5	29.8	30.8	30.1	17.7	12.4	27.5	11.1	16.4	45.4
Eastern	71.6	35.5	36.1	28.1	15.6	12.5	40.1	17.9	22.2	56.0
Centre-South	65.9	29.3	36.6	19.0	11.3	7.8	43.9	16.3	27.6	66.5
<u>TUNISIA</u>	71.1	24.9	46.2	19.7	10.6	9.1	49.8	13.5	36.3	70.0
Tunis	77.4	21.0	56.4	11.4	5.1	6.3	63.9	15.1	48.9	82.6
Northeast	73.1	21.3	51.8	13.6	6.9	6.7	57.1	13.9	43.2	78.1
Northwest	76.0	26.3	49.7	23.4	13.0	10.4	51.3	12.5	38.8	67.5
Center West	63.2	26.6	36.6	31.7	18.4	13.3	31.5	8.2	23.3	49.9
Center East	68.7	25.8	42.9	18.0	9.0	9.1	48.8	15.5	33.3	71.0
South	66.4	29.3	37.2	23.4	13.7	9.7	41.4	14.9	26.5	62.3
<u>EGYPT</u>	64.8	16.5	48.3	25.2	10.1	15.0	37.8	5.9	31.9	58.4
Urban Governorates	74.0	16.1	58.0	16.0	5.5	10.5	56.0	9.9	46.1	75.6
Lower Egypt (Urban)	75.4	17.3	58.1	18.6	7.8	10.9	54.5	8.6	45.9	72.3
Lower Egypt (Rural)	64.6	14.1	50.5	27.0	9.5	17.5	35.6	4.2	31.4	55.2
Upper Egypt (Urban)	67.0	16.9	50.1	23.2	9.7	13.5	41.5	6.4	35.1	62.0
Upper Egypt (Rural)	49.2	19.4	29.8	36.8	17.1	19.7	11.5	2.1	9.4	23.4

Table A.3 Demand for family planning by country and regions within countries: Asia

Total demand for family planning and its components for currently married women, by country and regions within countries, Asia, Demographic and Health Surveys, 1987

Country	Demand for Contraception			Unmet Need			Current Use			Percent of Total Demand Satisfied
	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	
INDONESIA	64.7	28.5	36.1	16.0	10.1	6.0	47.8	17.8	29.9	73.8
Java/Bali	66.9	27.8	39.1	15.2	9.3	5.9	50.9	18.0	32.9	76.1
Outer Java/Bali I	60.2	29.8	30.3	17.4	11.5	6.0	41.7	17.4	24.3	69.3
Outer Java/Bali II	60.3	31.0	29.3	19.0	12.0	6.9	39.6	17.4	22.2	65.7
SRI LANKA	75.9	21.5	54.4	12.3	7.2	5.1	61.7	13.1	48.6	81.3
Colombo Metro	78.1	22.2	55.8	14.8	8.9	5.9	62.6	12.9	49.8	80.2
Colombo Feeder Areas	78.2	20.3	57.9	9.0	4.8	4.1	67.0	14.2	52.8	85.8
South Western Coastal Low Lands	78.3	24.9	53.5	12.0	6.8	5.2	63.7	16.7	47.0	81.4
Lower South Central Hill Country	74.8	22.7	52.1	11.0	6.9	4.0	61.8	14.2	47.5	82.6
South Central Hill Country	71.9	18.0	53.9	12.6	7.1	5.5	57.4	9.6	47.8	79.8
Irrigated Dry Zone	77.3	22.3	55.0	12.8	7.6	5.3	62.3	13.4	48.9	80.7
Rain Fed Dry Zone	76.6	21.6	55.0	16.8	9.8	7.0	58.1	10.8	47.3	75.8
THAILAND	77.1	21.8	55.3	11.1	5.6	5.5	65.5	15.9	49.6	85.0
North	79.5	22.9	56.5	7.7	2.6	5.1	71.3	19.9	51.4	89.8
Northeast	76.5	20.9	55.5	11.6	6.4	5.2	64.6	14.4	50.2	84.5
Central	79.4	21.4	58.0	8.7	4.4	4.3	69.7	16.7	53.0	87.8
South	69.7	21.4	48.4	19.4	9.9	9.5	49.9	11.3	38.6	71.5
Bangkok	78.0	23.3	54.7	10.7	6.1	4.7	66.6	16.9	49.6	85.3

Table A.4 Demand for family planning by country and regions within countries: Latin America and the Caribbean

Total demand for family planning and its components for currently married women, by country and regions within countries, Latin America and the Caribbean, Demographic and Health Surveys, 1985-1989

Country	Demand for Contraception			Unmet Need			Current Use			Percent of Total Demand Satisfied
	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	
BOLIVIA	69.7	17.5	52.3	35.7	9.5	26.2	30.3	6.5	23.8	43.4
Altiplano	66.9	15.6	51.3	38.8	9.7	29.1	24.6	4.6	20.1	36.8
Valle	70.3	19.6	50.8	35.3	9.6	25.7	30.7	8.3	22.4	43.6
Llanos	75.6	19.3	56.3	28.8	8.7	20.1	42.9	8.9	34.0	56.7
BRAZIL^a	81.1	23.6	56.9	12.8	4.8	8.0	66.2	17.9	48.3	81.6
Rio de Janeiro	81.3	18.1	63.0	8.8	2.7	6.1	71.1	14.7	56.4	87.5
Sao Paulo	82.0	23.4	58.6	6.5	2.4	4.0	73.9	19.6	54.3	90.2
South	83.8	32.4	50.1	7.1	3.3	3.9	74.4	28.3	46.1	88.7
Central East	78.8	22.1	56.1	11.8	4.8	7.0	64.5	16.1	48.4	81.9
Northeast	80.4	21.3	58.1	24.2	8.3	15.9	53.2	12.1	41.1	66.1
North/Central West	78.0	18.1	59.9	14.3	6.0	8.4	63.0	11.7	51.3	80.7
COLOMBIA	80.9	22.1	58.9	13.5	5.1	8.3	64.8	15.4	49.4	80.1
Atlantic	76.6	21.3	55.3	21.2	7.8	13.4	51.6	10.7	40.9	67.4
Pacific	81.1	19.1	62.0	13.2	4.3	8.9	66.1	14.3	51.9	81.6
Central	81.8	22.1	59.7	11.6	4.5	7.1	67.3	16.3	51.1	82.4
East	79.0	19.0	59.9	11.3	4.8	6.5	65.5	12.9	52.6	82.9
Bogota	86.6	29.0	57.6	9.4	4.1	5.3	74.8	23.5	51.4	86.5
DOMINICAN REPUBLIC	71.2	20.8	50.4	19.5	10.0	9.5	49.8	9.6	40.1	69.9
Distrito Nacional	71.2	22.1	49.1	19.4	9.6	9.9	50.4	11.6	38.8	70.9
San Cristobal	72.0	19.8	52.2	17.4	7.7	9.7	50.7	9.4	41.3	70.5
Santiago	71.5	20.3	51.2	16.1	8.6	7.5	52.7	10.1	42.6	73.7
San Fco Macoris	72.7	18.6	54.1	20.2	10.4	9.8	50.9	7.5	43.4	69.9
Barahona	70.5	23.4	47.1	22.2	13.0	9.2	45.8	8.8	37.0	64.9
La Romana	69.6	20.6	49.1	22.7	10.0	12.6	44.9	9.3	35.5	64.4
San Juan	69.2	21.0	48.2	25.6	14.5	11.1	42.2	5.7	36.5	61.0
Monte Cristi	71.6	18.3	53.3	17.9	10.3	7.6	52.5	7.2	45.3	73.3
ECUADOR	70.8	23.8	47.0	24.2	10.8	13.4	44.3	11.6	32.7	62.5
Sierra										
Quito	76.2	27.8	48.4	20.1	8.6	11.5	52.7	17.1	35.6	69.1
Resto Urbano	73.4	24.9	48.6	20.8	9.5	11.3	50.0	13.6	36.4	68.1
Rural	61.3	22.0	39.3	33.2	15.3	18.0	25.0	5.2	19.9	40.8
Costa										
Guayaquil	78.9	29.0	49.9	18.6	8.6	10.0	57.5	17.8	39.7	73.0
Resto Urbano	68.4	17.4	50.9	16.5	5.6	10.9	51.4	11.6	39.8	75.2
Rural	71.7	22.8	48.9	28.5	13.1	15.3	41.6	9.0	32.6	58.0
EL SALVADOR	73.8	22.3	51.5	26.0	13.9	12.1	47.3	8.1	39.2	64.1
Area Metropolitana	81.0	21.8	59.3	16.6	8.9	7.6	63.5	12.4	51.1	78.4
Resto Urbano	75.6	20.4	55.2	22.7	11.8	10.9	52.7	8.5	44.2	69.7
Area Rural	67.0	24.2	42.9	35.5	19.1	16.4	31.0	4.5	26.5	46.2

Table A.4—Continued

Country	Demand for Contraception			Unmet Need			Current Use			Percent of Total Demand Satisfied
	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	Total	For Spacing	For Limiting	
GUATEMALA^a	53.4	22.1	31.4	29.4	16.4	13.0	23.2	5.1	18.1	43.3
Guatemala	69.7	22.8	46.9	22.8	11.2	11.6	45.0	10.7	34.3	64.5
Central	57.7	20.7	37.0	35.3	17.8	17.5	21.9	2.4	19.5	37.9
Sud-Occidental	46.2	20.7	25.5	30.7	16.9	13.8	14.8	3.2	11.6	32.0
Nor-Occidental	40.9	23.1	17.9	34.3	21.6	12.7	6.5	1.3	5.2	15.8
Norte	45.7	24.9	20.8	35.1	22.4	12.7	10.6	2.4	8.2	23.2
Nor-Oriental	51.4	19.8	31.6	21.4	12.4	9.1	28.3	6.0	22.3	55.1
Sud-Oriental	54.5	24.2	30.3	30.9	17.5	13.4	23.3	6.7	16.6	42.8
MEXICO^b	79.0	25.9	53.1	24.1	11.0	13.1	52.7	13.5	39.2	66.7
Region I	85.7	29.0	56.7	13.2	7.6	5.6	70.1	20.3	49.8	81.8
Region II	72.4	26.9	45.5	25.0	11.9	13.1	46.3	14.0	32.3	64.0
Region III	82.1	30.7	51.4	15.6	8.9	6.7	62.9	19.4	43.6	76.6
Region IV	76.9	21.1	55.8	23.4	8.5	14.9	53.5	12.6	40.9	66.0
Region V	78.3	27.0	51.3	28.1	11.2	16.9	47.2	14.0	33.2	60.3
Region VI	77.8	28.5	49.3	28.0	14.6	13.4	47.7	12.4	35.4	61.3
Region VII	71.6	30.1	41.5	37.7	21.5	16.2	33.3	8.0	25.3	46.5
Region VIII	82.9	24.9	58.0	31.4	12.8	18.6	50.9	12.1	38.8	61.4
Region IX	79.0	21.7	57.3	21.6	8.4	13.2	54.4	11.5	43.0	68.9
PERU	77.8	21.7	56.1	27.7	8.1	19.6	45.8	11.2	34.6	58.8
Lima Metropolitana	81.7	24.0	57.7	16.4	5.6	10.8	62.8	16.6	46.2	76.9
Costa (excludes Metropolitan Lima)	79.8	22.8	57.0	22.7	7.5	15.2	52.0	12.5	39.6	65.2
Sierra	74.5	20.0	54.5	38.4	10.4	28.0	30.9	7.3	23.5	41.5
Selva	73.4	18.4	55.0	36.0	9.4	26.6	32.9	6.3	26.6	44.9
TRINIDAD&TOBAGO	71.0	28.1	42.5	16.1	8.3	7.9	52.7	18.9	33.8	74.2
St. George	71.0	31.9	38.7	15.2	8.5	6.7	53.7	22.3	31.4	75.6
Rest of the Country	71.0	25.5	45.0	16.8	8.1	8.7	52.0	16.6	35.4	73.3

^a Figures are for women 15-44 years.

^b The ratio of intended to mistimed pregnancies for currently pregnant and amenorrheic women was estimated from national figures.

Regions in Mexico: Region I: Baja Californias, Sonora, Sinaloa, Nayarit. Region II: Aguascalientes, Chihuahua, Durango, San Luis Potosi, Zacatecas. Region III: Coahuila, Nuevo Leon, Tamaulipas, Monterrey (Metropolitan Area). Region IV: Veracruz. Region V: Colima, Jalisco, Michoacan, Guadalajara (Metropolitan Area). Region VI: Guanajuato, Hidalgo, Queretaro. Region VII: Campeche, Chiapas, Quintana Roo, Tabasco, Yucatan. Region VIII: Oaxaca, Puebla, Tlaxcala. Region IX: Distrito Federal, Guerrero, Mexico, Morelos, Mexico City (Metropolitan Area).

Appendix B

Comparability of Data

As discussed in Section 3 of this report (and shown in Figure 2.1), calculation of unmet need requires classification of women according to their current use status; pregnant or amenorrheic status and planning status of current or last pregnancy for these women; infecundity status; and reproductive intentions of fecund women.

In addition, number of children, residence, and level of education is required to estimate differentials in unmet need; as well as information on sexual activity and intention to use for further decomposition of unmet need.

A. Pregnant or Amenorrheic Status:

Pregnant or amenorrheic status is based on the following questions:

"Are you pregnant now?"

"How long ago did your last menstrual period start?"

If the woman is currently pregnant, then she is classified as not currently amenorrheic, irrespective of whether her period returned after the last birth. If there are no births in the last five years, then she is classified as not currently amenorrheic.

B. Infecundity Status:

For North Africa, Asia, Latin America and Botswana in sub-Saharan Africa, nonpregnant women in union for at least five years who *did not use contraception* and who have not been fertile are classified as infecund, as are nonpregnant women who have not menstruated in the past twelve weeks, who had their period before the last birth, or who have never menstruated.

Other countries (where the DHS B-Core Questionnaire was used): Nonpregnant women in union for at least five years who *have never used contraception* and who have not been fertile are classified as infecund, as are nonpregnant women who have not menstruated in the past twelve weeks, who had their period before the last birth, or who have never menstruated.

C. Planning Status for Current or Last Pregnancy (Currently Amenorrheic Women):

For the current pregnancy and births in the five years preceding the survey, women were asked:

(1) "Before you became pregnant had you done anything or used any method... to avoid getting pregnant?"

"Did you become pregnant while using [method]?"

(2) "What was the main reason you stopped using [method]?"

TO GET PREGNANT.....01

METHOD FAILED.....02

OTHER REASONS.....

(3) "At the time you became pregnant... did you want to have that child *then*, did you want to wait until *later*, or did you *want no more* children at all?"

[ASKED OF WOMEN WHO DID NOT BECOME PREGNANT WHILE USING]

(4) "Did you want to have that child but at a later time, or not have another child at all?"

[ASKED OF WOMEN WHO BECAME PREGNANT WHILE USING]

Information on method failures and planning status for *current pregnancy* is not available for sub-Saharan countries, except Botswana. Unmet need was calculated first for amenorrheic women by background characteristics. Estimates for currently pregnant women were then produced using the distribution of planning status for the amenorrheic women.

For Mexico and Zimbabwe, it was not possible to differentiate between intended and mistimed pregnancies. The ratio of intended to mistimed pregnancies for currently pregnant and amenorrheic women was estimated from the respective regional figures (Latin America and sub-Saharan Africa).

Information on planning status for *current or last pregnancy* is not available for two of the DHS-I surveys: Senegal and Ondo State, making it impossible to estimate unmet need.

D. Reproductive Intentions of Fecund Women:

All married women in DHS surveys were asked:

"(After the child you are expecting) would you like...to have a (another) child or would you prefer not to have any (more) children?"

Women who responded that they wanted to have another child were then asked:

"How long would you like to wait from now before the birth of a (another) child?"

Appendix C

Summary of DHS Surveys, 1985-1990

Region and Country	Date of Fieldwork	Implementing Organization	Respondents	Sample Size	Supplemental Studies, Modules, and Additional Questions
SUB-SAHARAN AFRICA					
Botswana	Aug-Dec 1988	Central Statistics Office	All women 15-49	4,368	AIDS, PC, adolescent fertility
Burundi	Apr-Jul 1987	Département de la Population Ministère de l'Intérieur	All women 15-49	3,970	AM, SAI, adult mortality
Burundi	Apr-Jul 1987	Département de la Population Ministère de l'Intérieur	Husbands	542	KAP study
Ghana ¹	Feb-May 1988	Ghana Statistical Service	All women 15-49	4,488	AM, SM, WE
Kenya ²	Dec-May 1988/89	National Council for Population and Development	All women 15-49	7,150	H
Liberia	Feb-Jul 1986	Bureau of Statistics Ministry of Planning and Economic Affairs	All women 15-49	5,239	H, TBH, employment status
Mali	Mar-Aug 1987	Institut du Sahel USED/CERPOD	All women 15-49	3,200	AM, VC, childhood physical handicaps
Mali (Male Survey)	Mar-Aug 1987	Institut du Sahel USED/CERPOD	Men 20-55	970	KAP study
Ondo State, Nigeria	Sep-Jan 1986/87	Ministry of Health, Ondo State	All women 15-49	4,213	AM, H, TBH
Senegal	Apr-Jul 1986	Direction de la Statistique Ministère de l'Economie et des Finances	All women 15-49	4,415	AM, CD
Sudan	Nov-May 1989/90	Department of Statistics Ministry of Economic and National Planning	Ever-married women 15-49	5,860	H, M, MM, female circum- cision, family planning services
Togo	Jun-Nov 1988	Unité de Recherche Démographique Université du Bénin	All women 15-49	3,360	AM, H, SAI, marriage history
Uganda	Sep-Feb 1988/89	Ministry of Health	All women 15-49	4,730	AM, H, SAI
Zimbabwe	Sep-Jan 1988/89	Central Statistical Office	All women 15-49	4,201	AIDS, AM, H, PC, SAI, WE
NORTH AFRICA					
Egypt	Oct-Jan 1988/9	National Population Council	Ever-married women 15-49	8,911	AM, CD, H, MM, PC, SAI, WE, women's status
Morocco	May-Jul 1987	Ministère de la Santé Publique	Ever-married women 15-49	5,982	AM, CD, H, S
Tunisia	Jun-Oct 1988	Office National de la Famille et de la Population	Ever-married women 15-49	4,184	AM, CD, H, S, SAI

¹Data available for 943 husbands interviewed with a husband's questionnaire

²Data available for 1,133 husbands interviewed with a husband's questionnaire

Region and Country	Date of Fieldwork	Implementing Organization	Respondents	Sample Size	Supplemental Studies, Modules, and Additional Questions	
ASIA						
Indonesia	Sep-Dec 1987	Central Bureau of Statistics National Family Planning Coordinating Board	Ever married 15-49	11,844	PC, SM	
Nepal (In-depth)	Feb-Apr 1987	New Era	Currently married women 15-49	1,623	KAP-gap survey	
Sri Lanka	Jan-Mar 1987	Department of Census and Statistics Ministry of Plan Implementation	Ever married 15-49	5,865	AM, H, NFP	
Thailand	Mar-Jun 1987	Institute of Population Studies Chulalongkorn University	Ever married 15-49	6,775	AM, S, SAI	
LATIN AMERICA & CARIBBEAN						
Bolivia	Mar-Jun 1989	Instituto Nacional de Estadística	All women 15-49	7,923	AM, CD, H, MM, PC, S, WE	
Bolivia (In-depth)	Mar-Jun 1989	Instituto Nacional de Estadística	All women 15-49	7,923	Health	
Brazil	May-Aug 1986	Sociedade Civil Bem-Estar Familiar no Brasil	All women 15-44	5,892	AM, H, PC, SM, abortion, young adult use of contraception	
Colombia	Oct-Dec 1986	Centro Regional de Población, CCRP Ministerio de Salud	All women 15-49	5,329	AM, PC, SAI, SM	
Dominican Republic	Sep-Dec 1986	Consejo Nacional de Población y Familia	All women 15-49	7,649	NFP, S, SAI, SM, family planning communication	
Dominican Republic (Experimental)	Sep-Dec 1986	Consejo Nacional de Población y Familia	All women 15-49	3,885		
Ecuador	Jan-Mar 1987	Centro de Estudios de Población y Paternidad Responsable	All women 15-49	4,713	SAI, CD, H, employment	
El Salvador	May-Jun 1985	Asociación Demográfica Salvadoreña	All women 15-49	5,207	S, TBH	
Guatemala	Oct-Dec 1987	Instituto de Nutrición de Centro América y Panamá	All women 15-44	5,160	H, S, SAI	
Mexico	Feb-May 1987	Dirección General de Planificación Familiar Secretaría de Salud	All women 15-49	9,310	H, NFP, S, employment	
Peru	Sep-Dec 1986	Instituto Nacional de Estadística	All women 15-49	4,999	H, NFP, employment, cost of family planning	
Peru (Experimental)	Sep-Dec 1986	Instituto Nacional de Estadística	All women 15-49	2,534		
Trinidad and Tobago	May-Aug 1987	Family Planning Association Trinidad and Tobago	All women 15-49	3,806	AM, NFP, breastfeeding	
AIDS	acquired immune deficiency syndrome		MM	maternal mortality	SM	social marketing
AM	anthropometric measurements		NFP	natural family planning	TBH	truncated birth history
CD	causes of death (verbal report of symptoms)		PC	pill compliance	VC	value of children
H	additional health questions		S	sterilization	WE	women's employment
M	migration		SAI	service availability information		