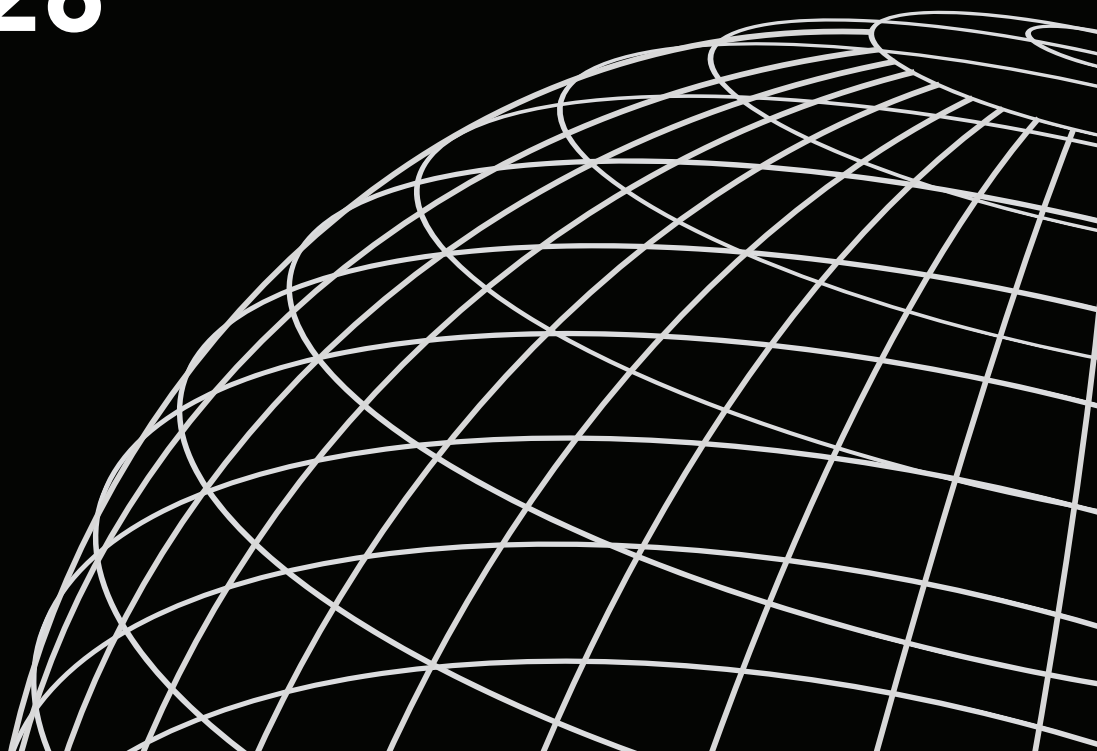




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UNMET NEED FOR MODERN CONTRACEPTIVE METHODS

DHS ANALYTICAL STUDIES 28



SEPTEMBER 2012

This publication was produced for review by the United States Agency for International Development. It was prepared by Charles F. Westoff of the Office of Population Research, Princeton University.

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The main objectives of the MEASURE DHS project are:

- to provide decision makers in survey countries with information useful for informed policy choices;
- to expand the international population and health database;
- to advance survey methodology; and
- to develop in participating countries the skills and resources necessary to conduct high-quality demographic and health surveys.

DHS Analytical Studies No. 28

Unmet Need for Modern Contraceptive Methods

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September 2012

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Editor: Bryant Robey
Document Production: Yuan Cheng

This study was carried out with support provided by the United States Agency for International Development (USAID) through the MEASURE DHS project (#GPO-C-00-08-00008-00). The views expressed are those of the authors and do not necessarily reflect the views of USAID or the United States Government.

Recommended citation:

Westoff, Charles F. 2012. *Unmet Need for Modern Contraceptive Methods*. DHS Analytical Studies No. 28. Calverton, Maryland, USA: ICF International.

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Preface

One of the most significant contributions of the MEASURE DHS program is the creation of an internationally comparable body of data on the demographic and health characteristics of populations in developing countries.

The *DHS Comparative Reports* series examines these data across countries in a comparative framework. The *DHS Analytical Studies* series focuses on analysis of specific topics. The principal objectives of both series are to provide information for policy formulation at the international level and to examine individual country results in an international context.

While *Comparative Reports* are primarily descriptive, *Analytical Studies* comprise in-depth, focused studies on a variety of substantive topics. The studies are based on a variable number of data sets, depending on the topic being examined. A range of methodologies is used in these studies, including multivariate statistical techniques.

The topics covered in *Analytical Studies* are selected by MEASURE DHS staff in conjunction with the U.S. Agency for International Development.

It is anticipated that the *DHS Analytical Studies* will enhance the understanding of analysts and policymakers regarding significant issues in the fields of international population and health.

Sunita Kishor
Project Director

Executive Summary

The main objective of this report is to document current levels and trends since 1990 in the unmet need for modern family planning methods. In this report the use of withdrawal and periodic abstinence is classified as nonuse, and users of these traditional methods are classified as having an unmet need. The recently developed algorithm for measuring unmet need (Bradley et al., 2012) is used throughout in order to provide a consistent measure over the years. Beyond these descriptive objectives, there is an emphasis on analysis of the covariates of unmet need.

A total of 52 developing countries with surveys since 2001 in the Demographic and Health Surveys (DHS) project are included, with 39 of these providing trend data based on comparison with earlier surveys. When grouped together for regional analyses, each country is weighted equally.

On average, 32 percent of married women are currently using a modern contraceptive method, ranging from 9 percent in West and Middle Africa to 51 percent in Latin America and the Caribbean. The total demand for family planning, defined as the sum of current modern contraceptive use and unmet need for modern methods, ranges from 41 percent in West and Middle Africa to 80 percent in Latin America and the Caribbean.

The use of modern contraception has generally been rising, but the changes are slight in West and Middle Africa, where contraceptive use for spacing rather than for limiting births continues to dominate. An analysis of trends among women with no schooling reveals a broad picture of decline in unmet need. The report gives special attention to women who have never used a modern method and say they do not intend to use any method (modern or traditional) in the future. Among all currently married women, the proportion in this category is declining, except in about half of the countries in West and Middle Africa.

A series of multivariate analyses of factors affecting the use of modern contraception versus having an unmet need shows, with some exceptions, a positive association with education and with wealth. General exposure to radio and television shows positive effects in various countries, while media messages promoting family planning seem less important except in West and Middle Africa and in poorer countries elsewhere. The number of children desired tends to be correlated with modern contraceptive use, as is lower child mortality.

The main reasons that women with unmet need offer for not using modern contraception are health concerns and side effects, followed by lack of exposure to the risk of pregnancy and opposition to contraception because of husbands' objections or religious reasons.

Unmet need was also assessed for unmarried women in countries where they were included in DHS surveys, which excluded most Asian countries. In Latin America and the Caribbean and in East and Southern Africa, about one-third of unmarried sexually active women are classified as having an unmet need, while in West and Middle Africa about half are in this category. Trends in the percentage of sexually active unmarried women who are *not* using modern contraception show a continuing and near universal decline from earlier years.

1 Objectives and Data

This report has three objectives. The first is to update the last Demographic and Health Survey (DHS) Comparative Report on unmet need (Westoff, 2006). The second objective is to substitute the new algorithm that has been developed (Bradley et al., 2012), which will enable a review of trends in unmet need using exactly the same measure over time. The third objective is to focus on unmet need for *modern* contraceptive use that, in effect, reclassifies the use of traditional methods (mostly withdrawal and periodic abstinence) as no method use, and reclassifies women who use traditional methods as having an unmet need.

In the latest DHS surveys, an average of 76 percent of contraceptive use is modern method use compared with 24 percent traditional method use. Unmet need for family planning is now a standard measure in DHS surveys. In its basic form, it is intended to capture the potential for increases in contraceptive prevalence, distinguishing between use for spacing births and limiting births, if unmet need were converted to contraceptive use.

The data for the current status analysis in this study consist of 787,919 women age 15-49, of whom 533,844 are currently married. A total of 52 countries with recent surveys are included. The analyses of trends are based on a subset of 36 of these countries that have at least one earlier survey and thus include thousands of additional women.

2 Comparisons of Modern and Traditional Method Users

In all countries combined (and weighted equally regardless of sample or population size)¹, 32 percent of currently married women are currently using modern contraceptive methods and 11 percent are using traditional methods (Table 1). Modern methods are the main methods used in each region, although nonuse of any contraception still predominates in sub-Saharan Africa. The two groups of users, modern and traditional, are more similar to each other than either is similar to nonusers, who are less educated and more rural. Nonusers are also more likely to want more children and to say that their last birth was intended. Exposure to radio and television is lowest among nonusers, as is the index of gender equality.

There are basically two reasons to limit the analysis to unmet need for modern methods. The first is that modern methods are much more effective than traditional methods in preventing unintended pregnancies. Secondly, modern methods are promoted by family planning programs, which are among the main consumers of research on demand for and use of contraception.

¹ The purpose of weighting the countries equally is to avoid the dominance of populations or samples of unequal size.

Table 1. Characteristics of currently married women 15 - 49 (in most recent surveys) using a modern, traditional or no method.

	Current Use of Contraception		
	Modern	Traditional	No method
All countries	32	11	58
Asia / North Africa / Europe	41	18	41
Latin America / Caribbean	51	10	39
West / Middle Africa	8	8	84
East / Southern Africa	36	5	59
Mean age	31.5	33.8	32.8
Mean years of schooling	7.0	7.6	4.3
Percent urban	46	47	31
Mean number of children	3.0	2.9	3.0
Mean number desired	3.3	3.6	4.8
Percent last birth unintended (in past 5 years)	37	31	26
Percent heard radio FP messages	43	36	37
Percent saw TV FP messages	42	41	23
Percent listen to radio daily	42	36	32
Percent watch TV daily	49	55	27
Gender equality index	60	60	45

3 The Most Recent Estimates of Unmet Need and Modern Contraceptive Prevalence

Table 2 shows the latest DHS measures of unmet need and modern contraceptive use. Altogether in these 52 countries, the percentage of married women in need of modern methods is 32 percent, on average, with little regional variation. There is a much greater regional variation in the use of modern contraception (representing met need), from 9 percent in West and Middle Africa to 51 percent in Latin America. In Asia modern contraceptive prevalence is 40 percent, and in East and Southern Africa 35 percent. Regional averages mask great variability among individual countries within each region.

3.1 Asia, North Africa, Europe

Among the 17 countries studied in this region, Albania shows the highest unmet need for modern methods, at 72 percent. Other data indicate that reliance on a traditional method, withdrawal (at 83 percent of all contraceptive use in Albania), is the explanation. The lowest estimate of unmet need for modern methods among the countries in this region is for Egypt, at 14 percent. Egypt, along with Indonesia and Vietnam, also shows the highest level of modern contraceptive use in this region, at 57 percent.

Table 2 subdivides both unmet need and contraceptive use into spacing and limiting components. The lowest use for spacing, between 2 and 3 percent, is in India, Albania and Azerbaijan. In India this pattern is well known and is the result of a typical reproductive history of having the number of children desired and then being sterilized.

Table 2. Estimates of the demand for modern contraceptive methods for currently married women (15 - 49) from the most recent surveys.

		Unmet Need for Modern Method			Current Use of Modern Method			Total Demand	Percentage of Total Demand Satisfied
		Total	Spacing	Limiting	Total	Spacing	Limiting		
<u>Asia / North Africa / Europe</u>									
Albania	2008-09	72	15	57	11	2	8	82	13
Armenia	2005	53	10	43	20	5	14	72	27
Azerbaijan	2006	52	8	44	14	3	12	67	21
Bangladesh	2007	25	9	17	48	13	34	73	65
Cambodia	2010	39	13	27	35	13	22	74	47
Egypt	2008	14	3	8	58	12	46	72	80
India	2005-06	22	8	14	49	3	46	70	69
Indonesia	2007	17	6	11	57	24	34	75	77
Jordan	2009	31	14	17	42	17	25	73	58
Moldova	2005	35	9	26	44	13	31	79	55
Morocco	2003-04	20	7	13	55	20	35	75	73
Nepal	2011	37	12	25	43	4	39	80	54
Pakistan	2006-07	33	13	20	22	4	18	55	40
Philippines	2008	39	14	25	34	9	25	73	47
Turkey	2008	36	10	26	46	10	36	82	56
Ukraine	2007	29	10	20	48	18	30	77	62
Vietnam	2002	29	6	22	57	10	47	79	72
Total		34	10	24	40	11	30	74	54
<u>Latin America / Caribbean</u>									
Bolivia	2008	46	14	33	35	10	25	81	43
Colombia	2010	14	6	8	73	16	57	87	84
Domin. Rep.	2007	14	8	6	70	15	55	84	83
Guyana	2009	31	10	21	40	11	29	71	56
Haiti	2005-06	45	20	25	25	11	14	69	36
Honduras	2005-06	26	12	14	56	19	38	82	69
Nicaragua	2001	17	7	10	66	19	47	83	79
Peru	2007-08	36	13	23	49	16	33	85	58
Total		29	11	18	51	15	37	80	64
<u>West / Middle Africa</u>									
Benin	2006	38	24	14	6	3	3	44	14
Burkina Faso	2003	35	26	9	9	6	3	44	20
Cameroon	2004	33	23	11	13	9	4	46	29
Chad	2004	22	19	3	10	9	1	32	31
Congo B	2005	51	39	12	13	10	3	64	20
Congo DR	2007	42	30	11	6	3	3	48	12
Ghana	2008	43	26	17	17	8	8	59	28
Guinea	2005	25	16	9	6	3	2	31	18
Liberia	2007	37	25	12	10	6	5	47	22
Mali	2006	29	21	8	7	4	2	36	19

(Continued...)

Table 2. – Continued

		Unmet Need for Modern Method			Current Use of Modern Method			Total Demand	Percentage of Total Demand Satisfied
		Total	Spacing	Limiting	Total	Spacing	Limiting		
Niger	2006	18	15	3	10	8	2	27	36
Nigeria	2008	25	18	8	10	6	4	35	28
Senegal	2005	34	25	8	10	6	4	44	24
Sierra Leone	2008	30	17	13	7	4	3	37	18
Total		32	23	10	9	6	3	41	22
<u>East / Southern Africa</u>									
Ethiopia	2011	31	18	13	27	16	12	58	47
Kenya	2008-09	32	15	17	39	15	25	71	55
Lesotho	2009	25	11	13	46	16	29	70	65
Madagascar	2008-09	30	16	14	29	14	16	59	50
Malawi	2010	30	14	16	42	19	24	72	58
Mozambique	2003	24	14	10	21	13	8	44	47
Namibia	2006-07	22	9	13	53	17	37	76	71
Rwanda	2010	31	13	17	45	20	29	76	60
Swaziland	2006-07	28	7	20	48	12	36	75	63
Tanzania	2010	32	21	12	27	16	11	60	46
Uganda	2006	44	27	17	18	8	10	62	29
Zambia	2007	35	21	14	33	20	13	67	49
Zimbabwe	2010-11	18	10	8	57	32	25	75	77
Total		30	16	14	35	16	19	65	54

Collectively, the 17 surveys in this region show a total demand for modern methods (the sum of use of and unmet need for modern methods) of 74 percent, of which 54 percent is currently satisfied. The lowest levels of satisfied demand in this region are Albania, Armenia and Azerbaijan, at 13, 21, and 27 percent, respectively. In Cambodia, Pakistan and the Philippines the levels of satisfied demand are below 50 percent. The explanation is both the higher use of withdrawal in the first three countries and lower rates of development in the three other countries compared with the rest of the region. The lowest level of total demand for modern contraception in the region is in Pakistan, at 55 percent (22 percent contraceptive use and 33 percent unmet need).

3.2 Latin America and the Caribbean

Only eight countries in Latin America and the Caribbean have relevant data for this study. The greatest unmet need for modern methods is in Bolivia (46 percent) and Haiti (45 percent), most of which is for limiting births. Colombia and the Dominican Republic show the lowest levels of unmet need, each at 14 percent. Peru has substantial unmet need (36 percent) along with high total demand for modern contraceptive use (85 percent), of which only 58 percent is satisfied. In Peru the use of traditional methods is 22 percent. While in Table 2 Guyana shows data similar to Peru, the nonuse of any contraception is the principal explanation in Guyana, rather than use of traditional methods. In most countries studied in this region, total demand of modern contraception exceeds 80 percent. The average proportion of demand that is satisfied, however, is 64 percent, ranging from 36 percent in Haiti to 83-84 percent in the Dominican Republic and Colombia.

3.3 West and Middle Africa

In West and Middle Africa modern contraceptive use is the lowest of any region. In the 14 surveys studied in this region, less than 10 percent of married women, on average, are currently using a modern method, while the level of unmet need is three times higher, at nearly one-third. The highest level of unmet need for modern methods is in Congo Brazzaville, at 51 percent, where the reliance on a traditional method, periodic abstinence, accounts for more than half of all contraceptive use reported in 2005. The lowest estimates of unmet need are in Chad (22 percent) and Niger (18 percent), two of the poorest countries in Africa, where nonuse is close to 90 percent and lactational amenorrhea is the main method in use for family planning. Unmet need is low because of the low proportion of women wanting to space or limit childbearing.

Within the region, Ghana shows the highest percentage of women currently using a modern method (17 percent) and also the highest percentage of use for limiting births (8 percent). Every other country in this region shows a greater use of contraception for spacing than for limiting births—an average of 6 percent for spacing compared with 3 percent for limiting. Consistent with this difference is the greater unmet need for spacing (23 percent) than for limiting (10 percent).

3.4 East and Southern Africa

Of the 13 national surveys in this region, the highest level of unmet need is in Uganda, at 44 percent in 2006. Whereas in West and Middle Africa the unmet need for spacing uniformly exceeds that for limiting, there are several exceptions to that pattern in East and Southern Africa. In Kenya, Lesotho, Malawi, Namibia, Rwanda and Swaziland, the unmet need for limiting exceeds that for spacing. This is consistent with the desire among women in this region for fewer children, as is the fact that 9 of these 13 countries show a higher use of modern contraception for limiting than for spacing. The highest proportion of women using modern contraception for limiting births is in Namibia and Swaziland. All combined, the surveys in this region show that 54 percent of total demand is satisfied, far above the estimate of 22 percent in West and Middle Africa.

4 Trends in the Demand for Modern Methods

Many countries in the DHS program have conducted more than one survey, which permits an analysis of trends in unmet need and overall demand for family planning. Figure 1 shows trends in the proportion of women using modern contraceptive methods and in the unmet need for modern methods for 37 countries, with the sum of current modern contraceptive use and unmet need representing the total demand for modern contraceptive use. The total demand can serve as an estimate of what the prevalence of modern method use might be if existing unmet need were met. As noted earlier, the development of the new unmet need algorithm enables the analysis of trends with an identical measure. The data are limited to the surveys conducted since 1990. It is important to keep in mind that the time intervals between surveys vary considerably.

The main observation in Figure 1 is that the total demand for modern methods is increasing in most of the countries studied, although in some the increase is very slight and in others seems to have plateaued. But in a few countries the increase has been dramatic over short periods of time. For example, in Cambodia total demand for modern contraceptive use has gone from 57 to 74 percent over a decade; in Namibia, from 51 to 76 percent over 15 years. Other sharp increases have occurred in Tanzania, Uganda and Zambia. There has been a recent dramatic increase in demand in Rwanda, from 56 to 76 percent in five years. There is no evidence of comparable increases in the West and Middle African countries included in this study.

Figure 1. Trends in the demand for modern methods among currently married women.

Asia / North Africa / Europe

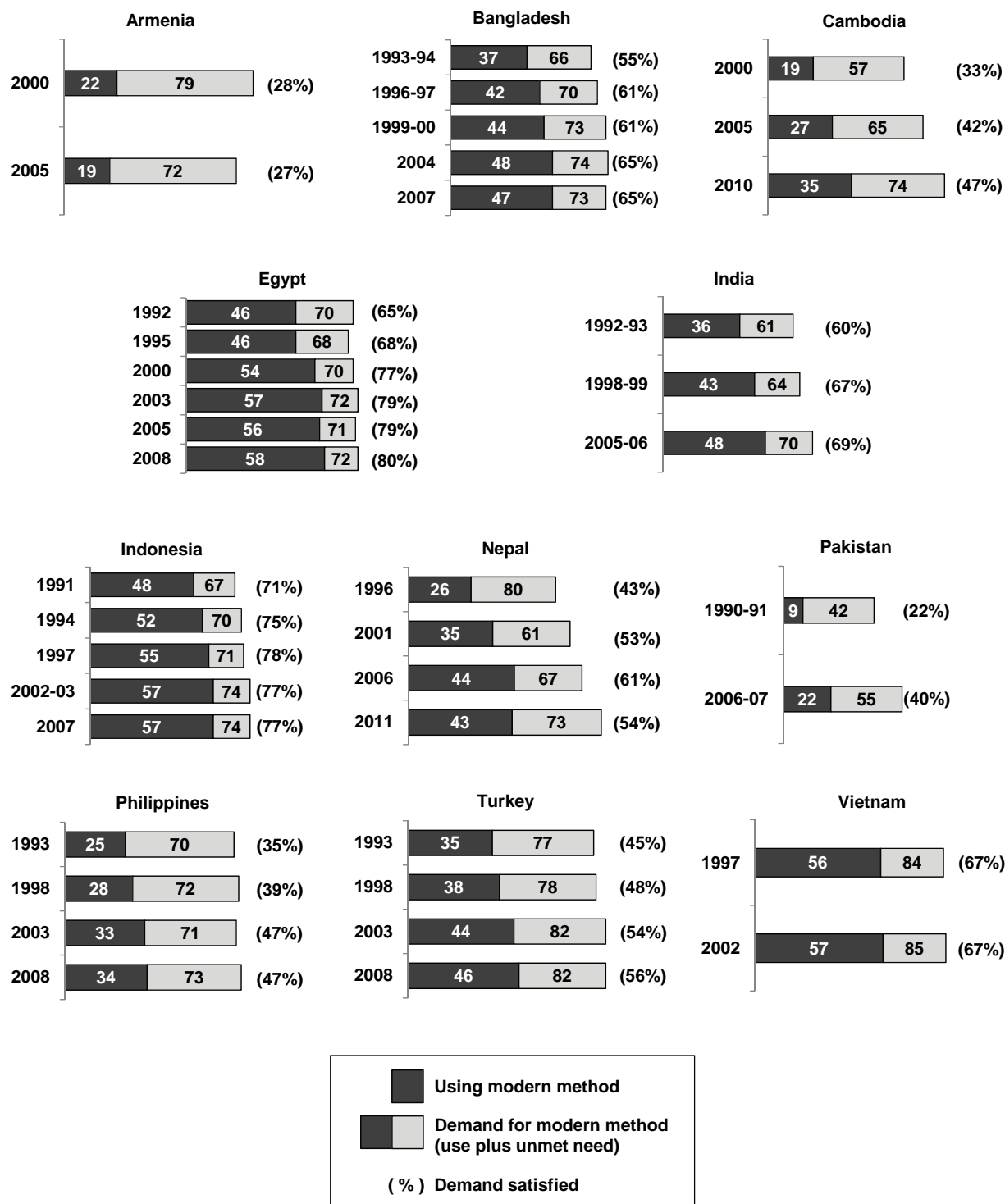
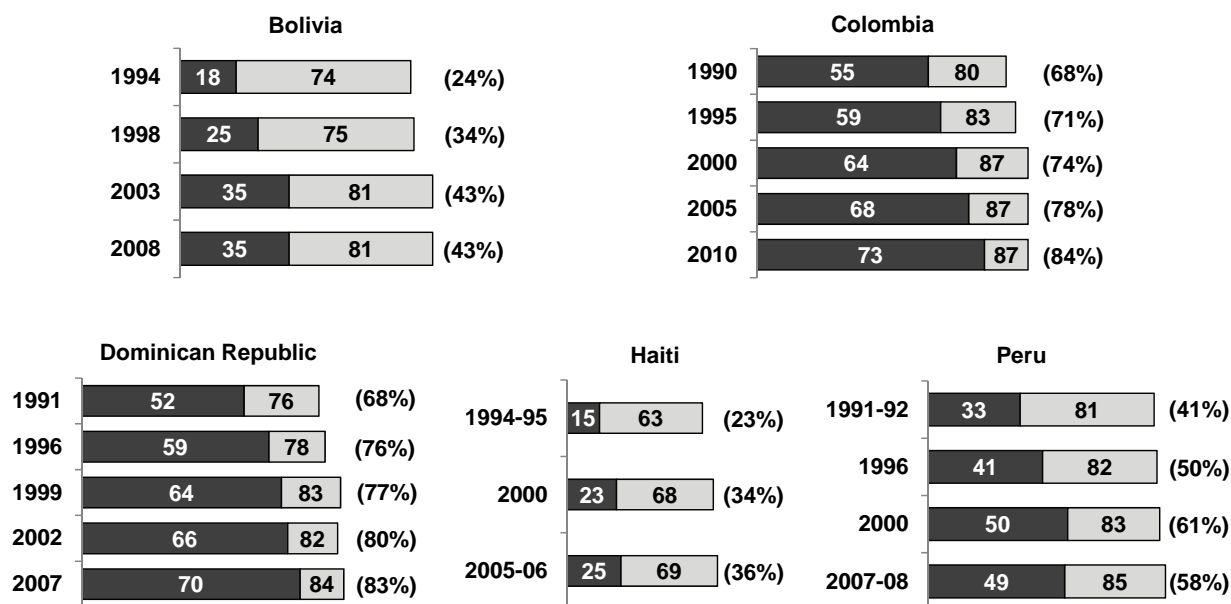


Figure 1. – Continued

Latin America / Caribbean



West / Middle Africa

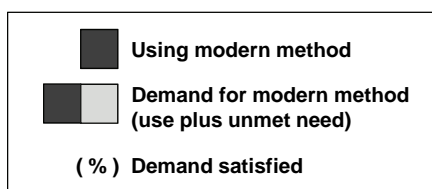
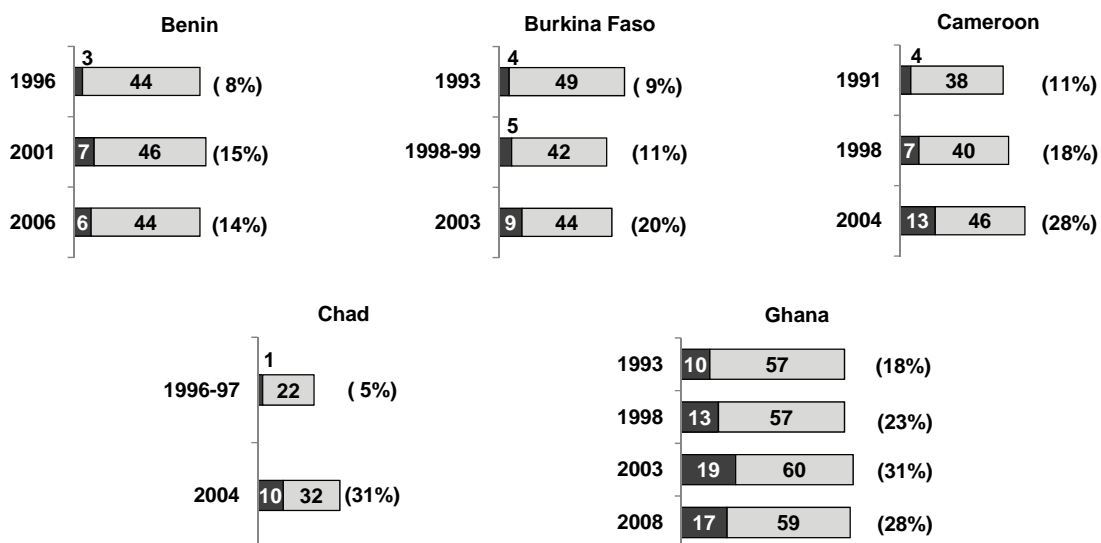
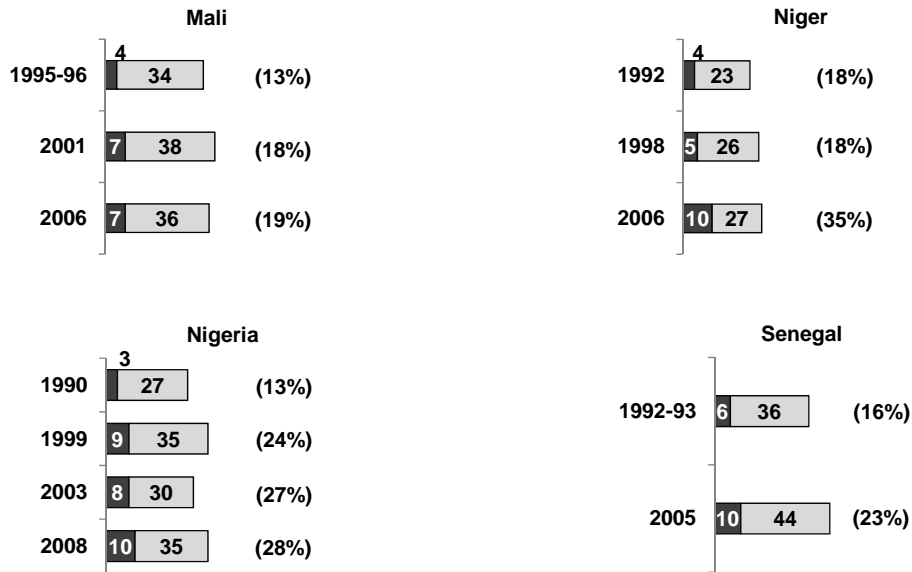


Figure 1. – *Continued*

West / Middle Africa, continued



East / Southern Africa

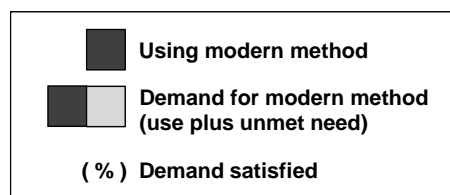
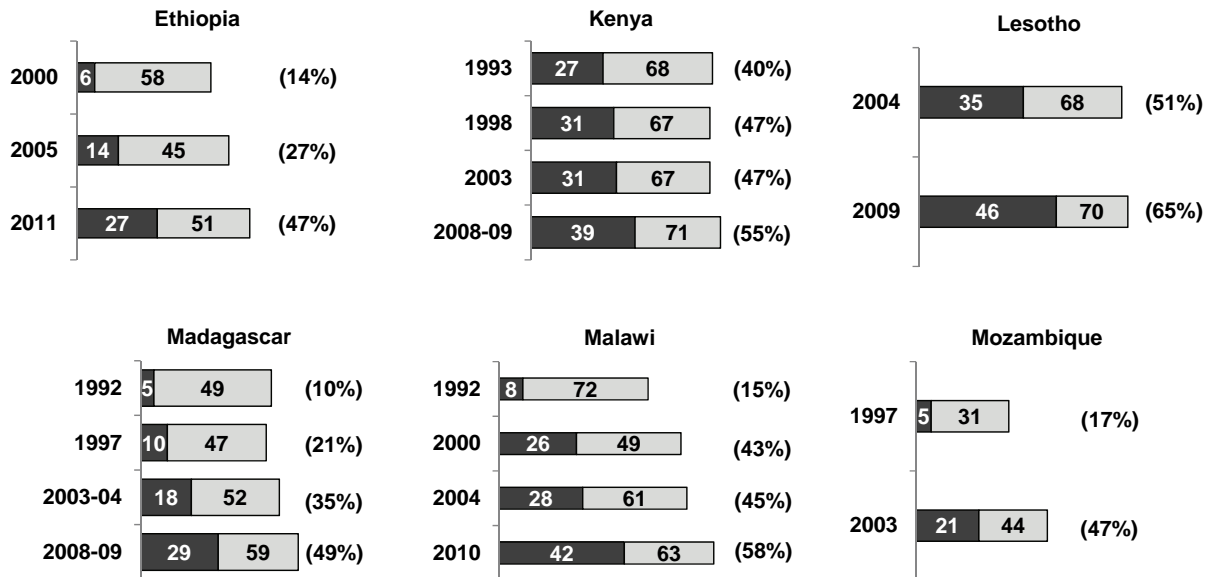
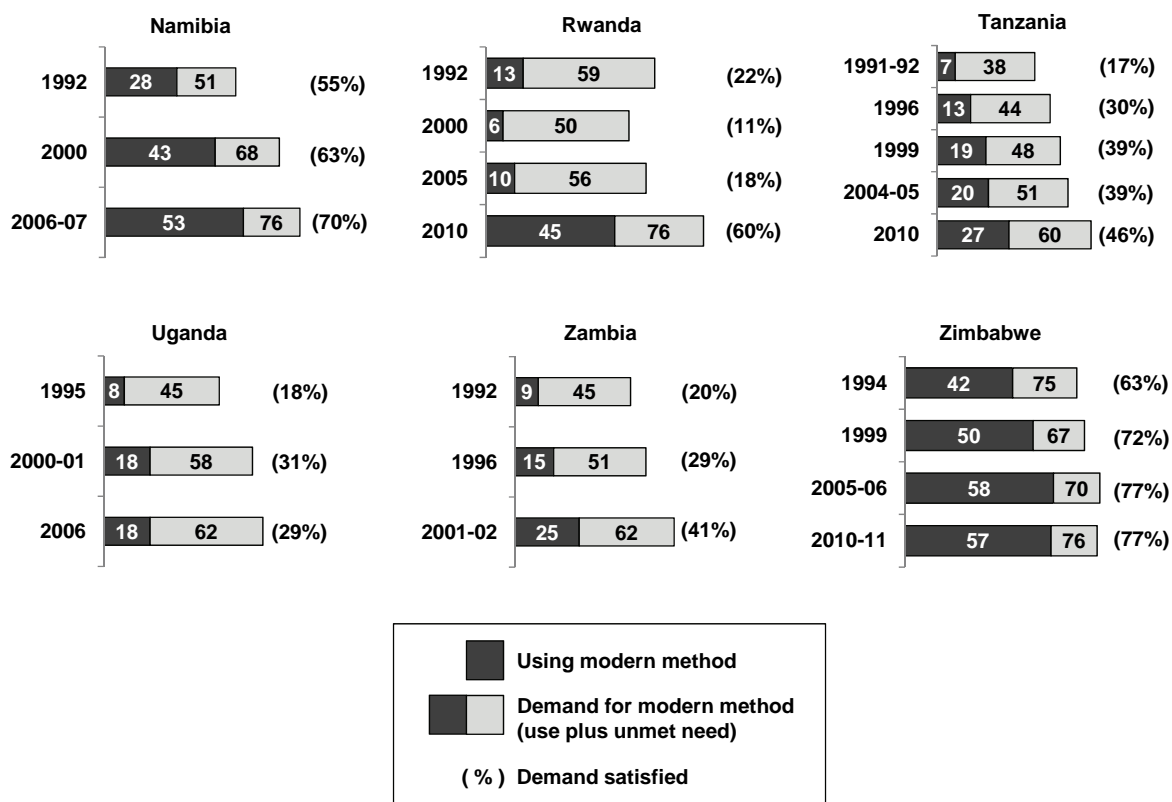


Figure 1. – *Continued*

East / Southern Africa, continued



In almost all countries with increasing demand for modern contraception, there has been a decline in unmet need. In a few countries the level of unmet need has not changed. In the earlier stages of the fertility transition, increases in unmet need can occur, when declines in the number of children desired or motives to space births often precede the availability of contraceptive methods. There is a clear increase in the satisfaction of demand for modern methods in most of the countries under review here (indicated in the parenthetical percentage after each bar in Figure 1). The level of demand satisfied reaches 84 percent in Colombia, 83 percent in the Dominican Republic and 80 percent in Egypt, but remains below 20 percent in several sub-Saharan African countries, where the most recent surveys were conducted six years ago.

5 Trends in Unmet Need and Demand for Spacing and Limiting

5.1 Asia and North Africa

In the 11 countries with multiple surveys in Asia and North Africa, the trends in unmet need for spacing and for limiting are mixed (Table 3). The unmet need for spacing births, which is typically lower than that for limiting in these parts of the world, shows a modest decline in most countries of the region. This is a positive development, since the length of birth intervals has beneficial health implications for both mothers and their children (Rutstein, 2001). In contrast, the unmet need for limiting births has declined in less than half of the countries. The general trend for modern contraceptive use has been, more consistently, on the increase for both spacing and limiting, with some exceptions as in India and Pakistan, where contraceptive use for spacing has not significantly increased. The increase in contraceptive use for limiting appears to have slowed in Bangladesh², Egypt, Indonesia, Jordan and the Philippines, but one should be aware that the most recent survey in these countries was conducted some four to seven years ago.

The demand for spacing shows little trend in this region in contrast to the demand for limiting, which appears to be increasing with several major exceptions (Egypt, Jordan and the Philippines). The satisfaction of demand for both spacing and limiting has increased steadily with the exception of Indonesia, where the percentage of demand satisfied for limiting has remained around 75 percent over 16 years.

Table 3. Trends in the percentages of currently married women in need of or using modern methods for spacing and for limiting and the percentage of demand satisfied.

	Unmet Need		Current Use		Demand		Percent of Demand Satisfied	
	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting
Asia / North Africa / Europe								
Bangladesh								
1993-94	13	17	9	27	22	44	40	62
1996-97	12	15	11	31	23	46	46	67
1999-00	12	17	12	31	24	48	51	65
2004	10	16	13	34	23	50	58	67
2007	8	17	13	34	22	51	61	67
Cambodia								
2000	19	19	7	12	27	30	27	38
2005	13	25	8	19	21	44	37	44
2010	12	27	13	22	25	49	52	45
Egypt								
1992	7	17	8	38	15	55	51	69
1995	7	15	8	38	15	53	56	72
2000	4	11	11	43	15	55	70	79
2003	5	11	12	44	17	55	72	81
2005	4	11	11	45	16	56	72	81
2008	4	10	12	45	17	55	73	82

(Continued...)

² The preliminary DHS report for Bangladesh in 2011 indicates an overall increase in the use of modern methods to 52 percent from 47 percent in the previous survey in 2007.

Table 3. – Continued

	Unmet Need		Current Use		Demand		Percent of Demand Satisfied	
	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting
India								
1992-93	14	11	2	34	16	45	12	76
1998-99	10	12	2	41	12	52	16	78
2005-06	8	13	3	46	11	59	25	77
Indonesia								
1991	9	10	18	30	27	39	65	75
1994	7	10	22	31	29	41	74	75
1997	7	9	24	31	31	40	78	78
2002-03	6	11	23	34	29	45	80	75
2007	6	11	24	34	30	45	79	76
Jordan								
1990	12	22	9	23	21	45	42	51
1997	17	18	11	26	28	44	41	59
2002	14	15	18	23	33	38	55	61
2007	12	16	15	26	28	43	55	61
Morocco								
1992	12	18	12	23	24	41	51	57
2003-04	7	13	20	35	27	48	74	72
Nepal								
1996	16	19	2	24	17	43	10	56
2001	12	20	3	32	15	52	20	62
2006	10	18	4	40	14	58	29	68
2011	12	25	4	39	16	65	24	61
Pakistan								
1990-91	16	17	1	8	17	25	8	31
2006-07	13	20	4	17	17	37	24	47
Philippines								
1993	18	27	4	20	22	48	20	43
1998	17	27	7	22	23	49	28	44
2003	14	24	8	25	23	49	37	51
2008	14	25	9	25	23	49	39	50
Turkey								
1993	10	32	6	29	16	61	38	48
1998	11	29	8	30	19	59	41	51
2003	10	27	9	35	19	62	45	56
2008	8	26	10	36	18	62	56	58
Latin America / Caribbean								
Bolivia								
1994	14	42	4	13	18	56	23	24
1998	13	36	7	19	20	55	33	34
2003	12	34	9	25	22	59	44	43
2008	14	33	10	25	23	57	42	43
Colombia								
1990	9	16	15	39	24	55	63	71
1995	9	15	14	45	24	60	60	75
2000	8	15	14	49	23	64	64	77
2005	7	12	13	54	21	66	66	82
2010	6	8	16	57	21	66	73	87

(Continued...)

Table 3. – Continued

	Unmet Need		Current Use		Demand		Percent of Demand Satisfied	
	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting
Domin. Rep.								
1991	11	13	8	43	20	56	43	77
1996	11	8	12	48	22	56	52	86
1999	12	7	14	50	26	57	55	87
2002	9	7	13	53	22	60	58	88
2007	8	6	15	55	23	61	64	90
Haiti								
1994-95	18	30	5	10	23	39	21	25
2000	18	27	7	15	25	42	30	36
2005-06	20	25	10	14	30	39	35	37
Nicaragua								
1998	9	12	15	43	23	55	63	78
2001	7	10	19	47	26	57	74	82
Peru								
1991-92	12	35	8	25	20	60	39	41
1996	12	28	12	30	24	58	49	51
2000	11	22	15	36	26	58	58	62
2004-06	12	24	14	33	27	56	54	58
2007-08	13	23	16	33	29	56	56	59
West / Middle Africa								
Benin								
1996	28	12	2	2	30	14	6	11
2001	26	13	4	3	30	16	13	20
2006	24	14	3	3	28	17	12	17
Burkina Faso								
1993	34	11	3	2	37	12	7	13
1998-99	29	9	3	2	32	10	10	16
2003	26	9	6	3	32	11	19	23
Cameroon								
1991	26	8	2	2	28	10	7	24
1998	22	11	3	3	26	14	14	25
2004	23	11	9	4	32	15	28	28
Chad								
1996-97	16	4	1	<1	17	5	5	8
2004	19	3	9	1	28	4	32	28
Ghana								
1993	31	16	5	5	35	22	13	25
1998	28	16	7	6	35	22	20	29
2003	25	16	10	9	35	25	28	35
2008	26	17	8	8	34	25	24	33
Guinea								
1999	17	9	2	2	20	11	12	18
2005	16	9	3	2	19	12	18	19

(Continued...)

Table 3. – Continued

	Unmet Need		Current Use		Demand		Percent of Demand Satisfied	
	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting
Mali								
1995-96	23	7	3	2	25	9	10	21
2001	22	9	4	3	26	11	16	23
2006	21	8	4	2	26	10	17	24
Niger								
1992	16	3	3	1	19	4	18	17
1998	18	3	3	1	22	4	16	25
2006	15	3	8	1	23	4	36	34
Nigeria								
1990	18	6	2	2	20	8	9	24
1999	20	7	4	4	24	11	19	36
2003	15	7	5	3	20	10	25	31
2008	18	7	6	4	23	12	24	35
Senegal								
1992-93	23	8	3	3	26	10	11	27
1997	27	10	7	4	33	14	20	27
2005	25	8	6	4	32	12	20	33
East / Southern Africa								
Ethiopia								
2000	22	16	3	4	25	20	11	18
2005	20	17	6	8	26	25	24	31
2011	18	13	15	12	33	25	46	48
Kenya								
1993	23	18	7	20	31	37	24	53
1998	20	16	10	22	29	37	33	58
2003	18	17	11	21	29	37	37	55
2008-09	15	17	15	24	30	41	50	60
Lesotho								
2004	10	23	13	22	23	45	56	49
2009	11	13	16	29	27	43	59	69
Madagascar								
1992	21	22	1	4	23	26	5	15
1997	19	18	4	6	23	24	17	24
2003-04	16	18	8	10	24	28	35	36
2008-09	16	14	13	16	29	30	46	53
Malawi								
1992	28	14	4	4	32	18	11	23
2000	17	17	11	15	28	33	38	47
2004	18	16	13	15	32	31	42	48
2010	14	16	18	24	33	40	56	60
Mozambique								
1997	19	6	2	3	21	9	11	30
2003	14	10	13	8	27	18	48	45
Namibia								
1992	15	7	11	17	26	25	41	70
2000	10	14	12	30	23	45	54	68
2006-07	9	13	17	37	26	50	64	74

(Continued...)

Table 3. – Continued

	Unmet Need		Current Use		Demand		Percent of Demand Satisfied	
	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting
Rwanda								
1992	24	22	6	7	30	29	20	24
2000	27	17	3	3	30	19	10	13
2005	27	19	4	6	31	25	14	24
2010	13	16	20	29	33	46	61	64
Tanzania								
1991-92	21	10	3	3	24	14	13	24
1996	19	12	7	7	26	19	26	37
1999	17	11	11	8	28	19	38	41
2004-05	20	10	11	9	32	19	36	45
2010	20	12	16	11	37	23	44	49
Uganda								
1995	23	14	3	5	26	19	12	26
2000-01	23	17	9	9	31	26	28	36
2006	27	17	8	10	35	27	23	36
Zambia								
1992	25	11	5	4	30	15	15	28
1996	24	12	9	6	33	18	26	35
2001-02	21	15	13	12	34	27	39	43
2007	21	14	20	13	41	27	49	48
Zimbabwe								
1994	14	11	24	18	38	30	64	61
1999	10	10	28	22	38	32	74	69
2005-06	8	9	30	28	38	37	79	75
2010-11	9	8	32	25	42	33	77	76

5.2 Latin America and the Caribbean

In Latin America and the Caribbean only six countries have DHS data for more than one year, and in one of these, Nicaragua, the two surveys are separated by only three years, between 1998 and 2001. In general in the region there has been a downward trend of unmet need both for spacing and, more clearly, for limiting. The use of modern contraception has increased for both purposes but is used mainly for limiting births. Every country included here shows greater contraceptive use for limiting than for spacing in every year of observation. This difference is reflected in the demand estimates and in the greater satisfaction of demand for purposes of birth limitation.

The lowest levels of satisfaction of demand are in Bolivia and Haiti. In Haiti, only slightly more than a third of the demand, for both purposes, is satisfied.

5.3 West and Middle Africa

In West and Middle Africa the picture is radically different in many respects. In every one of the 10 countries with trend data (Table 3), the unmet need for spacing exceeds the unmet need for limiting. There is mixed or little evidence of trends in either type of unmet need. In terms of modern contraceptive use, all but one estimate are in single digits, with only slight indications of increasing use. The changes in the demand for contraception for both spacing and limiting are similar—greater demand for spacing purposes with only a few indications of any increase in demand. There is some indication of an increase in the satisfaction of this low demand, but the level of satisfaction does not exceed one-third of the demand.

5.4 East and Southern Africa

For the most part, the countries in East and Southern Africa show a very different picture than those in West and Middle Africa. Although there is some similarity in the higher levels of unmet need for spacing than for limiting, there is a greater contraceptive use for limiting than for spacing in 7 of the 12 countries in this region compared with West and Middle Africa. Mostly, the levels of modern method use are higher for both purposes than in West and Middle Africa and reflect a substantial upward trend. The demand for limiting is clearly rising in most of the countries in East and Southern Africa. In Rwanda the increase in the demand for limiting rose sharply between 2005 and 2010. For both spacing and limiting, generally, the percentages of demand satisfied are increasing and in some countries now reach into the 60s and higher.

6 Women at Risk of Unintended Pregnancy

The estimates of unmet need thus far have been for all currently married women, without regard to their risk status. Women who are seeking pregnancy or who are infecund are obviously not at risk of unintended pregnancy. Therefore, most of the following analyses are confined to women who have an unmet need for modern methods or are using modern contraception. The unmet need category is limited to fecund women who either want to delay the next birth or who want no more children, that is, to women at risk of an unintended pregnancy. Another way to describe this is as a comparison of women with either a met or an unmet need.

Table 4 shows the distribution of women by this distinction for married women at risk of unintended pregnancy, divided into spacing and limiting purposes and by geographic region. Roughly half of all of these women are in each of the two categories of need (met versus unmet), with the clear exception of women in West and Middle Africa, where about three-quarters are in the unmet need category. The most “successful” picture is in Latin America and the Caribbean, with two-thirds of women using modern contraception. In each region there is a higher proportion of met need (modern contraceptive use) for limiting than for spacing.

Table 4. Distribution of married women at risk* of unintended pregnancy by unmet need vs. using a modern method, by region.

	All Countries		
	Total	Spacing	Limiting
Unmet need	50	58	44
Met need	50	42	56
Total	100	100	100
Number of women	349,496	127,961	221,535
	Asia / North Africa / Europe		
	Total	Spacing	Limiting
Unmet need	45	48	44
Met need	55	52	56
Total	100	100	100
Number of women	169,398	43,798	125,600
	Latin America / Caribbean		
	Total	Spacing	Limiting
Unmet need	36	44	33
Met need	64	56	67
Total	100	100	100
Number of women	75,831	22,792	53,039
	West / Middle Africa		
	Total	Spacing	Limiting
Unmet need	80	82	75
Met need	20	18	25
Total	100	100	100
Number of women	47,497	32,777	14,720
	East / Southern Africa		
	Total	Spacing	Limiting
Unmet need	45	48	42
Met need	55	52	58
Total	100	100	100
Number of women	56,770	28,594	28,176

*Women at risk of unintended pregnancy, includes those using a modern method or fecund non-users who want to postpone or avoid pregnancy.

7 Differences and Trends in Unmet Need by Education

In general, there is a negative relationship between women's education and unmet need, although there are many exceptions. While this relationship is well known, the main interest here is the trend of unmet need over time, especially among married women with no schooling. The proportions with no schooling are, of course, diminishing and there are now 8 of 38 countries studied with less than 5 percent in this category.

In many of the countries in this analysis with the exception of most countries in West and Middle Africa, there is evidence of considerable declines in unmet need among women with no schooling (Table 5). Examples include: Cambodia, from 70 to 52 percent in 10 years; Egypt, from 43 to 23 percent in 16 years; Morocco, from 49 to 27 percent in 12 years. There is little evidence of such declines in unmet need among this group in the Philippines (although currently only 1 percent have no schooling), or in Indonesia at any educational level.

Unmet need for modern methods among women with no schooling has declined sharply in Bolivia, the Dominican Republic and Peru, all over a 15-year period. In those countries less than 10 percent currently have no schooling. In sub-Saharan Africa the greatest declines in unmet need among this group of women over various time intervals have been in Ghana, Lesotho, Madagascar, Malawi, Mozambique, Tanzania and Zambia. In Rwanda the declines at all levels of schooling between 2005 and 2010 are especially noteworthy, for example from 89 to 50 percent from women with no schooling. In Chad and in Niger the declines are due mainly to the introduction of the lactational amenorrhea method, which is classified as a modern contraceptive method.

Although the focus of this analysis is on women with no schooling, there have been declines in unmet need among women at other education levels in most but not all of the countries shown in Table 5.

Table 5. Trends in the percentages of currently married women at risk of an unintended pregnancy who are in need of a modern method, by education.

	No Schooling	Primary	Secondary +
Asia / North Africa / Europe			
Bangladesh			
1993-94	45	46	41
1996-97	41	40	35
1999-00	41	39	37
2004	34	37	34
2007	35	34	35
Cambodia			
2000	70	66	62
2005	62	58	52
2010	52	53	54
Egypt			
1992	43	34	25
1995	37	31	24
2000	28	22	17
2003	25	23	17
2005	25	20	18
2008	23	22	17

(Continued...)

Table 5. – Continued

	No Schooling	Primary	Secondary +
India			
1992-93	43	36	39
1998-99	35	30	35
2005-06	32	29	32
Indonesia			
1991	35	28	24
1994	32	25	22
1997	25	22	20
2002-03	31	23	22
2007	34	23	22
Jordan			
1990	58	51	50
1997	60	48	46
2002	46	44	41
2007	42	41	41
2009	60	44	41
Morocco			
1992	49	32	35
2003-04	27	23	29
Nepal			
1996	58	57	46
2001	48	46	40
2006	35	46	47
2011	39	52	54
Pakistan			
1990-91	84	68	60
2006-07	64	56	53
Philippines			
1993	85	67	61
1998	80	63	59
2003	75	54	52
2008	82	55	52
Turkey			
1993	66	53	36
1998	62	52	36
2003	58	46	38
2008	55	45	34
Vietnam			
1997	37	36	30
2002	29	32	35
<u>Latin America / Caribbean</u>			
Bolivia			
1994	95	83	56
1998	87	73	52
2003	72	63	45
2008	68	63	49

(Continued...)

Table 5. – Continued

	No Schooling	Primary	Secondary +
Colombia			
1990	43	34	25
1995	39	31	24
2000	36	27	24
2005	31	22	20
2010	26	17	15
Domin. Rep.			
1991	48	31	29
1996	31	22	24
1999	25	21	25
2002	22	20	20
2007	16	15	18
Haiti			
1994-95	84	75	58
2000	69	67	56
2005-06	70	65	54
Peru			
1991-92	84	67	45
1996	72	53	40
2000	54	46	32
2004-06	61	50	36
2007-08	52	48	37
West / Middle Africa			
Benin			
1996	95	87	77
2001	88	81	65
2006	89	83	71
Burkina Faso			
1993	96	77	54
1998-99	92	72	47
2003	86	56	39
Cameroon			
1991	95	89	79
1998	92	82	74
2004	94	73	58
Chad			
1996-97	97	91	71
2004	67	77	53
Ghana			
1993	92	80	75
1998	81	77	72
2003	78	68	61
2008	78	73	68
Guinea			
1999	89	81	60
2005	85	76	61

(Continued...)

Table 5. – Continued

	No Schooling	Primary	Secondary +
Mali			
1995-96	93	68	48
2001	85	72	53
2006	85	71	59
Niger			
1992	85	66	41
1998	87	65	37
2006	67	55	41
Nigeria			
1990	94	85	66
1999	87	77	60
2003	88	71	58
2008	89	69	61
Senegal			
1992-93	91	71	49
1997	84	69	47
2005	86	65	49
East / Southern Africa			
Ethiopia			
2000	91	73	50
2005	79	60	33
2011	60	47	25
Kenya			
1993	72	63	41
1998	69	57	38
2003	77	59	34
2008-09	70	48	32
Lesotho			
2004	88	54	33
2009	53	42	23
Madagascar			
1992	96	90	77
1997	94	78	63
2003-04	85	60	60
2008-09	56	47	60
Malawi			
1992	89	83	42
2000	61	57	40
2004	61	56	41
2010	45	42	35
Mozambique			
1997	91	79	47
2003	60	49	27
Namibia			
1992	59	51	27
2000	50	44	26
2006-07	51	36	21

(Continued...)

Table 5. – Continued

	No Schooling	Primary	Secondary +
Rwanda			
1992	81	78	56
2000	93	89	68
2005	89	82	54
2010	50	38	32
Tanzania			
1991-92	94	79	46
1996	83	66	58
1999	75	56	51
2004-05	78	57	40
2010	66	51	47
Uganda			
1995	92	82	59
2000-01	81	70	37
2006	83	72	47
Zambia			
1992	92	83	47
1996	85	75	49
2001-02	77	63	38
2007	58	55	38
Zimbabwe			
1994	54	42	21
1999	43	35	18
2005-06	54	26	15
2010-11	34	27	20

8 Past and Future Use for Women in Need

Table 6 classifies women with an unmet need by whether they have used modern contraception in the past and by their intention to use any family planning method in the future. While analysis of contraceptive use in the past is limited to modern methods, intention to use in the future includes both traditional and modern methods. This difference is because the survey question about preferred future method was not included in all of the surveys, and even when included the proportion of “don’t know” responses is significant. Thus the estimates of future use overstate somewhat the intention to use modern methods.

Examination of the characteristics of these groups (not included here) shows that women who have never used a modern method and who do not intend to use any method in the future—considered below as the “hard core” of unmet need—tend to be the least educated and, together with women who also never used but intend to use, are disproportionately in rural areas. Those in the “hard core” are also most likely to have intended the last birth and least likely to have heard or seen media messages on family planning. They are least likely to be daily radio listeners or television viewers and least likely to be in favor of gender equality.

The highest proportion of women in this category is in West and Middle Africa, with 45 percent having never used and not intending to use, in contrast to 19 percent in East and Southern Africa. These estimates are lower in Asia and North Africa, at 19 percent, and lowest in Latin America and the Caribbean, at 11 percent.

Table 6. Percent distribution of currently married women with unmet need by past use of a modern method and by intention to use any method in the future.

		Never Used Modern Method		Used Modern Method in the Past		Total in Need
		Does not intend to use*	Intends to use	Does not intend to use*	Intends to use	
<u>Asia / North Africa / Europe</u>						
Albania	2008-09	62	11	18	8	100
Armenia	2005	34	24	24	18	100
Azerbaijan	2006	49	15	30	6	100
Bangladesh	2007	6	22	14	58	100
Egypt	2008	9	15	32	44	100
India	2005-06	21	55	7	18	100
Indonesia	2007	14	10	44	33	100
Jordan	2009	11	15	31	42	100
Moldova	2005	11	8	48	33	100
Morocco	2003-04	4	8	28	59	100
Nepal**	2011	11	36	8	45	100
Pakistan	2006-07	33	35	9	23	100
Philippines	2008	26	20	24	31	100
Turkey	2008	12	22	32	33	100
Ukraine	2007	25	6	52	17	100
Vietnam	2002	10	25	27	38	100
Total		19	34	27	31	100
<u>Latin America / Caribbean</u>						
Bolivia	2008	23	35	9	34	100
Colombia	2010	2	10	17	70	100
Domin. Rep.	2007	4	18	15	63	100
Guyana	2009	15	13	36	36	100
Haiti	2005-06	17	32	16	36	100
Honduras	2005-06	11	24	11	54	100
Nicaragua	2001	13	21	13	52	100
Peru	2007-08	5	18	10	67	100
Total		11	22	15	51	100
<u>West / Middle Africa</u>						
Benin	2006	38	42	7	14	100
Burkina Faso	2003	25	59	3	12	100
Cameroon	2004	36	26	11	26	100
Chad	2004	69	28	1	2	100
Congo B	2005	20	23	18	39	100
Congo DR	2007	54	29	7	10	100
Ghana	2008	27	28	15	30	100
Guinea	2005	40	42	7	11	100
Liberia	2007	38	29	14	19	100
Mali	2006	44	39	6	11	100
Niger	2006	54	32	5	9	100

(Continued...)

Table 6. – Continued

		Never Used Modern Method		Used Modern Method in the Past		Total in Need
		Does not intend to use*	Intends to use	Does not intend to use*	Intends to use	
Nigeria	2008	61	18	10	11	100
Senegal	2005	52	24	10	14	100
Sierra Leone	2008	52	28	7	13	100
Total		45	33	8	14	100
East / Southern Africa						
Ethiopia**	2011	31	44	6	19	100
Kenya	2008-09	18	26	18	37	100
Lesotho	2009	26	74	—	—	100
Madagascar	2008-09	35	31	15	19	100
Malawi	2010	9	26	12	53	100
Mozambique	2003	25	28	16	31	100
Namibia	2006-07	11	15	22	51	100
Rwanda**	2010	23	43	5	28	100
Swaziland	2006-07	6	10	25	59	100
Uganda	2006	17	51	5	27	100
Zambia	2007	12	24	11	52	100
Zimbabwe**	2006	10	14	22	53	100
Total		19	33	13	35	100

* Includes women who are uncertain about future use.

** Based on past use of any method because of questionnaire change.

In Asia and North Africa women who have never used a modern method but who intend to use family planning are 34 percent of the total in need. India shows the highest proportion, at 55 percent. Across all countries in this region, an average of 19 percent of women have never used a modern method and have no intention of using any method. The highest values are seen in Albania and Azerbaijan, where withdrawal, a traditional method, dominates.

In Latin America and the Caribbean the dominant category of women with unmet need is past users of a modern method who intend to resume use (51 percent), with only 11 percent in the “hard core” category. The highest proportion in the “hard core” category is in Bolivia, at 23 percent.

In West and Middle Africa the “hard core” dominates among women with unmet need, at 45 percent. Chad and Nigeria show the highest levels of women with unmet need who have never used a modern method and do not intend to use any method (69 and 61 percent, respectively).

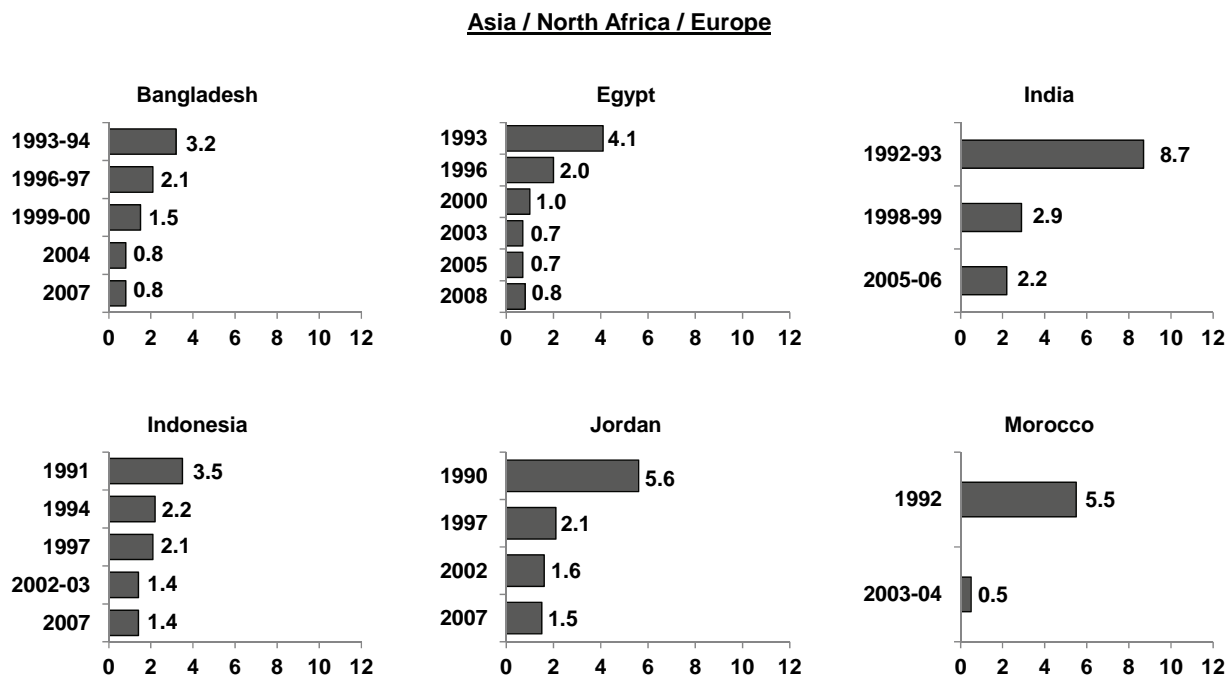
The East and Southern Africa region shows the highest proportions of women with unmet need who intend to use a modern method either for the first time (33 percent) or to resume use of a method (35 percent). However, on average in this region, 19 percent of women with unmet have never used modern contraception and do not intend use family planning, reaching a high of 35 percent in Madagascar.

9 Trends in the “Hard Core” of Women with Unmet Need

As mentioned, women who have never used a modern method and who do not intend to use any method in the future represent the “hard core” of the unmet need category. This characterization is meant to describe women who lack the motivation to control fertility, which is a greater challenge for family planning programs than just providing contraceptive supplies and services. Whereas the above comparisons are confined to women with unmet need, the following trend analyses return to the population of all currently married women. As Figure 2 shows, the trend in the percentage of women in this “hard core” of unmet need is clearly downward in almost all of the countries, with the exception of about half of the countries in West and Middle Africa. In some of the other countries the estimate has reached below 1 percent, and around 5 percent in the Philippines, Haiti and Rwanda, and higher in Ethiopia, at over 8 percent in the 2011 survey. In West and Middle Africa the estimates are all 5 percent and higher, reaching 14 percent in Senegal (in 2005). In East and Southern Africa the decline in the percentage in the “hard core” group is clear.

The two major reasons that women with no contraceptive experience or intention to use contraception offer for not using a method are opposition to use (35 percent) and health-related reasons (28 percent). The types of opposition include religious reasons, fatalism and husband’s opposition. The health reasons include concerns about side effects and general concerns about the health implications of contraception.

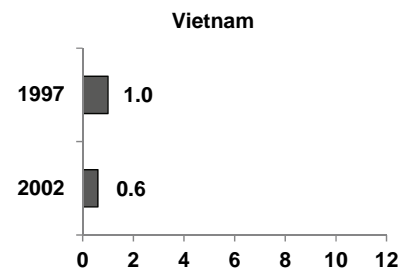
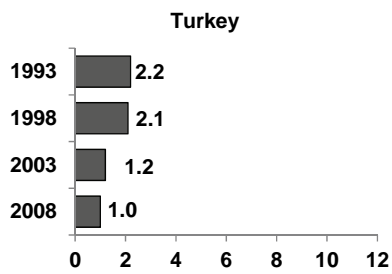
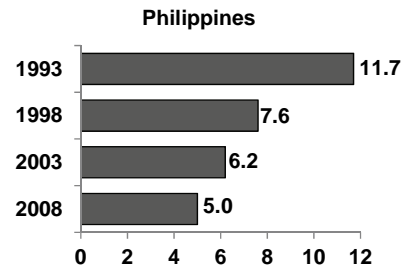
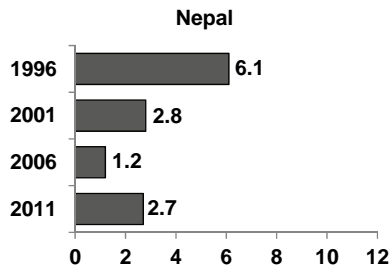
Figure 2. Trends in the percentage of currently married women that have an unmet need and have never used a modern method* and do not intend to use any method in the future.



* Because of recent changes in the questionnaire, the trends for Nepal, Ethiopia, and Rwanda are based on women who never used any method, not confined to use of modern method only.

Figure 2. – Continued

Asia / North Africa / Europe, continued



Latin America / Caribbean

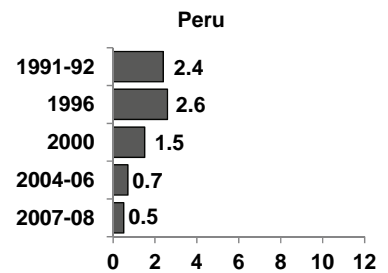
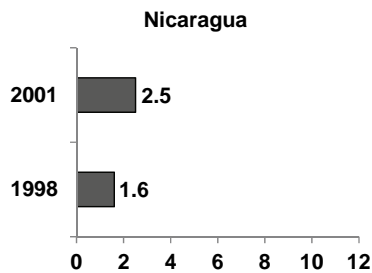
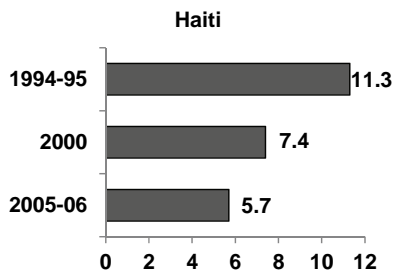
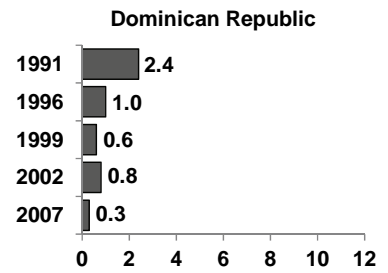
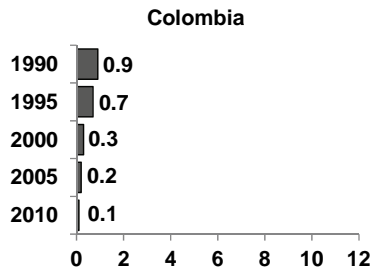
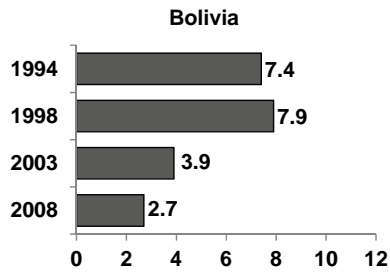


Figure 2. – Continued

West / Middle Africa

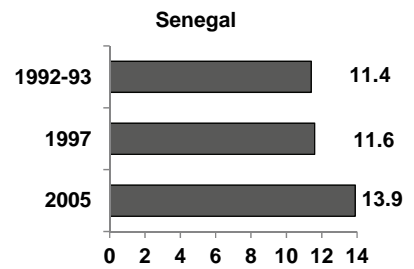
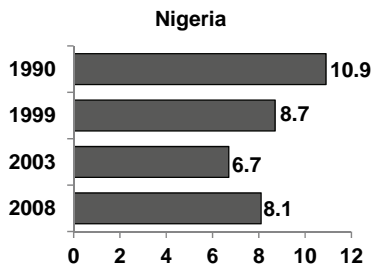
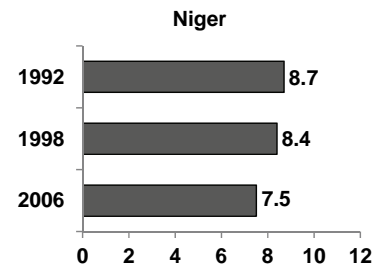
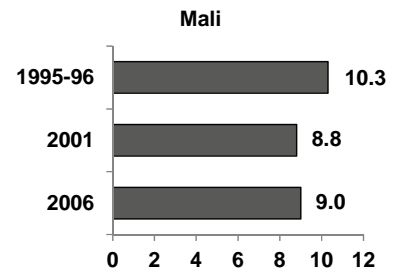
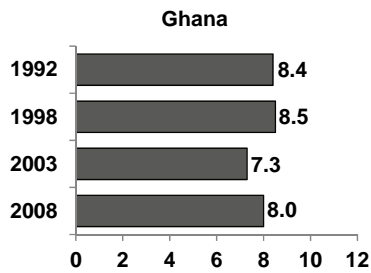
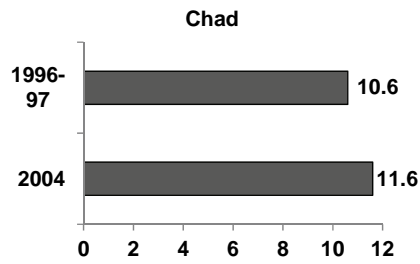
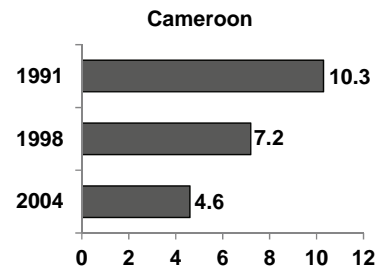
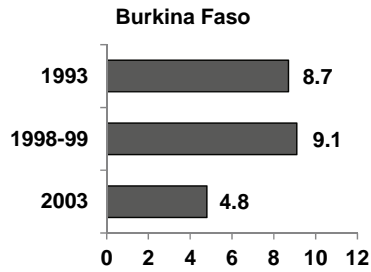
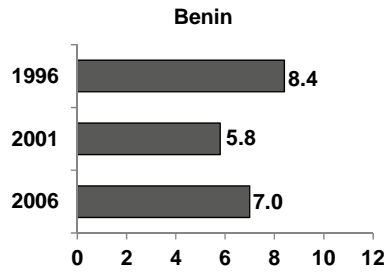
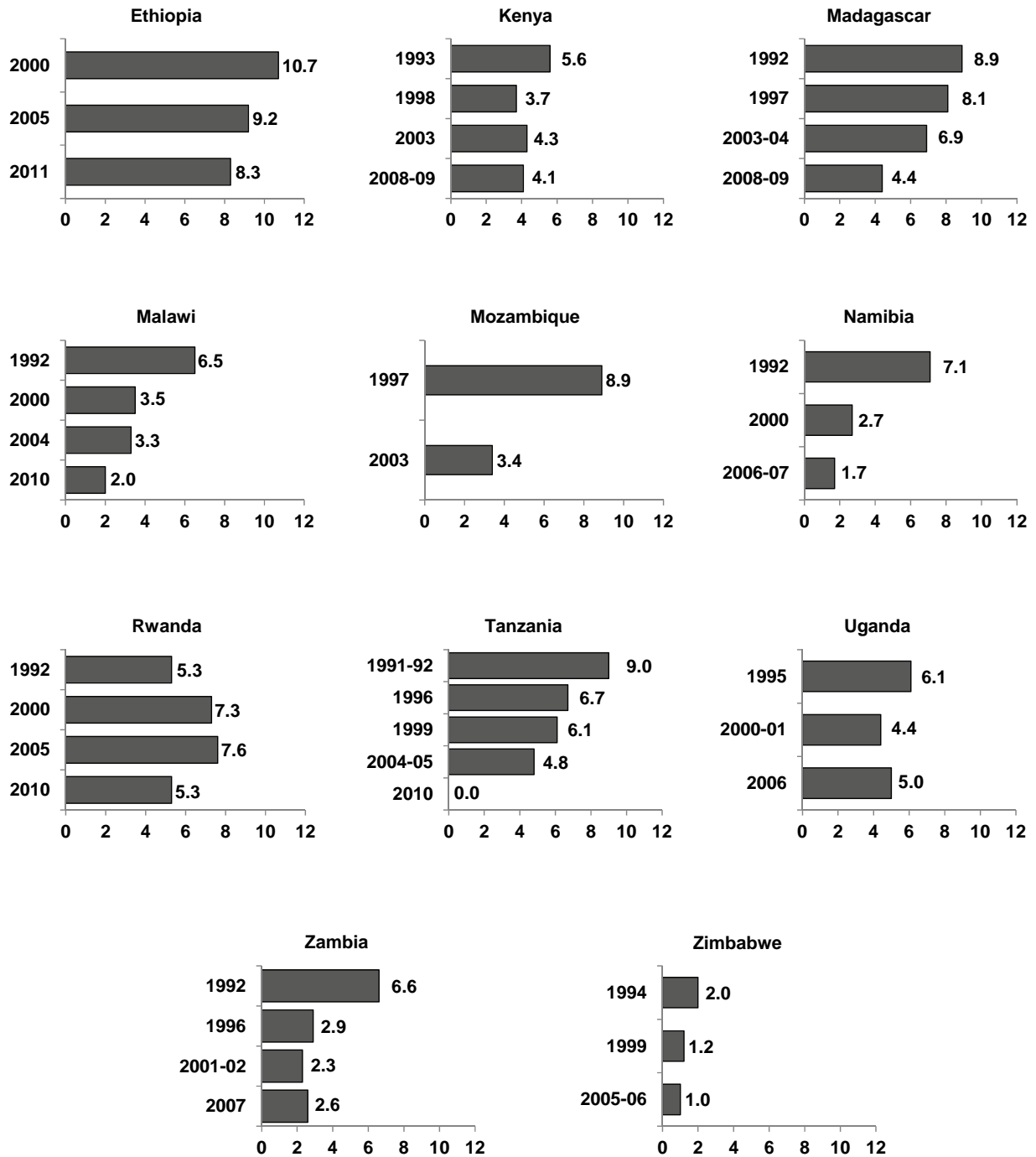


Figure 2. – Continued

East / Southern Africa



10 Other Characteristics of Women with Unmet Need

On average, there is no difference by age between married women with an unmet need for family planning and those currently using a modern method (Table 7). But the similarity ends there. As we have seen, unmet need is associated with less schooling. It is also associated with more unintended births and with more children desired. The use of modern methods is more common in urban areas and among women who report having heard or seen media messages about family planning, as well among women more exposed to the media in general. The differences for women in the spacing or limiting categories (not shown here) are similar, although at different levels because of the age difference between women who want to space births and those who want no more births.

The next step is to determine the simultaneous influence of these covariates in a multivariate analysis in which the focus is on their predictive validity.

Table 7. Characteristics of married women with an unmet need for modern methods compared with women currently using a modern method.

	With Unmet Need	Using Modern Method
Mean Age	32	33
Mean years of schooling	5.6	7.0
Percent urban	37	46
Mean number of births	3.2	3.0
Percent last birth (in last 5 years) unintended	43	37
Mean number children desired	4.1	3.3
Percent heard radio FP messages	39	43
Percent saw TV FP messages	31	42
Percent listen to radio daily	34	42
Percent watch TV daily	36	49

11 Multivariate Analysis of Factors Affecting Use of Modern Methods versus Unmet Need

The objective here is to evaluate the associations between unmet need and a number of covariates. Unmet need is confined to the population at risk of unintended pregnancy, i.e. married women who are either using a modern method or in need of one. As noted earlier, this measure excludes women seeking pregnancy and women who are infecund.

The dichotomous dependent variable in these tables is zero for unmet need and a value of one for the use of a modern method, so that covariates greater than one mean a positive association with modern method use and those less than one a negative association. In this total subpopulation of women at risk, the proportion with unmet need is 44 percent, with 56 percent using a modern method.

The first presentation is at the regional level (Table 8), which includes all of the countries that do not have missing data on some variables. In general, with the exception of Asia and North Africa, the use of modern methods increases with the amount of schooling. This exception will be discussed at the individual country level. Wealth is typically associated positively with modern method use. It is measured here in quintiles, while schooling is calibrated in single years. Television exposure is also positively

correlated with the use of modern methods. Urban residence only appears relevant in sub-Saharan Africa. The associations with the actual number of children and the number desired show a mixed picture. These are discussed in greater detail in the following section, with analysis of individual countries. The number of child deaths shows a negative relationship: fewer deaths are associated with greater use of modern contraception.

Table 8. By region, odds ratios of using a modern method vs. having an unmet need for currently married women at risk of an unintentional pregnancy.

	Asia / North Africa / Europe	Latin America / Caribbean	West / Middle Africa	East / Southern Africa
Years of schooling	0.94	1.01	1.02	1.05
Wealth (quintiles)	1.17	1.11	1.16	1.09
Radio exposure	1.17	(1.00)	1.13	(0.98)
TV exposure	1.02	1.14	1.10	1.05
Radio messages on FP	0.84	1.18	1.30	1.10
TV messages on FP	(1.04)	1.20	1.18	(0.98)
Rural residence	(1.00)	(1.06)	0.81	(0.95)
Age	0.98	1.01	1.03	1.03
Number of children desired	0.92	1.06	0.95	0.95
Number of living children	1.05	0.97	0.93	0.86
Number of child deaths	0.97	0.85	0.94	0.89
Number of women	140,545	31,894	42,359	54,789

() not significant at .05 level

12 Multivariate Analyses at the Individual Country Level

12.1 Schooling

The evidence accumulated over the years clearly shows that increasing education is associated with the use of contraception, so the opposite finding in several countries (Bangladesh, Cambodia, India, Indonesia, Nepal and Vietnam) is surprising (Table 9). A more detailed picture (not shown here) seems to indicate that in countries with extensive family planning programs, such as those offering sterilization or injectables, the education relationship with contraceptive use is offset and even reversed. Also, the national family planning programs in these countries operate at the household level, bypassing the enabling factor of formal education. In most of the 53 countries included here, however, the expected positive association prevails, with more schooling associated with greater use of modern contraception.

12.2 Wealth

In contrast to the connections of schooling with modern method use, wealth shows a consistent and strong positive association with only few exceptions. Across all countries, with each quintile increase in wealth there is an average of a 13 percent increase in the proportion of women using modern methods. The impact of wealth on contraceptive practice seems to be greatest in West and Middle Africa; the association is particularly strong in Chad.

Table 9. For each country, odds ratios of using a modern method vs. having an unmet need, for currently married women at risk of an unintentional pregnancy.

	Asia / North Africa / Europe									
	Albania 2008-09	Armenia 2005	Azerbaijan 2006	Bangladesh 2007	Cambodia 2010	Egypt 2008	India 2005-06	Indonesia 2007	Jordan 2009	
Years of schooling	1.09 (0.97)	1.06	1.06	0.96 (0.95)	0.97	(1.00)	0.95	0.97	(1.02)	
Wealth	(1.04)	1.20	1.12	(1.02)	0.95	1.08	1.07	1.05	(1.06)	
Radio exposure	(1.18)	(1.00)	(1.10)	(1.07)	NA	1.04	(0.98)	(0.97)	NA	
TV exposure	(1.01)	(1.24)	(1.01)	1.07	NA	1.14	1.26	1.25	NA	
Gender equality	(1.13)	(1.12)	(0.97)	0.77	NA	(0.98)	0.96	(0.90)	NA	
Radio FP messages	1.56	(1.14)	(1.25)	(0.92)	(1.01)	(0.90)	0.84	(1.03)	NA	
TV FP messages	(0.94)	1.43	(0.96)	1.17	1.13	(1.09)	1.08	(1.12)	NA	
Rural residence	0.96	(1.00)	0.74	0.83	1.24	0.87	(1.01)	1.28	0.82	
Age	(0.92)	0.96	0.97	1.01	0.96	1.02	1.11	0.97	0.98	
Number of children desired	1.20	(1.04)	(1.02)	0.85	(0.99)	0.92	0.81	0.89	(0.99)	
Number of living children	1.32	(1.08)	(1.06)	0.86	(1.02)	0.94	0.95	0.91	1.12	
Number of child deaths		(1.27)	0.71	0.84	(0.96)	0.87	0.76	0.84	(0.92)	
Number of women	4,108	2,894	3,411	7,211	8,343	10,110	61,312	19,907	6,197	

	Morocco				Nepal		Pakistan		Philippines		Turkey		Ukraine		Vietnam	
	Moldova 2005	2003-04	2011	2006-07	2008	2007	2002	2008	2007	2002	2008	2007	2002	2007	2002	
Years of schooling	1.06	(0.98)	0.93	(1.00)	(1.00)	1.06	0.97	1.06	(1.02)	1.06	(1.02)	(1.02)	0.97	(1.02)	0.97	
Wealth	1.12	(1.00)	1.18	1.20	(1.02)	1.12	NA	1.12	(1.05)	1.12	NA	1.12	NA	1.12	NA	
Radio exposure	(0.95)	(1.00)	(0.99)	NA	1.08	NA	NA	NA	(1.05)	NA	NA	(1.05)	NA	NA	NA	
TV exposure	1.13	1.06	(1.07)	NA	1.11	NA	1.21	NA	NA	NA	NA	1.21	NA	NA	NA	
Gender equality	1.20	0.95	NA	NA	1.16	NA	(1.09)	NA	(1.09)	NA	NA	(1.09)	NA	NA	NA	
Radio FP messages	(1.19)	(0.96)	(0.99)	1.30	(1.09)	NA	0.60	NA	(1.09)	NA	NA	0.60	1.27	1.27	1.27	
TV FP messages	(0.95)	(1.04)	(1.07)	1.27	(1.13)	NA	1.21	NA	(1.13)	NA	NA	1.21	(0.97)	(0.97)	(0.97)	
Rural residence	(0.95)	(1.05)	0.83	0.85	(1.05)	(0.87)	(1.00)	(0.99)	(1.05)	(0.87)	(1.00)	(1.00)	(0.99)	(0.99)	(0.99)	
Age	0.97	0.97	1.04	1.05	(1.01)	(0.99)	(0.99)	0.98	(1.01)	(0.99)	(0.99)	(0.99)	0.98	0.98	0.98	
Number of children desired	NA	0.96	0.91	0.92	(0.99)	(0.96)	0.84	0.89	(0.99)	(0.96)	0.84	0.84	0.89	0.89	0.89	
Number of living children	1.12	(1.00)	1.06	(1.04)	(0.98)	1.08	(0.89)	(1.06)	(0.98)	1.08	(0.89)	(0.89)	(1.06)	(1.06)	(1.06)	
Number of child deaths	(1.10)	0.93	0.90	(1.00)	0.82	(1.07)	(0.81)	(0.97)	0.82	(1.07)	(0.81)	(0.81)	(0.97)	(0.97)	(0.97)	
Number of women	3,870	6,315	7,569	4,686	6,150	5,621	3,102	4,551	6,150	5,621	3,102	4,551	4,551	4,551	4,551	

(Continued...)

Table 9. – Continued

	Latin America / Caribbean									
	Bolivia 2008	Colombia 2010	Domin. Rep. 2007	Guyana 2009	Haiti 2005-06	Honduras 2005-06	Nicaragua 2001	Peru 2007-08		
Years of schooling	1.02	(1.01)	(1.00)	(1.00)	1.02	(0.99)	(0.98)	(1.00)		
Wealth	1.22	1.17	(0.99)	1.13	1.21	1.09	NA	1.16		
Radio exposure	0.93	NA	(1.03)	(1.03)	(0.97)	(1.01)	1.10	(1.08)		
TV exposure	1.09	NA	1.11	(1.09)	(0.85)	1.19	1.18	1.13		
Gender equality	(0.96)	1.11	(0.93)	(0.96)	(1.02)	(1.00)	NA	1.08		
Radio FP messages	1.20	(1.04)	NA	(1.08)	1.33	(1.04)	(1.00)	(1.00)		
TV FP messages	(1.06)	1.32	NA	(1.07)	(1.04)	1.24	(1.05)	1.25		
Rural residence	(0.93)	1.21	1.35	(1.24)	(1.12)	(0.97)	(0.93)	(0.95)		
Age	(1.00)	1.02	1.07	(1.00)	1.03	1.04	1.05	(0.99)		
Number of children desired	1.06	1.05	(0.99)	(1.02)	(0.99)	(0.99)	(0.99)	1.08		
Number of living children	(1.02)	1.07	(1.05)	(1.00)	0.90	0.89	0.89	(1.00)		
Number of child deaths	0.92	0.95	(1.05)	(1.10)	0.89	(0.95)	0.88	(0.95)		
Number of women	8,073	23,610	13,079	2,044	4,432	9,253	6,148	8,075		

	West / Middle Africa								
	Benin 2006	Burkina Faso 2003	Cameroon 2004	Chad 2004	Congo B 2005	Congo DR 2007	Ghana 2008	Guinea 2005	Liberia 2007
Years of schooling	1.05	1.09	1.06	1.15	(1.03)	(0.98)	(1.00)	(1.03)	(1.01)
Wealth	1.29	1.35	1.24	1.73	(1.12)	1.22	(1.08)	(1.07)	(1.13)
Radio exposure	(1.05)	(1.10)	(1.03)	(1.12)	(0.97)	1.21	1.20	1.16	1.20
TV exposure	(0.95)	(1.00)	(1.05)	(1.03)	(1.08)	(1.10)	(1.04)	(1.14)	(1.08)
Gender equality	(1.00)	0.92	1.14	NA	NA	(1.07)	(1.02)	(1.00)	NA
Radio FP messages	1.65	1.72	1.38	2.36	(1.23)	(0.96)	(0.85)	0.97	(1.05)
TV FP messages	(1.00)	(1.14)	(0.94)	(0.86)	1.45	(1.13)	(1.23)	(1.22)	1.90
Rural residence	(1.00)	0.51	(0.88)	0.37	(1.16)	(0.76)	(1.26)	(0.72)	0.72
Age	(1.03)	(1.01)	(1.00)	(1.05)	(1.01)	1.05	1.06	1.04	1.04
Number of children desired	1.06	(0.99)	0.95	(0.97)	(0.94)	(1.00)	(0.97)	(1.06)	0.91
Number of living children	0.94	(0.97)	0.92	(0.94)	(0.88)	0.87	0.89	0.85	(1.01)
Number of child deaths	(0.97)	(0.95)	(1.05)	(0.91)	(1.08)	(0.97)	(0.92)	0.85	(1.07)
Number of women	5,480	3,948	2,963	1,317	2,307	2,945	1,663	1,765	1,983

(Continued...)

Table 9. – Continued

	Mali		Niger		Nigeria		Senegal		Sierra Leone									
	2006	2006	2006	2006	2008	2005	2005	2008	2006-07	2006-07								
Years of schooling	1.04	1.09	1.09	1.04	1.04	1.09	1.09	(1.02)	1.04	1.09								
Wealth	1.25	1.23	1.23	1.12	1.12	(1.05)	(1.05)	1.25	1.27	(1.00)								
Radio exposure	(1.09)	(0.84)	(0.84)	(1.02)	(1.02)	(1.13)	(1.13)	1.14	(1.04)	(1.05)								
TV exposure	(1.06)	1.16	1.16	(1.00)	(1.00)	1.23	1.23	(1.02)	(1.04)	(1.00)								
Gender equality	(0.95)	(0.98)	(0.98)	1.09	1.09	(1.01)	(1.01)	(1.01)	1.10	1.09								
Radio FP messages	(0.95)	1.78	1.78	1.21	1.21	(1.10)	(1.10)	1.89	(1.22)	(0.89)								
TV FP messages	1.79	(0.99)	(0.99)	1.21	1.21	(1.24)	(1.24)	1.04	(0.78)	(1.30)								
Rural residence	(0.91)	0.66	0.66	0.85	0.85	0.67	0.67	0.65	(0.89)	(1.05)								
Age	1.03	1.05	1.05	1.02	1.02	1.04	1.04	1.05	(1.09)	(1.01)								
Number of children desired	0.94	(0.87)	(0.87)	0.95	0.95	(0.98)	(0.98)	(1.00)	(0.90)	(1.05)								
Number of living children	(1.02)	0.88	0.88	(1.01)	(1.01)	(0.99)	(0.99)	0.90	(1.08)	(1.01)								
Number of child deaths	0.87	(0.90)	(0.90)	0.91	0.91	0.85	0.85	(0.94)	(0.97)	(0.95)								
Number of women	3,622	2,108	2,108	6,833	6,833	3,435	3,435	1,924	2,621	1,512								
East / Southern Africa																		
	Ethiopia		Kenya		Lesotho		Madagascar		Malawi		Mozambique		Namibia		Rwanda		Swaziland	
	2011	2011	2008-09	2009	2009	2009	2008-09	2003	2010	2010	2003	2006-07	2010	2006-07	2010	2006-07	2006-07	
Years of schooling	(1.02)	(1.02)	(1.02)	1.04	1.04	1.04	0.93	1.08	(1.02)	(1.02)	1.08	1.04	1.05	1.09	1.05	1.09	1.09	
Wealth	1.35	1.25	1.25	1.23	1.23	1.23	1.10	(1.08)	1.06	1.06	(1.08)	1.27	1.09	(1.00)	1.09	(1.00)	(1.00)	
Radio exposure	(0.89)	(0.96)	(0.96)	(1.04)	(1.04)	(1.04)	(1.03)	(1.00)	1.10	1.10	(1.00)	(1.04)	1.15	(1.05)	1.15	(1.05)	(1.05)	
TV exposure	(1.08)	(1.10)	(1.10)	(1.00)	(1.00)	(1.00)	(0.95)	1.08	(1.00)	(1.00)	1.08	(1.04)	(0.91)	(1.00)	(0.91)	(1.00)	(1.00)	
Gender equality	NA	1.12	1.12	1.13	1.13	1.13	(1.03)	(1.04)	(1.01)	(1.01)	(1.04)	1.10	NA	1.09	NA	1.09	1.09	
Radio FP messages	(1.13)	1.49	1.49	(1.18)	(1.18)	(1.18)	(1.14)	1.51	(0.99)	(0.99)	1.51	(1.22)	1.41	(0.89)	1.41	(0.89)	(0.89)	
TV FP messages	(1.29)	(1.00)	(1.00)	(1.23)	(1.23)	(1.23)	(0.83)	(0.98)	(0.98)	(0.98)	(0.98)	(0.78)	(1.09)	(1.30)	(1.09)	(1.30)	(1.30)	
Rural residence	(0.86)	1.55	1.55	(0.91)	(0.91)	(0.91)	(1.01)	(1.15)	(0.90)	(0.90)	(1.15)	(0.89)	(1.09)	(1.05)	(1.09)	(1.05)	(1.05)	
Age	1.04	1.05	1.05	1.05	1.05	1.05	1.01	0.99	1.03	1.03	0.99	(1.02)	0.96	(1.01)	0.96	(1.01)	(1.01)	
Number of children desired	(0.97)	0.93	0.93	(0.99)	(0.99)	(0.99)	0.90	(1.00)	(0.98)	(0.98)	(1.00)	(1.00)	0.94	(0.95)	0.94	(0.95)	(0.95)	
Number of living children	0.82	0.84	0.84	0.75	0.75	0.75	(0.98)	(0.98)	0.93	0.93	(0.98)	0.90	0.93	0.92	0.93	0.92	0.92	
Number of child deaths	0.82	(0.94)	(0.94)	0.84	0.84	0.84	(1.02)	(0.98)	0.93	0.93	(0.98)	(1.08)	(0.97)	(0.88)	(0.97)	(0.88)	(0.88)	
Number of women	4,806	3,183	3,183	2,850	2,850	2,850	6,485	3,684	10,915	10,915	3,684	2,621	5,126	1,512	5,126	1,512	1,512	

(Continued...)

Table 9. – Continued

	Tanzania		Uganda		Zambia		Zimbabwe	
	2010	()	2006	()	2007	()	2010-11	()
Years of schooling	(1.02)		1.08	(1.03)	(1.03)		(1.03)	
Wealth	1.11		1.23	(1.00)	(1.00)		(1.08)	
Radio exposure	1.12.		(1.08)	1.15	(1.06)		(1.06)	
TV exposure	(1.07)		(1.09)	(1.09)	1.24		1.24	
Gender equality	NA		(1.02)	(0.98)	NA		NA	
Radio FP messages	(1.12)		1.23	(1.18)	(0.97)		(0.97)	
TV FP messages	(0.92)		0.58	1.35	(1.04)		(1.04)	
Rural residence	1.28		0.60	(0.82)	1.39		1.39	
Age	1.03		1.07	(1.00)	(1.00)		(1.00)	
Number of children desired	0.93		(0.98)	(1.01)	(1.01)		(1.01)	
Number of living children	0.87		0.86	0.91	0.88		0.88	
Number of child deaths	0.89		0.91	0.90	0.85		0.85	
Number of women	3,605		3,113	2,682	4,143		4,143	

() not significant at .05 level

12.3 Mass Media

Radio and television exposure are included here in two ways: one is the simple frequency of such exposure, without respect to the content, and the other is based on women's reports of having heard or seen media messages about family planning. The simple frequency questions are divided into four categories of exposure, and the questions about exposure to family planning messages are divided into whether or not the woman reported having recently heard or seen such messages on radio or television. In a recent DHS report focusing on the influence of the media in general on reproductive behavior (Westoff, Koffman and Moreau, 2010), the evidence was strong that such exposure, particularly to television, correlates with contraceptive use.

In Table 9, radio exposure in general appears to have strong associations with modern contraceptive use in about half of the sub-Saharan African countries. Television exposure is a positive covariate in a similar number of countries including India, Indonesia, Ukraine, Honduras, Nicaragua, Senegal and Mozambique.

Radio and television messages focused on family planning seem less influential and are not always correlated directly with modern method use. Radio messages are strongly associated with modern method use in Pakistan, Bolivia, Haiti and numerous countries in West and Middle Africa. Television messages on family planning are significantly associated with modern method use in Albania, Armenia, Pakistan, Ukraine, Colombia and several sub-Saharan African countries (especially Congo Brazzaville, Liberia, Mali and Zambia).

12.4 Other Covariates

The association of modern method use with rural-urban residence is mixed, and is not significant in most of the countries. A positive association with city residence is evident in a number of countries, but there are also a few countries that appear to show greater use in rural areas.

The gender equality index³ is not generally associated with the use of modern contraception, although it does play a role in a few sub-Saharan countries.

The remaining substantive covariates are the number of children desired, the actual number of children born and the number of child deaths. In Asia and North Africa and in Latin America and the Caribbean, half of the countries show negative associations with the actual number of children and half show positive associations, while in sub-Saharan Africa the dominant picture is the reverse, i.e., modern contraceptive use increases with fewer children. The number of children desired shows a mixed but mostly negative association (women who want fewer children are more likely to use modern contraception) but there is no clear pattern in Latin America and the Caribbean. In contrast, the pattern in sub-Saharan Africa is similar to that in Asia and North Africa, with most countries showing contraceptive use related to desire for fewer children. Contraceptive use and lower child mortality are correlated in most countries.

³ The gender equality measure is based on a summary index of who in the family has the final say about health care, large household purchases, purchases for daily needs, and about visits to family or relatives. These questions were not included in all surveys, with about one-third of women not represented.

13 Multivariate Analyses for Spacing and Limiting by Regions

The question arises whether the covariates that distinguish unmet need from contraceptive use in general are the same for spacing as for limiting births. Table 10 shows a comparison of the two for married women by region. These comparisons show very similar covariates for both types of behavior.

Table 10. Odds ratios of using a modern method vs. having an unmet need for married women who are spacing or limiting births, by region.

	Asia / North Africa / Europe		Latin America / Caribbean		West / Middle Africa		East / Southern Africa	
	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting	Spacing	Limiting
Schooling	0.97	0.92	(1.01)	1.01	1.04	1.03	1.04	1.05
Wealth	1.07	1.21	1.06	1.14	1.14	1.17	1.06	1.11
Radio exposure	1.13	1.20	(1.00)	(1.00)	1.14	1.10	(0.98)	(0.99)
TV exposure	1.18	0.98	1.17	1.12	1.09	1.08	(1.04)	1.06
Radio FP messages	0.75	0.88	(1.07)	1.25	1.32	1.27	1.12	1.10
TV FP messages	0.91	1.09	1.21	1.20	1.25	(1.09)	(1.01)	(0.94)
Rural residence	(0.93)	(1.03)	(1.04)	(1.07)	0.81	0.87	0.89	(1.03)
Age	1.01	0.97	1.01	(1.00)	1.04	1.01	1.06	(1.01)
Desired number of children	1.07	0.91	1.10	1.08	0.97	(0.99)	(1.00)	0.96
Number of living children	0.84	1.03	0.87	0.95	0.85	0.96	0.71	0.89
Number of child deaths	0.89	0.96	0.77	0.87	0.93	0.93	0.84	0.90
Number of women	34,625	105,879	11,092	20,800	29,116	13,210	27,585	27,201

() not significant at .05 level

14 Reasons for Nonuse

In the DHS, women not currently using contraception who either want to postpone the next child or who do not want any more children are asked the reason(s) for such nonuse. We have grouped these reasons as follows (as in Khan et al., 2007):

Exposure – not having sex or infrequent sex

Fertility-related – menopausal, subfecund, postpartum amenorrhic or breastfeeding

Opposed – religious reasons, respondent or husband opposed, fatalistic

Knowledge issues – knows no method or source of methods

Health reasons – concern about side effects or general health concerns about use

Other reasons – access, cost, convenience

These reasons were tabulated for currently married women with an unmet need for a modern contraceptive method (women at risk of an unintended pregnancy). The most frequently cited reason for nonuse is health concerns (29 percent) while exposure reasons, pregnancy-related reasons and opposition

are each cited by 18-19 percent of women. Lack of knowledge of a method or about a source is given by 7 percent of respondents, and other reasons by 8 percent (cost considerations are mentioned by only 3 percent of women with unmet need).

Table 11 shows the distribution of these reasons for nonuse for each country. Health concerns are particularly prominent, exceeding 40 percent in Cambodia, Guyana, Haiti, Indonesia, Kenya, Tanzania and Swaziland. Reasons for nonuse relating to exposure, mainly infrequent sex, exceed 40 percent in Armenia, Moldova, Morocco, Ukraine, Honduras and Peru. Fertility-related reasons, including menopause, infecundity, postpartum amenorrhea and breastfeeding, are cited in the 25-33 percent range in Peru, Congo Brazzaville, Guinea, Senegal, Ethiopia, Malawi, Mozambique, Rwanda, Uganda and Zambia.

Opposition to the use of contraception for personal or religious reasons or husband's objections exceed 25 percent in Armenia, India, Pakistan, Chad, Mali, Niger, Nigeria, Senegal and Ethiopia. Lack of knowledge about contraception as a reason for nonuse among women with an unmet need is evident mainly in West and Middle Africa, exceeding 20 percent in Burkina Faso, Cameroon, Chad and Niger.

With few exceptions, in most countries less than 10 percent of women cite the remaining reasons for nonuse, which include access, cost and convenience. In the Philippines 19 percent are in this category (mostly mentioning costs), which is the highest percentage of any country considered here.

Table 11. Reasons offered for non-use of contraception by currently married women in need of a modern method.

		Exposure	Fertility - related	Opposed	Knowledge	Health	Other	Total
<u>Asia / North Africa / Europe</u>								
Albania	2008-09	22	4	41	1	26	5	100
Armenia	2005	43	18	22	0	16	2	100
Azerbaijan	2006	26	24	13	4	26	7	100
Bangladesh	2007	32	27	14	1	22	5	100
Cambodia	2010	23	10	12	1	48	6	100
Egypt	2008	37	16	12	0	33	2	100
India	2005-06	21	20	29	4	20	6	100
Indonesia	2007	24	18	5	1	41	12	100
Jordan	2009	32	18	14	0	32	4	100
Moldova	2005	43	17	7	1	28	5	100
Morocco	2004	49	18	6	0	25	3	100
Nepal	2011	33	23	17	1	23	4	100
Pakistan	2006-07	12	15	39	3	23	8	100
Philippines	2008	21	10	10	1	38	19	100
Ukraine	2007	40	16	19	-	23	2	100
Total		28	17	19	1	29	6	100
<u>Latin America / Caribbean</u>								
Bolivia	2008	29	24	9	9	23	7	100
Colombia	2010	33	22	10	1	26	8	100
Domin. Rep.	2007	25	16	20	1	33	4	100
Georgia	2009	22	6	13	2	45	13	100

(Continued...)

Table 11. – Continued

		Exposure	Fertility - related	Opposed	Knowledge	Health	Other	Total
Haiti	2005-06	12	15	14	1	50	9	100
Honduras	2005-06	43	16	15	1	21	5	100
Nicaragua	2001	23	11	23	3	33	8	100
Peru	2007-08	43	26	5	0	20	6	100
Total		24	16	13	2	36	8	100
<u>West / Middle Africa</u>								
Benin	2006	17	13	12	20	27	11	100
Burkina Faso	2003	24	13	16	21	9	17	100
Cameroon	2004	28	20	13	19	2	7	100
Chad	2004	13	10	31	24	16	6	100
Congo B	2005	17	27	16	11	20	9	100
Congo DR	2007	16	18	19	17	20	10	100
Ghana	2008	17	15	18	6	38	7	100
Guinea	2005	7	33	23	8	24	6	100
Liberia	2007	7	23	14	12	32	13	100
Mali	2006	8	14	31	17	24	6	100
Niger	2006	11	9	28	22	19	11	100
Nigeria	2008	13	12	29	14	27	5	100
Senegal	2005	12	25	26	7	25	5	100
Sierra Leone	2008	8	18	23	15	25	11	100
Total		14	18	21	15	24	9	100
<u>East / Southern Africa</u>								
Ethiopia	2011	8	25	25	7	27	9	100
Kenya	2008-09	12	13	15	5	47	8	100
Lesotho	2009	23	23	16	2	21	15	100
Madagascar	2008-09	12	13	20	9	38	8	100
Malawi	2010	19	27	15	2	35	3	100
Mozambique	2003	26	27	15	7	13	12	100
Namibia	2006-07	10	20	17	6	35	12	100
Rwanda	2010	20	33	19	0	26	2	100
Swaziland	2006-07	10	12	20	1	51	6	100
Tanzania	2010	13	13	18	2	48	6	100
Uganda	2006	9	25	15	5	35	11	100
Zambia	2007	17	33	12	3	26	9	100
Zimbabwe	2010-11	35	21	24	1	12	7	100
Total		16	22	18	4	32	8	100

15 Unmet Need among Unmarried Women

The analysis thus far has been confined to currently married women. The new algorithm for the measurement of unmet need is also applicable to unmarried women, at least for the more recent surveys. Trend analyses for unmarried women are more complicated than for married women (explained later) but the current status estimates (Table 12) appear reliable. These estimates differ from those in the DHS report on the new algorithm (Bradley et al., 2012) because the focus here is on modern methods only. In some countries this makes a considerable difference in the estimates, depending on the extent of traditional method use. The estimates in Table 12 are for unmarried women who report having had sex in the preceding 31 days. The estimates apply to women age 15-49, with a separate column for young women age 15-19.

In Asia and North Africa most of the surveys either did not interview unmarried women or did not ask questions about their sexual behavior. The analysis is therefore confined to Latin America and the Caribbean and to sub-Saharan Africa.

In Latin America and the Caribbean an average (equally weighted for each country) of 32 percent of the unmarried women age 15-49 are classified with an unmet need for modern methods of family planning. An average of 58 percent are currently using modern methods, with the total demand near 90 percent. The proportion of this total demand satisfied (64 percent on average) is highest in Colombia, at 81 percent in 2010, and lowest in Haiti at 35 percent in 2006. The picture is similar for women age 15-19 in this region (they are 21 percent of the 15-49 age group). Unmet need among young women age 15-19 is lowest in Colombia and Peru, and highest in Haiti.

In West and Middle Africa the overall unmet need among unmarried women age 15-49 is 51 percent, considerably higher than the 32 percent in Latin America and the Caribbean. In West and Middle Africa young women comprise a high proportion of all women age 15-49, at 45 percent. Within this region, the Congo Democratic Republic and Liberia have the lowest proportion of the total demand satisfied, at 28 and 29 percent respectively. The highest proportions of demand satisfied are in Burkina Faso and Cameroon, the only countries to exceed 50 percent. In these two countries this level was reached nearly 10 years ago.

In East and Southern Africa, the level of unmet need among unmarried women age 15-49 is significantly lower, at 33 percent, than in West and Middle Africa, at 51 percent. Also, the percentage of total demand satisfied is much higher in East and Southern Africa, at 60 percent, compared with 39 percent in West and Middle Africa. Young women age 15-19, who comprise 29 percent of all unmarried women in the East and Southern Africa region, show a success rate of 45 percent compared with 33 percent in West and Middle Africa. In East and Southern Africa the most successful country in satisfying demand for modern contraception among unmarried women is Namibia, at 83 percent of women age 15-49 and 79 percent of women age 15-19. The least successful is Madagascar, at 36 percent of women age 15-49 and 17 percent of women age 15-19.

Table 12. Unmet need and demand for family planning (modern methods) for sexually active, unmarried women 15 - 49 and 15 - 19.

	<u>Unmet Need for Modern Methods</u>		<u>Current Use of Modern Methods</u>		<u>Total Demand</u>		<u>Proportion of Demand Satisfied</u>	
	15 - 49	15 - 19	15 - 49	15 - 19	15 - 49	15 - 19	15 - 49	15 - 19
<u>Latin America / Caribbean</u>								
Bolivia 2008	46	51	48	46	94	97	51	48
Colombia 2010	18	28	75	70	93	98	81	72
Domin. Rep. 2007	27	42	57	44	84	87	68	51
Guyana 2009	29	37	61	61	89	98	68	62
Haiti 2005-06	59	66	32	29	91	95	35	31
Honduras 2005-06	26	34	62	57	88	91	71	63
Nicaragua 2001	24	40	61	46	85	86	72	53
Peru 2007-08	27	27	65	72	92	99	70	72
Total	32	41	58	52	89	93	64	56
<u>West / Middle Africa</u>								
Benin 2006	53	64	29	28	83	91	36	31
Burkina Faso 2003	34	43	56	48	90	91	62	52
Cameroon 2004	38	45	47	50	85	95	55	53
Congo B 2005	61	71	27	23	87	93	31	24
Congo DR 2007	60	65	23	23	83	88	28	26
Ghana 2008	56	63	34	33	90	96	37	34
Guinea 2005	52	59	36	31	88	90	41	34
Liberia 2007	56	67	23	20	79	87	29	23
Mali 2006	47	58	22	22	69	80	32	27
Nigeria 2008	49	61	42	37	92	98	46	38
Sierra Leone 2008	54	67	25	21	79	88	31	23
Total	51	60	33	30	84	91	39	33
<u>East / Southern Africa</u>								
Ethiopia 2011	30	22	52	52	82	74	64	70
Kenya 2008-09	41	71	45	23	86	94	53	25
Lesotho 2009	33	48	57	41	90	90	63	46
Madagascar 2008-09	51	69	29	14	80	83	36	17
Malawi 2010	39	57	46	30	86	87	54	35
Mozambique 2003	29	36	42	41	71	77	59	53
Namibia 2006-07	16	20	78	76	94	96	83	79
Rwanda 2010	28	26	42	28	70	54	60	52
Swaziland 2006-07	30	40	63	56	93	96	68	58
Tanzania 2010	37	52	45	35	82	86	55	40
Uganda 2006	33	54	47	28	80	82	59	34
Zambia 2007	42	53	44	38	86	90	51	42
Zimbabwe 2010-11	26	53	62	35	87	88	71	40
Total	33	46	50	38	84	84	60	45

*Too few observations

16 Covariates of Unmet Need among Unmarried Women

Here we try to determine the main characteristics that are associated with unmet need among unmarried women. Following the same procedure used for married women, the dependent variable is defined as women at risk of unintended pregnancy. We compare women either using no contraceptive method or using a traditional method with women currently using a modern method⁴. Because of smaller numbers, only regional totals are shown in the analysis of unmarried women. Also, since many countries did not include the DHS questions on gender equality in their surveys, this measure is excluded, because the sample size in the populations studied here would be reduced by over 10,000 women. It should be noted, however, that, where surveys have included the index of gender equality, it shows a strong positive correlation with the use of modern methods.

Table 13 shows the results for unmarried women age 15-49, for the three regions that included these women in DHS surveys. For women age 15-19, only the total (for the three regions combined) is shown because of this group's smaller numbers. The number of years of education is consistently correlated positively with the use of modern methods in all of the comparisons. The educational variable is calibrated in single years so that odds ratios of 1.07 for women age 15-49 and 1.12 for women age 15-19 are strongly related to modern method use. Wealth shows little association (it is excluded from the analysis of women age 15-19 because it would be more relevant to the wealth of young women's parents, which would be more difficult to know and report).

The mass media set of measures shows positive associations for radio only for young unmarried women age 15-19. For unmarried women age 15-49 as a whole, radio but not television exposure is correlated with modern method use. The measures of whether media messages focused explicitly on family planning show evidence of positive correlation with modern method use for both radio and television among the total group of women age 15-49.

Rural residence is not associated with greater use of modern contraception among unmarried women. The number of children desired shows a negative correlation with contraceptive use, as might be expected.

Table 13. Odds ratios of using a modern method of contraception vs. having an unmet need among sexually active unmarried women, by age.

	15 - 49				
	15 - 19	Total	Latin America / Caribbean	West / Middle Africa	East / Southern Africa
Years of schooling	1.12	1.07	1.05	1.06	1.08
Wealth	-	1.03	(0.96)	1.08	(0.99)
Radio exposure	1.13	1.13	(0.94)	1.11	1.14
TV exposure	(1.02)	(1.01)	(1.12)	(1.01)	1.09
Radio messages on FP	(1.15)	1.18	(1.12)	(1.14)	1.14
TV messages on FP	(1.24)	1.25	(1.25)	1.45	1.09
Rural residence	(0.89)	(0.98)	(0.77)	0.80	0.79
Number of children desired	0.91	0.87	0.89	(1.01)	0.88
Age	1.18	1.03	1.02	1.01	1.03
Number of women	4,487	14,461	2,510	5,797	6,154

() not significant at .05 level

⁴ Surveys in countries in the Asia and North Africa region typically did not interview never-married women.

17 Trends in Unmet Need among Unmarried Women

In an earlier review of trends in unmet need (Westoff, 2006), a description was included of trends in the nonuse of contraception for sexually active unmarried women in sub-Saharan Africa. By this simple measure, unmet need both for women age 15-49 and age 15-19 appeared to have declined in most of the countries under review. In the analysis below, the new algorithm for unmet need was first used but the decision was reached to retain the earlier measure of nonuse of contraception (confined to modern methods). The rationale is mainly that in 15 of the sub-Saharan countries with multiple surveys the standard unmet need index cannot be constructed for surveys in the early 1990s, which reduces the time span available for analysis. The analysis of the trend data in sub-Saharan Africa as well as in Latin America and the Caribbean was conducted with both measures for the available surveys, and shows essentially the same trends⁵.

Figure 3 shows the trends for countries with at least three surveys, based on the proportion of unmarried, sexually active women (sex in the past 31 days). The general picture is similar to the earlier review in 2006, showing a pattern of decline in the percentages of women age 15-19 and age 15-49 who are *not* using modern contraceptive methods. The few exceptions are mostly concentrated among young women, where small numbers play a role.

In general, the declines in nonuse of modern methods among unmarried women are sharpest in Latin America and Caribbean, although the most recent picture in Haiti shows an interruption of the decline. In sub-Saharan Africa the downward trends are apparent in Cameroon, Burkina Faso (though the last observation there was in 2003) and Nigeria. There are more countries experiencing a decline, particularly in Namibia, Tanzania and Zambia. Kenya presents a similar picture except for the most recent reversal among women age 15-19. Overall, the trends among women age 15-19 are close to those among all unmarried women of reproductive age.

The main reasons that unmarried women at risk of unintended pregnancy offer for nonuse of modern contraceptive methods relate to infrequent sex and health reasons, particularly contraceptive side effects.

⁵ Current status estimates of unmet need among unmarried women with the new algorithm are shown in Table 5 in the recently published description of the algorithm (Bradley et al., 2012).

Figure 3. Trends in the percentage of unmarried sexually active women who are not currently using a modern method.

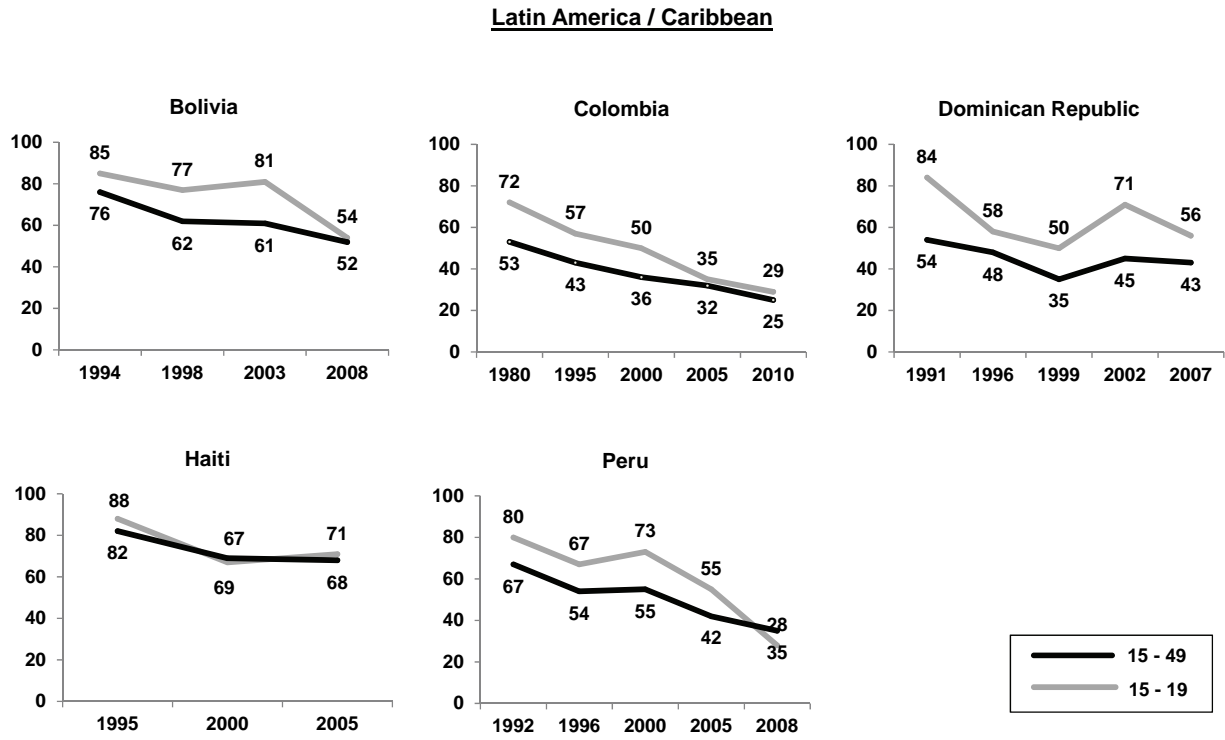


Figure 3. – Continued

West / Middle Africa

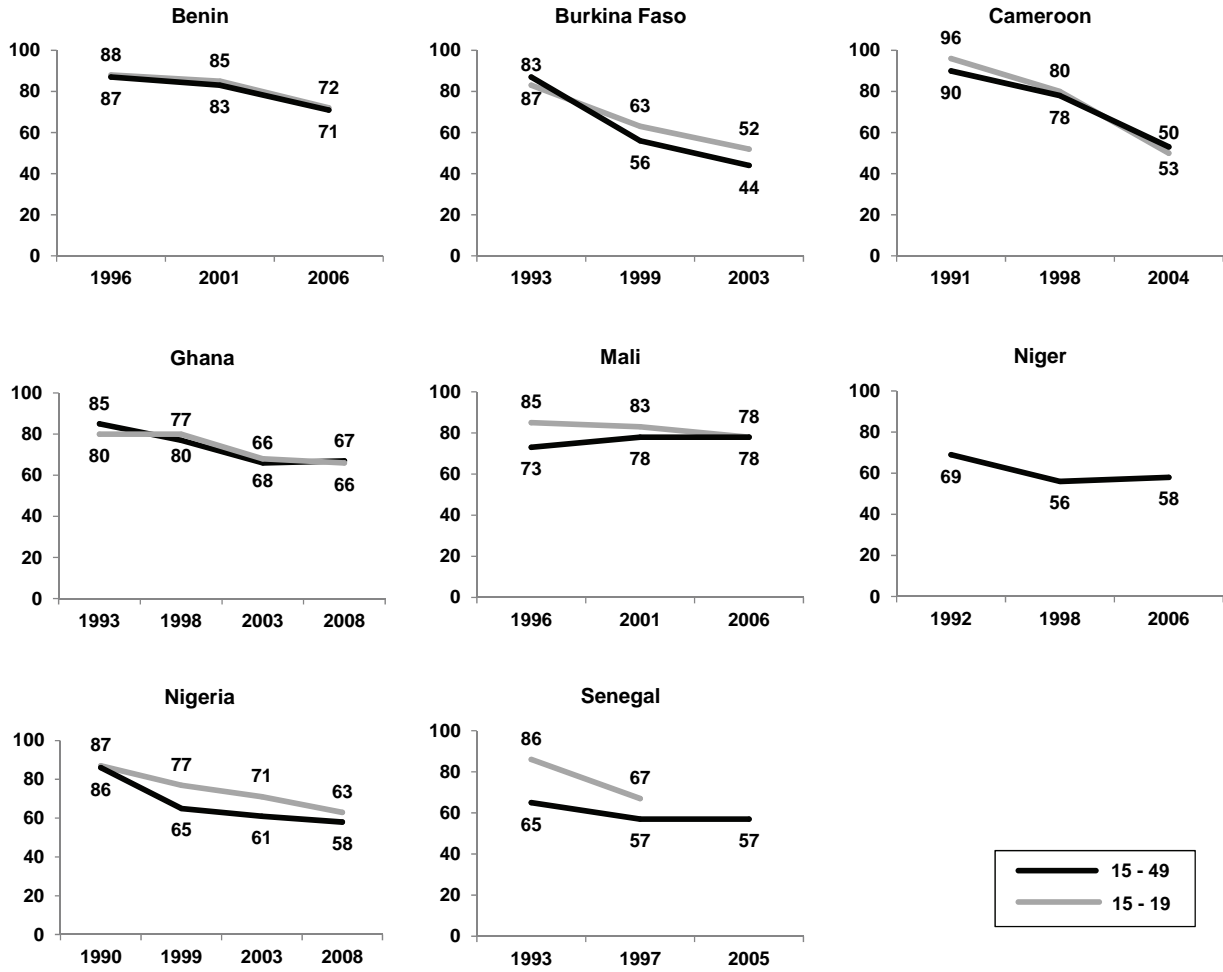
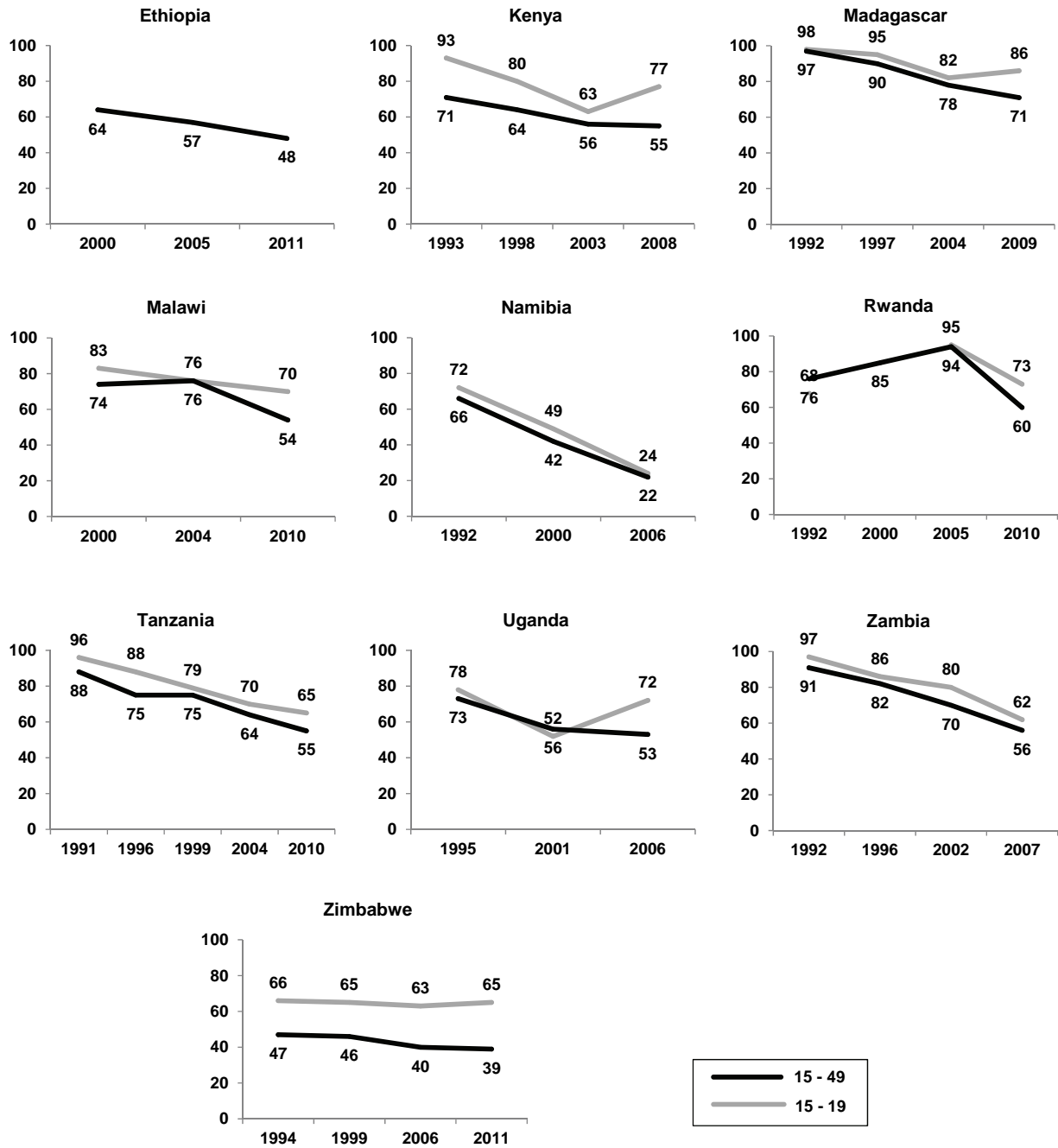


Figure 3. – Continued

East / Southern Africa



18 Summary and Conclusions

The objective of this report is to update comparative trends in unmet need using the newly revised algorithm (Bradley et al. 2012), to focus on modern methods, and to examine the covariates of unmet need for modern methods.

The most recent level of unmet need for modern methods for currently married women averages 32 percent, while current use of modern methods ranges from 9 percent in West and Middle Africa to 51 percent in Latin America and the Caribbean. Total demand for modern methods (contraceptive use plus unmet need) is increasing in most of the countries, along with a general declining trend of unmet need. There is a clear increase in the satisfaction of the total demand.

Unmet need for spacing dominates in sub-Saharan Africa, particularly in the West and Middle region, where in all countries it exceeds the unmet need for limiting births. Women with an unmet need are less educated than women using a modern method, are more likely to live in rural areas, want more children on average, and are less exposed to mass media.

Unmet need has declined sharply among women with no schooling as well as among more educated women. The trend in the “hard core” of women with an unmet need—those who have never used a modern method and who do not intend to use any method—is clearly downward in almost all of the countries studied, with the exception of about half of the countries in West and Middle Africa.

The main covariates of using a modern method among women at risk of an unintended pregnancy are wealth, television exposure and low child mortality. Media messages promoting family planning are significant in a number of individual countries. In general, the covariates of modern method use are the same for birth spacing and for limiting.

The study also assessed unmet need among unmarried, sexually active women in countries that included the necessary data, for both women age 15-49 and age 15-19. The total demand for modern methods (contraceptive use plus unmet need) in this group exceeds 80 percent. The amount of schooling is the most important determinant of modern method use. Trends in the percentage of sexually active unmarried women who are *not* using modern methods indicate a clear decline for young women age 15-19 and for women age 15-49 in almost all of the 23 countries examined.

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