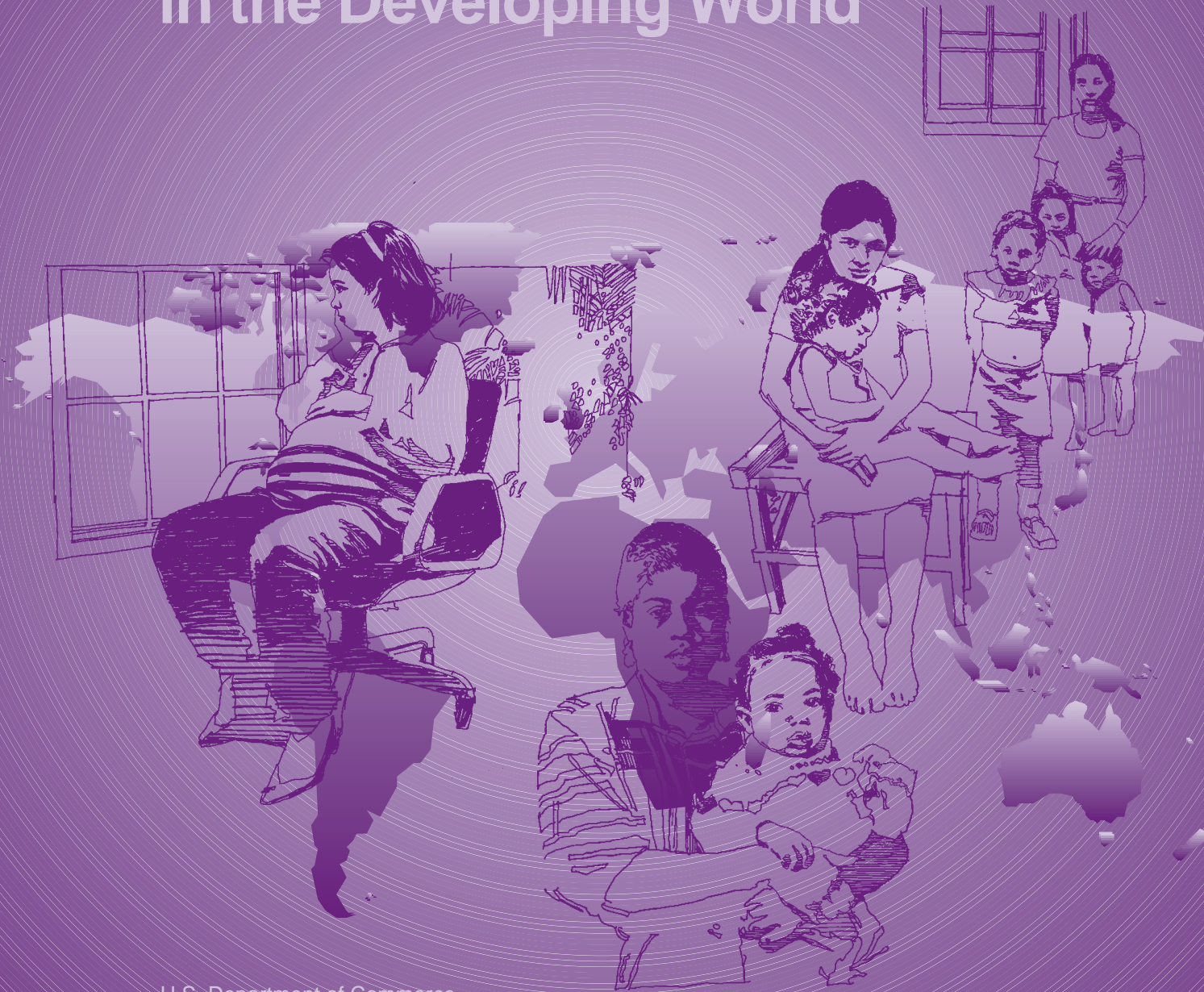


IPC/95-1

Trends in Adolescent Fertility and Contraceptive Use in the Developing World



U.S. Department of Commerce
Economics and Statistics Administration
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Trends in Adolescent Fertility and Contraceptive Use in the Developing World

by
Thomas M. McDevitt
with Arjun Adlakha, Timothy B. Fowler and Vera Harris-Bourne



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Preface

The reproductive health of adolescents is an area designated in need of special attention in USAID's statement of objectives, approach, and program priorities in reproductive health (May 1994):

recognition of the special needs of adolescents...[is] critical to the implementation of reproductive health programs and deserve[s] priority attention.

This report collects and summarizes information on the reproductive behavior of adolescent women in the major regions of the developing world. Combining information for all countries from the Census Bureau's International Data Base with information from demographic surveys, this report identifies key trends and patterns that will assist policymakers, program directors, and specialists in making appropriate and effective decisions.

Although the report was not planned as a complement to the growing body of work on adolescent reproductive behavior in developed countries (see, for example, United Nations 1988a; Jones et al. 1986; The Alan Guttmacher Institute 1994; as well as WHO 1989a and 1989b, which draw heavily on available data from more developed countries), it should also contribute to our understanding of the commonalities in adolescent reproductive behavior, contraceptive use, and fertility trends worldwide.

Overview

About 15 million babies are born to adolescent mothers each year. These are high-risk births from the perspective of the health of both mother and child. They are also high-cost births when the associated negative effects on the quality of life and role of women in society are considered. About 8 in every 10 of these babies are born in the developing countries of Asia, Africa, and Latin America. And about 13 percent of all children born in developing countries are born to teenage mothers.

If present trends continue, about 325 million births to adolescents will occur in the developing world over the next quarter of a century. Other adolescent reproductive health problems — including pregnancy-related morbidity, sexually transmitted diseases (including HIV/AIDS), and unsafe abortion — are also expected to persist, though their levels over the coming 25 years are difficult to estimate.

The extent to which specific adolescent reproductive behavior patterns are considered problematic varies from society to society. In some societies, including a number in Africa and Asia, early marriage and childbearing are strongly supported. Unfortunately, the health implications of pregnancy and childbirth for adolescent women and for babies born to women in this age group are no less a matter of concern than in more rapidly changing, less supportive societies. Reproductive health is a particular concern in the case of early adolescent pregnancy and childbearing; i.e., where the mother is age 17 or younger rather than age 18 or 19.

Survey data from 56 countries have been assembled in this report to describe recent trends in adolescent reproductive behavior and the correlates of that behavior. Four key determinants of adolescent fertility are considered: residence, female educational attainment, age at marriage, and contraceptive use. Residence and female educational attainment have repeatedly been shown to be related to the supply and demand for children, to fertility intentions, or to fertility itself. However, the influence of these variables is generally considered to be indirect, operating through other variables referred to in the literature as intermediate (or proximate) determinants of fertility. Age at marriage and contraceptive use, the other two causal variables considered in this study, are proximate determinants of fertility. Empirical relationships between childbearing and both types of causal variables are also reported for the countries of Asia, Africa, and Latin America.

The principal findings of the report:

- Most developing countries for which survey data exist have experienced some decline in adolescent fertility during the past 10 to 15 years. The largest declines have been in the countries of Asia, the Near East, and North Africa; the smallest, in Sub-Saharan Africa. Many of the countries of Latin America and the Caribbean, which had the lowest adolescent fertility in the developing world in the early 1970's, now have higher rates than some countries in Asia, the Near East, and North Africa.
- Although the number of births per 1,000 women ages 15 to 19

has declined and will continue to fall during the coming 25 years, the growing numbers of young women in Sub-Saharan Africa (the result of past high fertility in this region) mean there will be roughly a 23 percent increase in teenage births in Sub-Saharan Africa during the 1995-2020 period. Absolute numbers of births to teenage mothers will fall in the rest of the developing world, most noticeably in the more developed countries of Latin America and the Caribbean.

- Countries with the highest *early* adolescent fertility in the 1990's are also countries with higher overall adolescent fertility and higher infant mortality rates. There is no reason to expect these relationships to change in the coming years.
- Declines in adolescent fertility have tended to exceed those of women in the prime reproductive years in the same countries during the past 10 to 15 years.
- Which regions and which countries within the developing world have higher adolescent birth rates is likely to be related to patterns of urbanization and the growth of educational enrollments over the next 25 years. At present, about 24 percent of rural women in the developing world begin childbearing in their teenage years versus about 16 percent of urban women. This, and the continuing trend toward urbanization in the developing world, imply that adolescent fertility will continue to fall during the remainder of the 1990's.
- Demographic and Health Surveys (DHS) data collected in the

late 1980's and early 1990's show that the average proportion of women who begin childbearing during their teenage years among those with secondary or higher education is about 30 percent of that for women with no education. Even a primary education is associated with significantly later initiation of childbearing — the mean proportion of young women with primary schooling who begin childbearing as adolescents is about 60 percent of that of women with no schooling.

Over the past 20 years, both primary and secondary female enrollment ratios (ER's) have risen substantially in most developing countries. However, ER's also fell in a number of low-income countries including, in particular, African countries during the 1980's. This suggests that in some countries a powerful factor behind past declines in adolescent fertility may be less supportive of further declines during the next decade.

- Of the two proximate determinants of adolescent fertility considered in this report, the timing of marriage has been the more important in determining adolescent fertility (as opposed to the overall, or completed, fertility of women) since the early 1970's.

Once married, adolescent women living in Africa, Asia, and Latin America begin their reproductive lives with relatively low reliance on contraception. And when they do use contraception to delay or limit their childbearing, they may use less efficient methods than do older women.

- Actual use of family planning is generally considered a function of motivation and access to family planning services, regardless of the age group involved. The data extracted from DHS reports and presented here confirm the fact that access is related to use but is not a sufficient condition for use.
- Data presented in this report indicate that the use of modern methods of family planning by adolescent women has risen in most, but not all, countries of the developing world during the past 10 to 15 years.

At the same time, approximately 13 million teenage women living in developing countries have unmet need for family planning. In many Asian, African, and Latin American countries, 30 percent or more of married adolescent women wish to delay or limit childbearing but are not currently using contraception.

Limited data from the Demographic and Health Surveys program suggest that there may be some additional unmet need attributable to sexually active, unmarried teenagers who are not using any means of contraception.

These statistics represent both a challenge and an opportunity for the governments of the developing world to improve the reproductive health of their adolescent populations.

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Introduction

The 1994 International Conference on Population and Development represents a milestone in drawing attention to the reproductive health needs of the populations of both more developed and less developed nations. The Cairo Program of Action's chapter on reproductive rights acknowledges the need to urgently address the well-documented maternal and infant health problems of high-risk pregnancies (United Nations 1994b). However, it goes beyond the previous World Population Plan of Action in specifically underscoring the need to contend with the adolescent reproductive health issues of unplanned pregnancies, sexually transmitted disease, and unsafe abortion.

This report contributes to the information base upon which policy and programmatic decisionmaking takes place by bringing together survey data collected over the past 25 years to show how adolescent reproductive behavior has changed and to quantify current levels and regional variation in factors affecting teenage fertility. The report also suggests the magnitude of the challenge to improve adolescent reproductive health facing the nations of the developing world during the coming 25 years.

This report specifically focuses on the reproductive activity of women 15 to 19 years of age living in the developing world, together with the correlates and determinants of that

behavior.¹ Special attention is given to trends in their fertility, because of its high-risk nature, and to regional variations in the proximate determinants of that fertility. This kind of information is potentially useful to decisionmakers and others concerned with progress in developing countries. While all countries face economic and social burdens because of adolescent childbearing and/or the other adolescent reproductive health concerns mentioned, these burdens weigh more heavily on developing countries, which have fewer resources with which to respond.

¹ The term "adolescence" is variously defined in studies like this one as "the state or process of growing up," "the period of life from puberty to maturity," and "the period of transition from childhood to adulthood, [encompassing] both the development to sexual maturity, and to psychological and relative economic independence" (United Nations 1988a, IPPF 1994:5). The age range implied by such description is obviously imprecise. Operational definitions vary. The United Nations (1987, 1988a, 1989) chose to look at the reproductive behavior of teenagers; i.e., those in the age range 13-19, in its work on this subject. Bledsoe and Cohen (1993), the Population Reference Bureau in its use of Demographic and Health Surveys data (1992; Yinger et al. 1992), and the World Health Organization's (1989a, 1989b) work, *The Health of Youth*, focus on the age range 15 to 19. Studies of "youth" tend to address a broader and somewhat older age group — young people ages 15 to 24.

Throughout this report, the term "adolescent" refers to women ages 15 to 19. Statements about "teenagers" and "teenage" behavior refer to the broader age range 13-19 (as an approximation of the post-puberty population under age 20), but as a practical matter most teenage reproductive behavior tends to occur in the age range 15 to 19 in most populations.

The "Problem" of Adolescent Fertility

The adverse effects of teenage sexual behavior, pregnancy, and childbearing are generally well documented:

- Young women are more likely than more mature women to suffer pregnancy-related complications that endanger their lives or lead to infertility. Teenage pregnancies are more likely to end in delayed or obstructed labor; ruptures in the birth canal; and associated death of mother, infant, or both. These risks are greater if prenatal care is inadequate (United Nations 1989:83-105).

Limited data suggest that maternal mortality rates for women ages 15-19 may be up to double those of women in their twenties and early thirties (World Health Organization 1989a,b).

- Adolescent pregnancies are more likely to be associated with low birth weight, prematurity, birth injuries, stillbirth, and infant mortality (Bledsoe and Cohen 1993:5; WHO 1989b:5).
- Younger, unmarried women are more likely than older, married women to consider late, unsafe abortions as an alternative to carrying a pregnancy to term (Kirby and Cromer 1994:11; Bledsoe and Cohen 1993:6; cf. WHO 1989b:7).

- Unmarried, sexually active adolescents are subject to greater risks of infection with sexually transmitted diseases (including HIV/AIDS in a growing number of countries) than are married women.

Apart from the health risks, adolescent childbearing and the conditions associated with it are fundamental factors determining the quality of life and role of women in a society.

- Untimely pregnancy can force young women to discontinue their education, reducing their employment options later in life.
- Health problems, lack of education, and the responsibilities of parenthood combine to further restrict women's future economic opportunities and career choices.
- In some societies, both mothers and children may suffer social ostracism when teenage births take place outside marriage.

The implications for society include the immediate costs of addressing the health problems. But the longer term costs may be even greater, if less amenable to measurement.

- The investment made in women's education may not be fully realized once young women are forced to withdraw from further schooling. The potential economic and the non-economic contributions of a large component of society will be limited as these young mothers are forced to devote themselves to child care and rearing.

As Nafis Sadik, Executive Director, United Nations Population Fund (UNFPA), has put it: "... adolescent fertility worldwide continues to be a roadblock to girls' and women's educational achievement, their status, and their full participation in society."²

- Finally, national efforts to limit population growth will suffer, not just because of the early childbearing by these women, but because childbearing at early ages tends to be associated with higher fertility over women's reproductive lives. Rapid population growth represents a challenge to nations in terms of providing education, health services, and employment for its people now and in the future.

These are the "problems" of teenage sexual activity, pregnancy, and childbearing documented over and over in the literature. However, the extent to which adolescent reproductive behavior is considered problematic varies from society to society within the developing world. And for this reason, it is useful to begin with a shared understanding of the commonalities involved. We borrow here from Bledsoe and Cohen (1993:7-9), who distinguish between two "configurations" of adolescent fertility and the different problems associated with them.

In some societies, including a number in Africa and Asia, marriage during the adolescent years is strongly supported. Married adolescents, often rural-resident, have their

first births at a very young age, but this in itself is not considered by society to be a problem. The real problems stem from the physiological immaturity of the young mother. In other societies, unmarried adolescents, possibly urban-resident but in any case part of rapidly changing societies, face a wider range of problems associated with sexual activity, pregnancy, and childbirth. These include the same negative health consequences of early pregnancy faced by the first group of young women, but also the higher risks of sexually transmitted diseases and abortion and reduced educational and economic prospects.

The health and social welfare literature gives somewhat more attention to teenage pregnancy among unmarried, urban-resident schoolgirls than to childbirth within marriage to women ages 15-19. But it is important to bear in mind that the problem of adolescent fertility is, in fact, a general problem because (1) the health concerns cited apply equally to both groups; (2) the issue of women's status and economic participation is taking on increasing importance, even where early marriage is sanctioned; and (3) rapid population growth is, again, a challenge to many developing nations. It is for this reason that the focus of this report is on the reproductive behavior and, in particular, the fertility of women ages 15-19 rather than being confined to the specific problems of unmarried adolescents.

² Cited in Kirby and Cromer (1994:10).

Framework

Variations in observed levels of adolescent fertility over time and across populations are a function of a set of intermediate, or “proximate,” determinants; specifically,

- exposure to sexual intercourse and the timing and predominance of marriage, and
- contraceptive use rates and abortion rates.

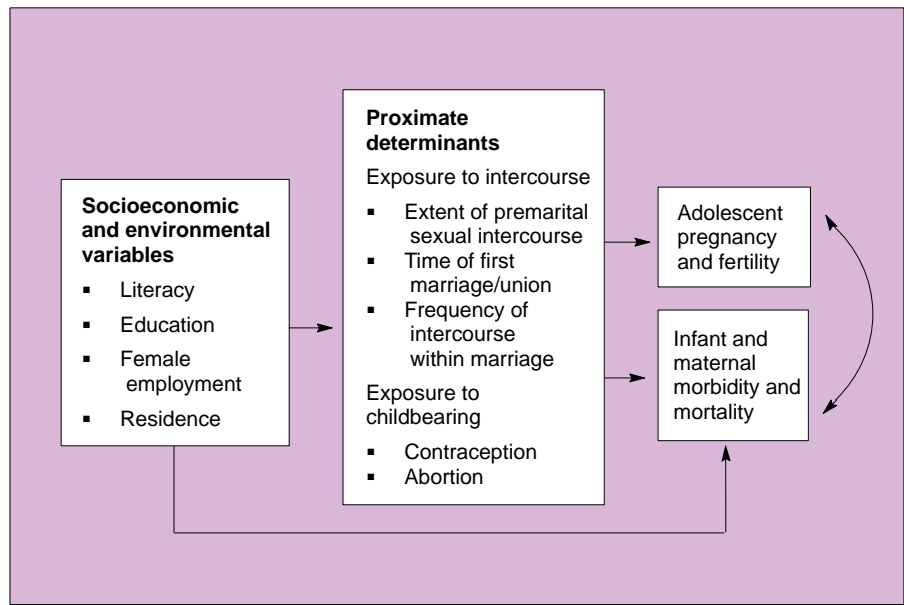
However, data availability dictates a focus on marriage and contraceptive use in this report.

Beyond the proximate determinants, adolescent fertility is also a function, indirectly, of significant and complex underlying changes ongoing in developing societies. Some of these changes are reflected in evolving patterns of residence — urban versus rural — as well as general improvements in literacy or the educational attainment of young men and women themselves (figure 1).³

³ Figure 1 is not meant to be a full framework for explaining fertility cross-nationally, or even a full listing of proximate determinants in the same way that the frameworks proposed by Davis and Blake (1956) and Bongaarts (1978, 1982) are. A number of the intermediate determinants of fertility given in these well known frameworks are not listed here because they are of lesser importance to adolescent fertility. Age at first intercourse and frequency of premarital sexual relations, which receive little attention in the Kingsley-Blake and Bongaarts discussions but are recognized as proximate determinants of fertility in many of the Demographic and Health Surveys final country reports, are listed in figure 1 because these variables are particularly relevant to the frequency of adolescent pregnancy and childbearing. In addition, more attention is given in this report to some determinants of fertility than to others, generally for reasons having to do with data availability.

Figure 1.

The Framework for Discussion of the Factors Associated With Adolescent Fertility Change in This Report



The ordering of the information presented in this report follows this distinction between proximate and underlying factors.

The Contribution of This Report

This report uses information from the Demographic and Health Survey (DHS) program carried out by Macro International, Inc. from 1984 to the present; the World Fertility Survey (WFS) program overseen by the International Statistical Institute during the 1970's and early 1980's; and the family health and contraceptive prevalence surveys carried out by the Centers for Disease Control (CDC) since 1985. Combining data from these three sources allows us to identify major trends in adolescent reproductive behavior and the correlates of that behavior.

Data are available for 56 countries representing over three-fourths of the developing world's population (excluding China). The countries covered are grouped in this report into three major regions and represent a sizeable percentage (shown in parentheses) of the total 1995 population of each region:

- Sub-Saharan Africa (SSA — 63 percent)
- Asia, Near East, and North Africa (ANENA — 81 percent, excluding China and Japan)
- Latin America and the Caribbean (LAC — 82 percent)

The countries are listed in table 1, along with the years for which survey data are available.

Table 1.
Surveys Used in This Report

Region/country	Demographic and Health Surveys	World Fertility Surveys	Centers for Disease Control Surveys	Region/country	Demographic and Health Surveys	World Fertility Surveys	Centers for Disease Control Surveys
SUB-SAHARAN AFRICA (SSA)				LATIN AMERICA/CARIBBEAN (LAC)			
Botswana	1988			Belize			1991
Burkina Faso	1993			Bolivia	1989		
Burundi	1987				1994		
Cameroon	1991	1978		Brazil			
Cote d'Ivoire		1980/1981		Total country	1986		
Ghana	1988	1979/1980		Northeast	1991		
	1993			Colombia	1986	1976	
Kenya	1989	1977/1978			1990		
	1993			Costa Rica		1976	1986
Liberia	1986						1993
Madagascar	1992			Dominican Republic	1986	1975	
Malawi	1992				1991		
Mali	1987			Ecuador	1987	1979/1980	1989
Mauritius			1985	El Salvador	1985		1988
			1991				1993
Namibia	1992			Guatemala	1987		
Niger	1992			Guyana		1975	
Nigeria	1990	1981/1982		Haiti		1977	1989
Rwanda	1992			Jamaica		1975/1976	1989
Senegal	1986	1978					1993
	1992/1993			Mexico	1987	1976/1977	
Sudan (Northern)	1989/1990	1978/1979		Nicaragua			1992/1993
Tanzania	1991/1992			Panama		1977	1984
	1994			Paraguay	1990	1979	1987
Togo	1988			Peru	1986	1977/1978	
Uganda	1988/1989				1991/1992		
Zambia	1992			Trinidad and Tobago	1987	1977	
Zimbabwe	1988						
ASIA/NEAR EAST/NORTH AFRICA (ANENA)							
Bangladesh	1993/1994	1975/1976					
Egypt	1988	1980					
	1992						
India							
Total country	1992/1993						
Uttar Pradesh (UP)	1992/1993						
Indonesia							
Total country	1991						
Bali and Java	1987	1976					
Jordan	1990	1976					
Morocco	1987	1980					
	1992						
Pakistan	1990/1991	1974/1975					
Philippines	1993	1978					
South Korea		1974					
Sri Lanka	1987	1975					
Syria		1978					
Thailand	1987	1975					
Tunisia	1988	1978					
Turkey	1993	1978	1988				
Yemen (Sana'a)	1991/1992	1979					

Note: Data were available from World Fertility Surveys for Benin, Lesotho, Mauritania, and Venezuela. However, since this was the only information available and therefore not current, it is not used in this report. In addition, the World Fertility Surveys in Costa Rica and in Panama did not collect data for adolescent females, the DHS report for Nepal has not been published, and survey data from a survey for Grenada conducted by the Centers for Disease Control are not available. Only limited use of data for these countries has been made in this report for these reasons. Finally, only the Uttar Pradesh State report and the preliminary (Introductory) national report were available for India when this report was written, and data presented in the charts and appendix tables of the report reflect this limitation.

The Magnitude of the Problem

The magnitude of the problem of adolescent fertility in the developing world can best be understood in terms of (1) the size of the adolescent cohort; (2) regional adolescent birth rates and the adverse effects of teenage sexual behavior, pregnancy, and childbearing specific to each region; and (3) the growth in numbers of adolescent women, numbers of births, and associated problems over the next quarter century.

The Adolescent Cohort and Its Children

There are some 254 million women ages 15-19 (hereafter, “adolescents”) alive in 1995, and about 2 in every 3, or 164 million, live in Africa, Asia, the Near East, or Latin America and the Caribbean (figure 2 and appendix table 1). These numbers are projected to increase during the next quarter century. The size of the adolescent cohort will grow by over 60 million, to 315 million young women, by the year 2020, and nearly all of this growth will occur in these three regions. Sub-Saharan Africa alone will account for half of the increase. By the end of the next 25 years, the number of adolescent women living in the “remaining world” will actually have declined by about 7 million persons. Nearly 3 in every 4 adolescent women will then be living in Asia, Africa, the Near East, and Latin America.

Projected numbers of births to adolescents, in contrast, will decrease slightly over the course of the next 25 years, from 15.3 million annually to approximately 15.0 million. (Data are from appendix table 2). Numbers of adolescent births should fall

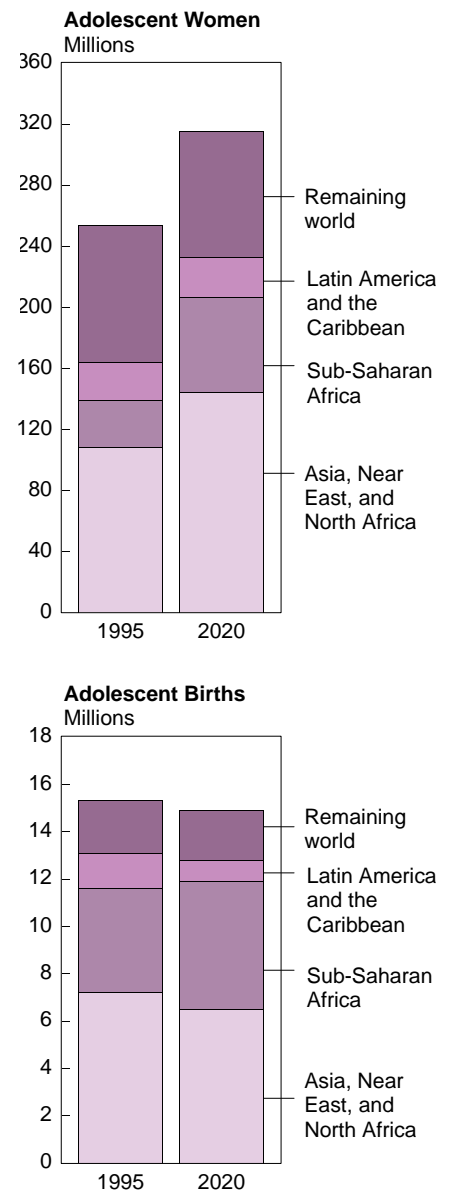
by about 10 percent of the 1995 value in Asia, the Near East, and North Africa; by 40 percent in the relatively more developed countries of Latin America and the Caribbean; and by a smaller amount in the rest of the world. However, approximately one million *more* births will occur each year to teenage mothers in Sub-Saharan Africa. This represents a 23 percent increase in teenage births in this region during the 1995-2020 period.

The number of adolescent births in each region of the world is a function of the number of women ages 15 to 19 and the number of births per 1,000 women in this age range that occur each year — the age-specific fertility rate (ASFR). Sub-Saharan African ASFR’s are generally higher than those for countries in other regions of the world (appendix table 3); the composite regional value is over twice that of the other developing regions. In addition, the fertility of young women in Africa is expected to remain well above that of adolescent women in other parts of the developing world through 2020 (appendix table 2). This helps explain why a growing proportion of adolescent births will occur in Sub-Saharan Africa over the 1995-2020 period even though more adolescent women live in Asia, the Near East, and North Africa. Adolescent fertility for the table 1 countries as estimated by the U.S. Bureau of the Census are shown in figure 3.⁴ Countries with high fertility (ASFR’s of 150 births per 1,000 women or more) and moderately high fertility (ASFR’s in the 125-to-149 range)

⁴ Data are in appendix table 3.

are predominantly Sub-Saharan African.

Figure 2.
Adolescent Women and Adolescent Births: 1995–2020

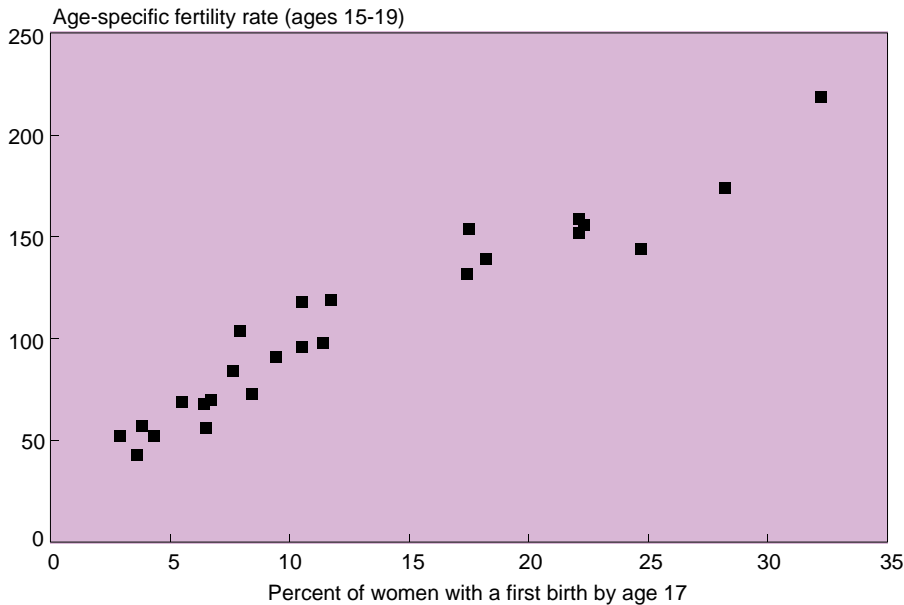


Note: Asia excludes Japan and China (Mainland). Remaining world includes China (Mainland), all developed countries and Oceania.

Figure 3.
Adolescent Fertility Rates: 1995

Map not available at this time.

Figure 4.
Adolescent and Early Adolescent Fertility
 (25 countries)



Associated Health Problems

The presumed adverse health and social effects, as well as the macro-level costs, of a possible 15 million teenage births each year for the next 25 years are difficult to quantify. Obviously, much depends on whether governments initiate or expand programs addressing adolescent reproductive health education, information, and care; whether educational and employment opportunities are available to women in the same way they are available to men; and whether young mothers will be able to take advantage of these opportunities.

The effects will be greatest in those countries with higher proportions of adolescent births to younger mothers (i.e., ages 15-17) compared to older adolescents (ages 18-19). The countries with the highest levels of adolescent age-specific fertility currently also tend to be the countries with the highest rates of *early* adolescent fertility. Data taken from 24 Demographic and Health Surveys conducted in the early 1990's show a close relationship between proportion of women who by age 17 have had one or more births and overall adolescent fertility (figure 4).

The health risks of adolescent sexual activity, pregnancy, and childbearing are well-documented:

- Infant mortality rates (IMR's) are generally significantly higher for babies born to adolescent mothers than for infants born to women in their twenties or thirties. Births to teenage mothers are subject to higher risks of low birth weight and complications associated with delivery resulting in higher mortality. Data from DHS and CDC surveys conducted in the late 1980's and early 1990's indicate that IMR's for younger women are higher than those for women in the age group 20-29 by as much as 80 percent (figure 5 and appendix table 6, column 4).

Infant mortality differentials for children born to adolescent mothers vis-a-vis older women vary from country to country and from region to region. The differences are also larger in a relative sense where the absolute IMR levels are now lower, as in Latin America, Asia, the Near East, and North Africa.

A child born to an adolescent mother in Sub-Saharan Africa is more likely to die in infancy than in any of the other regions. However, because infant mortality is relatively high at all maternal ages in this region (infant mortality rates of 150 infant deaths per 1,000 births or higher are found in the region (appendix table 6, columns 2 and 3)), Sub-Saharan Africa has the

Figure 5. Infant Mortality Rate by Age of Mother

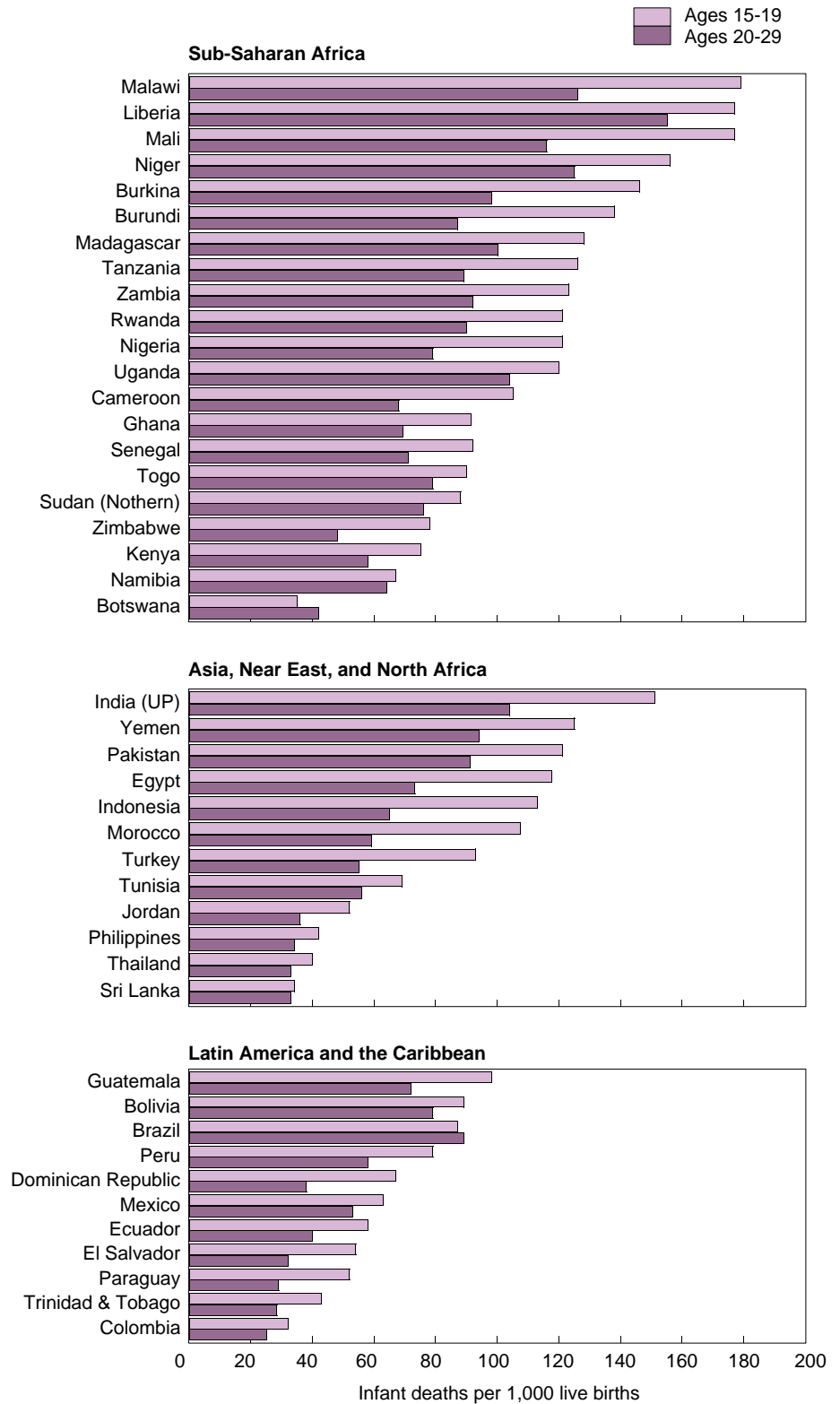


Figure 6.
**Infant Mortality by Percent of Women With
 One or More Births by Age 17**
 (24 countries)



lowest average *relative risk*⁵ of dying in the first year of life associated with early motherhood.

⁵ Relative risks shown in appendix table 6, column 4, are simply the ratios of (1) IMR for babies born to mothers ages 15-19 to (2) the rate for mothers ages 20-29. A rate in excess of 1.0 indicates that babies born to adolescent mothers are subject to a higher risk than are those born to women ages 20-29.

The relative risk of early child-bearing is in excess of 1.5 in a few countries in each of the three regions, but the highest relative differentials are in countries in ANENA (Morocco 1.82, Turkey 1.6) and in LAC (Dominican Republic 1.77, El Salvador 1.69, Paraguay 1.79); i.e., for regions and, for LAC, in countries where infant mortality rates are comparatively low.

This suggests that adolescent infant mortality continues to be a problem even in those countries that have enjoyed some success in bringing down their IMR's overall.

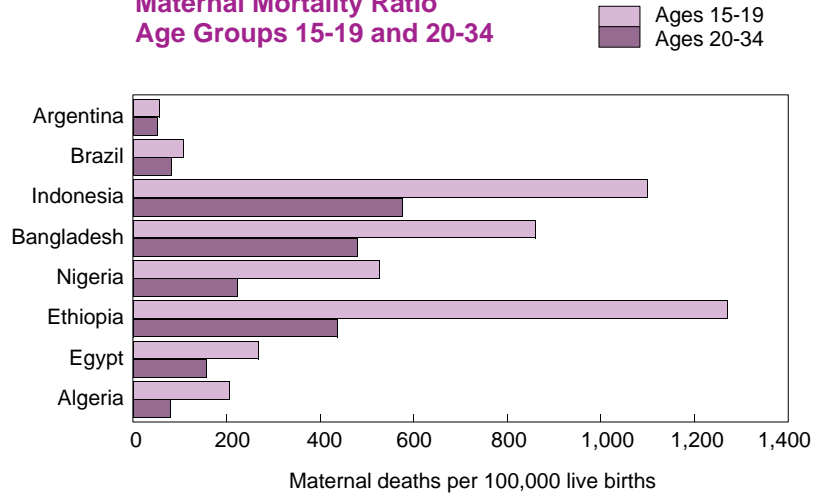
These data also reflect the fact that, because of the differences in mix of causes involved (the higher incidence of low birthweight births and birth complications associated with teenage pregnancies), it is easier to reduce infant mortality for older women than for teenage mothers.

- Infant mortality is highest in those countries with the largest proportions of early teenage births. When DHS data on adolescent pregnancy and child-bearing from surveys fielded in the late 1980's and early 1990's are combined with mortality figures from the International Data Base of the Bureau of the Census, the data show that, in general, the higher the percentage of women who have a first birth by age 17, the higher the infant mortality rate for teenage mothers (figure 6).

- The risk of maternal death is also greater for adolescent women than it is for more mature women. The difference in risk is greatest in generally high mortality populations (Ethiopia, Bangladesh, Nigeria, for example); less, in more advanced developing countries like Argentina and Brazil (figure 7).
- Sexually transmitted diseases (STD's) are considered a serious and growing problem associated with teenage sexual activity worldwide (United Nations 1994b:50). The Population Reference Bureau and the Center for Population Options (1994) have estimated that as many as 1 in 20 adolescents contracts an STD each year.

The concern about adolescent exposure to STD's is heightened because of the spread of the HIV/AIDS epidemic. About half of all HIV infections affect individuals under age 25 (WHO 1989c). And seroprevalence data from studies of pregnant women for a number of African populations taken from the HIV/AIDS Surveillance Database of the Bureau of the Census suggest that between 40 and 50 percent of the under-25 infections of young women, on average, occur to those in the age group 15 to 19 (figure 8).

Figure 7.
**Maternal Mortality Ratio
Age Groups 15-19 and 20-34**



Note: For Brazil, older women are ages 20-29.
Source: World Health Organization (1989a).

Figure 8.
**HIV Seroprevalence for Pregnant Women
Age Groups 15-19 and 20-24**

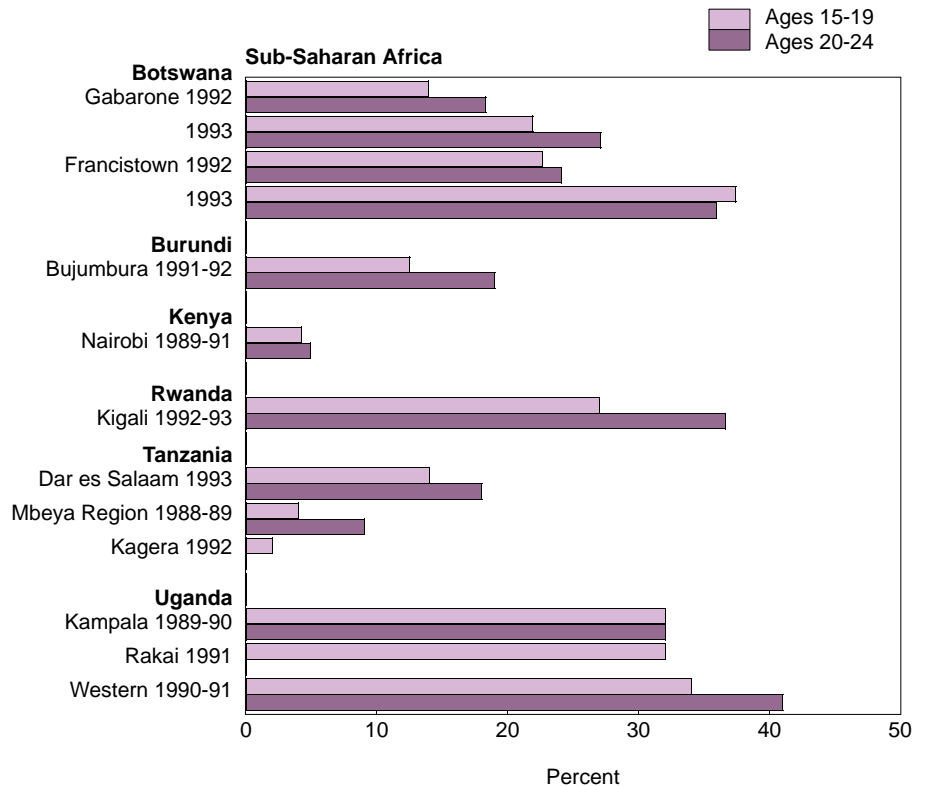


Figure 9.
Trends in Adolescent Fertility Rates

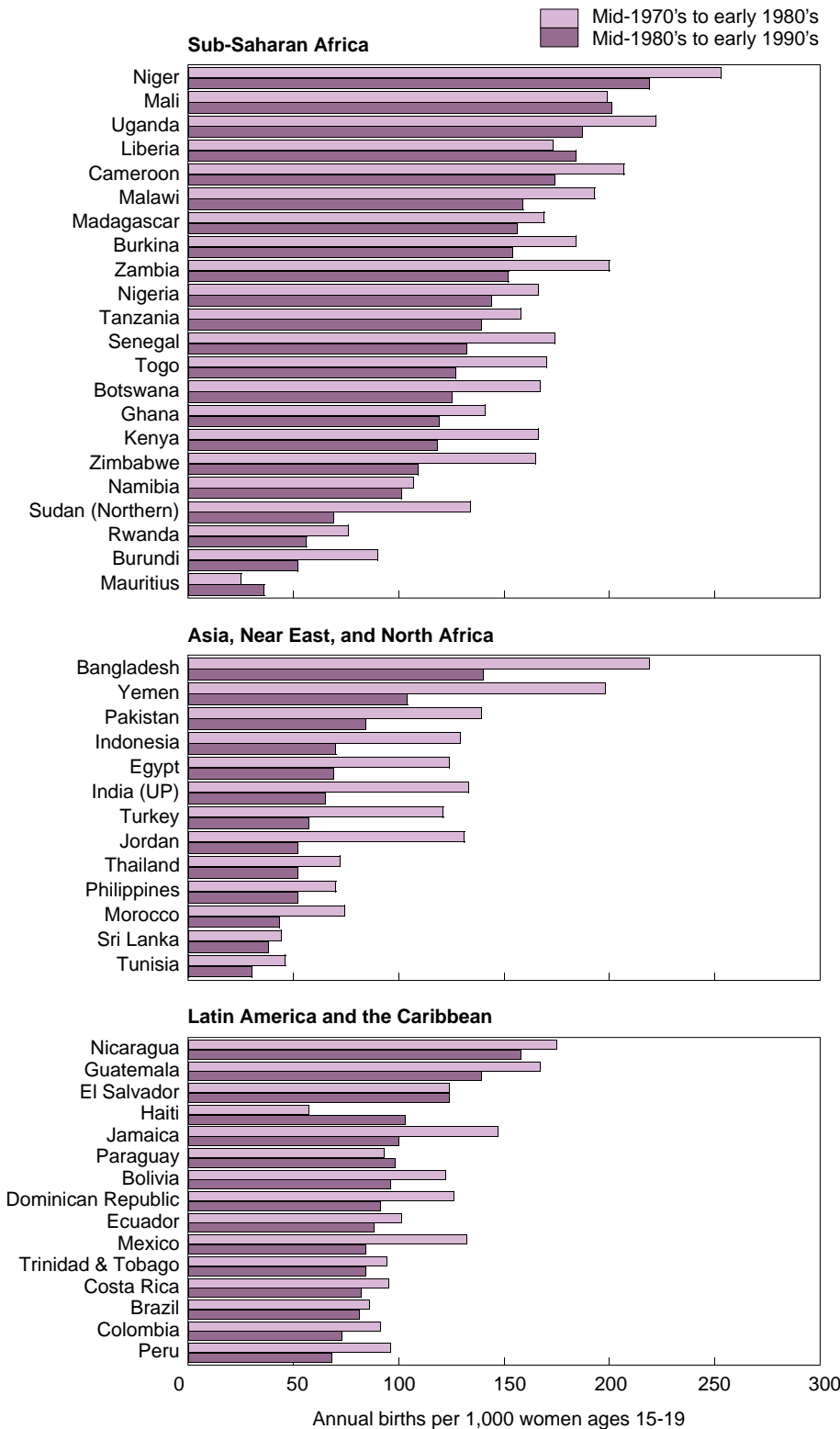
**Trends in Adolescent Fertility:
Past and Future**

The first two elements defining the magnitude of the problem associated with adolescent reproductive behavior in the developing world — the present size of the adolescent cohort and some of the implications of adolescent sexual activity, pregnancy, and childbearing — were the subject of the first two parts of this section. The third element has to do with foreseeable changes in the extent of that behavior, including increases in adolescent pregnancies and births, during the next 25 years.

Data from the World Fertility Survey studies in the late 1970's and early 1980's, and from surveys undertaken by the DHS program and Centers for Disease Control in the late 1980's and early 1990's provide a unique historical time series for studying the fertility of women ages 15 to 19 over this period.

Figure 9 shows estimates of adolescent age-specific fertility for periods immediately preceding surveys conducted in the two time periods. Taken at face value, the data indicate that rates of childbearing among adolescents appear to have declined between the mid-1970's and the early 1990's in nearly all countries for which data for two time periods are available.

Seeming anomalies, such as the apparent intersurvey increases in adolescent fertility in Haiti and Paraguay (third panel of figure 9), may be real, or not. These comparisons, like others based on unadjusted, published numbers taken



from two or more sources could be affected by differences in survey methodology or sample variation.

Retrospective birth history data from multiple surveys carried out in some countries and from single surveys in others provide partial time series for adolescent age-specific fertility and an arguably better basis for inferring trends.⁶ The results of an inspection of birth history data for 32 countries are classified according to strength of evidence of fertility decline in table 2. For the majority of countries, there is at least some evidence, and for a few countries rather strong evidence, of a decline in adolescent ASFR's since the 1970's. In a few cases, these data undercut conclusions that would be drawn from comparisons of adolescent ASFR's taken from two surveys. For example, Paraguay's birth history data suggest that adolescent fertility has probably not risen, as was implied in figure 9, but has instead remained relatively flat during the past two decades.

⁶ The birth history approach provides estimates for several dates prior to the survey date. For countries having two or more surveys with birth histories, a long series of data points is formed by combining estimates corresponding to several dates prior to each survey. For those countries where only one survey with birth histories is available, the derived trend in fertility is based on data points for a shorter period; specifically, three dates prior to the survey date. (Estimates too far back from the survey date are less reliable due to recall problems and are not used.) Four countries — Bangladesh, Haiti, Mauritius, and Jamaica — are not presented because birth history data for these countries either were not collected or were not available to us.

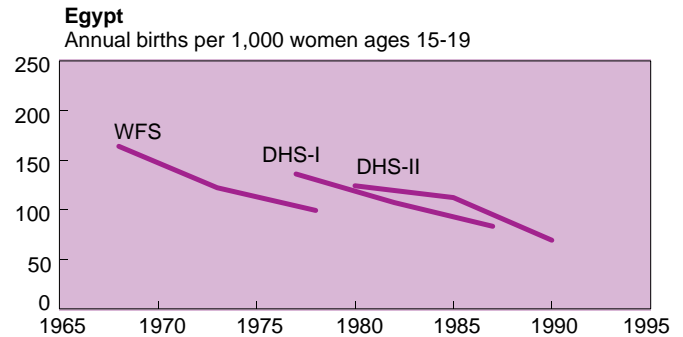
Table 2.

Countries Grouped by Strength of Evidence of Declining Adolescent Fertility

Clear evidence

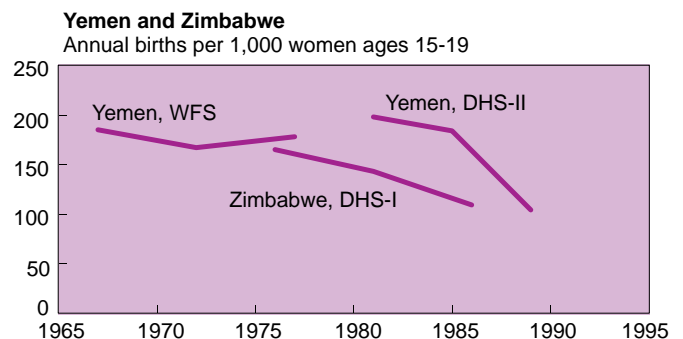
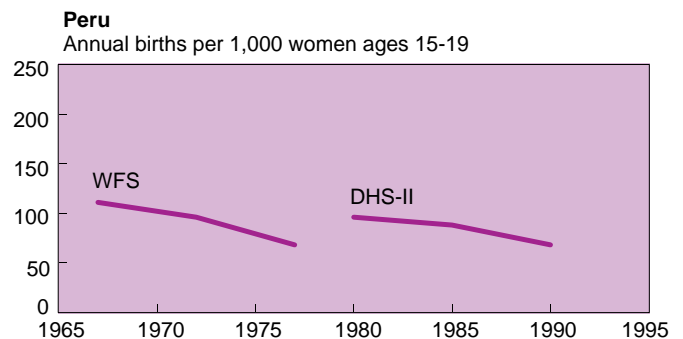
Jordan
Kenya
Morocco
Sudan (Northern)
Turkey

Representative countries



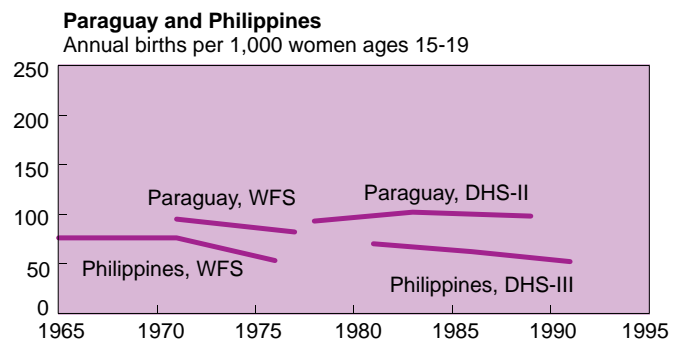
Some evidence

Cameroon
Colombia
Dominican Republic
Ecuador
Mexico
Peru
Tunisia
Yemen
Burundi
Malawi
Rwanda
Tanzania
Uganda
Zambia
Zimbabwe



Inconclusive evidence

Bolivia
Ghana
Paraguay
Philippines
Thailand
Trinidad & Tobago
Burkina
Liberia
Mali
Niger
Nigeria
Togo



When all the data are considered together, the conclusion is compelling that most developing countries have experienced some decline in adolescent fertility during the past 10 to 15 years. Moreover, the data suggest that this statement can be applied to a number of countries in Africa, as well as to countries in the other two regions.

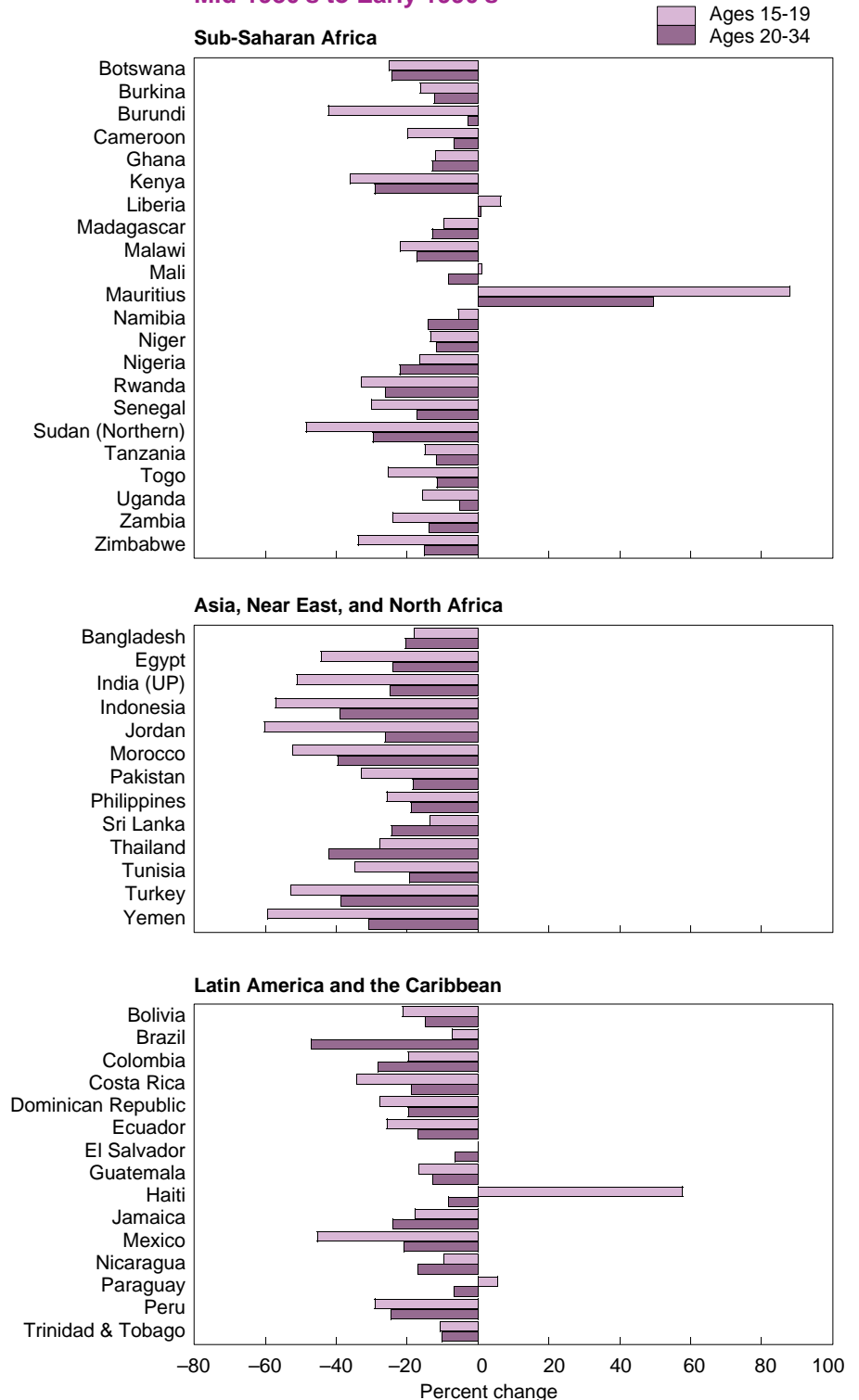
The general trend in teenage fertility has differed from region to region.

- *Sub-Saharan Africa.* The fertility of women ages 15 to 19 in Sub-Saharan Africa has been and continues to be higher than in any other world region. Sixteen of the 22 countries with survey data for two or more dates had adolescent fertility rates of over 150 births per 1,000 women during the mid-1970's to early 1980's period. Adolescent ASFR's declined at a moderate pace in most countries through the mid-1980's to early 1990's, and five countries recorded impressive declines of over 30 percent in adolescent fertility.
- *Asia, the Near East, and North Africa.* The largest declines in fertility over the past 10-15 years are found in the countries of Asia, the Near East, and North Africa, largely due to rising age at marriage. In the mid-1970's, this region had high fertility rates (in some cases as high as those in Sub-Saharan Africa) but recent adolescent fertility has been comparable to that found in developed countries such as the United States or Canada.
- *Latin America and the Caribbean.* Adolescent fertility in Latin America and the Caribbean countries declined only slightly during the past 10-20 years. Although most countries in the region have shown some decline, none of the countries considered here have fallen below 50 births per 1,000 adolescent women and most have ASFR's above 75. It is worth noting that during the earlier period most countries in the region had lower adolescent fertility rates than the countries in Asia, the Near East, and North Africa. Now, because of the slower decline, some of the region's countries have higher rates than countries in Asia, the Near East, and North Africa.

The recent decline in adolescent fertility reflects a broader decline in fertility that has occurred in many developing countries during the past 10-15 years, but the fall in adolescent fertility has tended to exceed the changes in other age groups. The decreases in teenage age-specific fertility, where they have occurred, have generally surpassed fertility declines in the prime reproductive years (ages 20-34) (figure 10 and appendix table 5).

This pattern is consistent with later marriage, which would affect the younger group more than the older group and which other evidence (including data presented on page 30) suggests is occurring in many countries. However, greater decline in fertility among adolescents is by no means an invariable pattern across countries, reflecting the fact that the causes of fertility decline during the past decade have not been limited to changes in age at marriage.

Figure 10.
Percent Change in Fertility, Age Groups 15-19 and 20-34: Mid-1970's to Early 1980's Versus Mid-1980's to Early 1990's



Note: Percent change in fertility shown is standardized for a 10-year period.

Table 3.
Regional Levels of Adolescent Fertility in 1995

Region	ASFR (15-19)
Asia, the Near East, and North Africa	66
Sub-Saharan Africa	143
Latin America and the Caribbean	60
Remaining world	25
World total	60

Source: Appendix table 3. Figures are for all countries of the region, not just for those for which survey data exist.

After varying amounts of change during the past 10-15 years, with some changes positive rather than negative, adolescent fertility in Sub-Saharan Africa remains far higher in 1995 than in the other developing regions distinguished here (table 3). Adolescent fertility in each of these regions is considerably in excess of that in the remaining countries of the world.

The adolescent age-specific fertility rates prevailing in 1995 are the

result of the changes in fertility that have taken place since the 1970's and the continuing relationships between the proximate determinants of that fertility, as well as linkages between certain underlying social and economic variables and these proximate determinants, and the ways in which both sets of relationships have changed during this period.

These factors are discussed in the following four sections of the report.

Residence

Residence, female literacy and educational attainment, and female labor force participation are the three socioeconomic variables most commonly associated with differentials in individual fertility and with variations in fertility across populations (see, for example, United Nations 1987). Evidence is presented in this report on the relationship between the first two of these variables — residence and educational attainment — and adolescent fertility.

Data relating to the linkage between labor force participation and fertility are not presented because (1) that link is somewhat tenuous in the case of women ages 15-19 — a smaller proportion of women in this age group are married than in other age groups, so the group as a whole does not face the same choices between the workplace and family that underlie the negative fertility-work relationships attributed

to other age groups;⁷ (2) a significant proportion of these women are still in school (and labor force participation is not an immediate issue for them); and (3) DHS cross-tabulations for adolescents address fertility-residence and fertility-education differentials but not fertility-labor force participation differentials.

Residence and Fertility

The mechanisms linking residence to fertility may be grouped into (1) the characteristics and preferences of individuals, which vary with residence; and (2) place characteristics.

- Part of rural-urban fertility differentials is explained by occupational and educational characteristics of rural residents

⁷ See United Nations (1987: chapter 9) for a discussion of theories for observed relationships between women's employment and fertility in developing countries.

vis-a-vis urban residents.

Urban women are more likely to be better educated, to be working in the modern sector, or to have modern sector employment as a foreseeable future career option. Urban women often earn higher incomes or live in higher income households.

- Another part of rural-urban differentials is attributed to locational factors that affect aspirations, family size preferences, and the cost of fertility regulation. Urban places typically offer better educational and modern sector job opportunities, better health facilities, and more access to contraceptive information and supplies. Residents of urban areas also tend to face lower social and financial costs of fertility regulation, a somewhat lower labor value of children, and higher out-of-pocket costs of having and raising children.

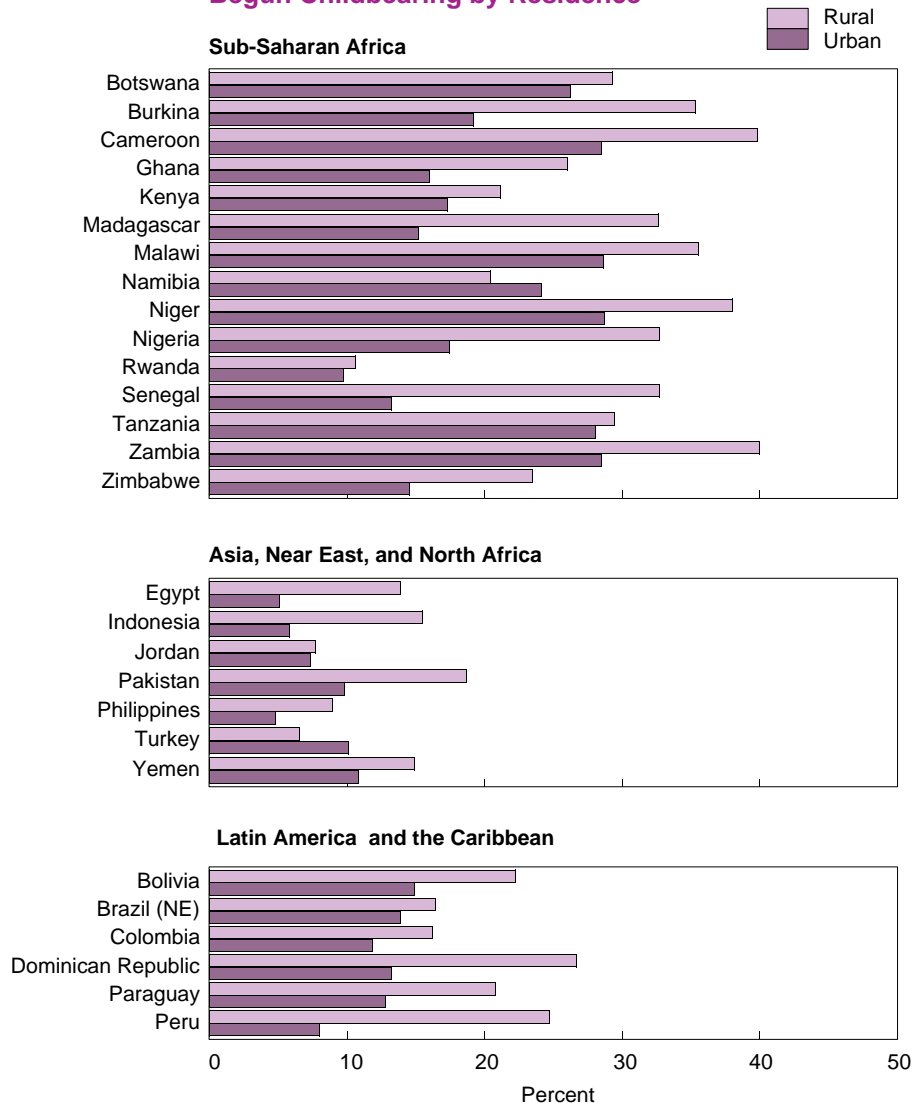
What the Data Show

Available evidence suggests that (at least during early and intermediate fertility transition stages) urban women have lower fertility because they desire smaller families, marry later, are more likely to use family planning and may also be more likely to use contraception more effectively. Offsetting these effects, urban women breastfeed less often and for shorter durations than rural-resident women, leading to earlier returns of ovulation following a birth and correspondingly shorter birth intervals (United Nations, 1987). While these generalizations refer to all women rather than to adolescent women per se, data from 28 countries where DHS or CDC surveys were conducted in the late 1980's or early 1990's are consistent with the statement. With two exceptions, the percentage of urban-resident adolescent women who have begun childbearing is less than the corresponding percentage of rural-resident women (figure 11 and appendix table 7).

The exceptions — Namibia and Turkey — are in no way obviously different from other countries insofar as residence-related determinants of young adult fertility are concerned. The DHS country reports for these two countries show higher urban ASFR's than rural ASFR's for the 15-19 year age group as departures from the general pattern for the country without further explanation.

Currently about 24 percent of rural women in the developing world begin childbearing in their teenage years versus 16 percent of urban-resident women (table 4).

Figure 11.
Percent of Adolescent Women Who Have Begun Childbearing by Residence



Both percentages are higher in Sub-Saharan Africa — 30 percent of rural and 21 percent of urban adolescents. The mean urban-rural differential is lower in Asia, the Near East, and North Africa than in the other regions.

In general, more urbanized countries tend to have lower adolescent fertility than nations with smaller proportions of their populations

living in towns and cities. Figure 12 shows the relationship for 50 table 1 countries between urbanization (in 1990) and age-specific fertility (late 1980's or early 1990's) for women ages 15-19. The relationship shown in figure 12 is negative (indicating that more urbanized countries do have lower adolescent fertility), but weak. The wide dispersion of data points about a

Table 4.

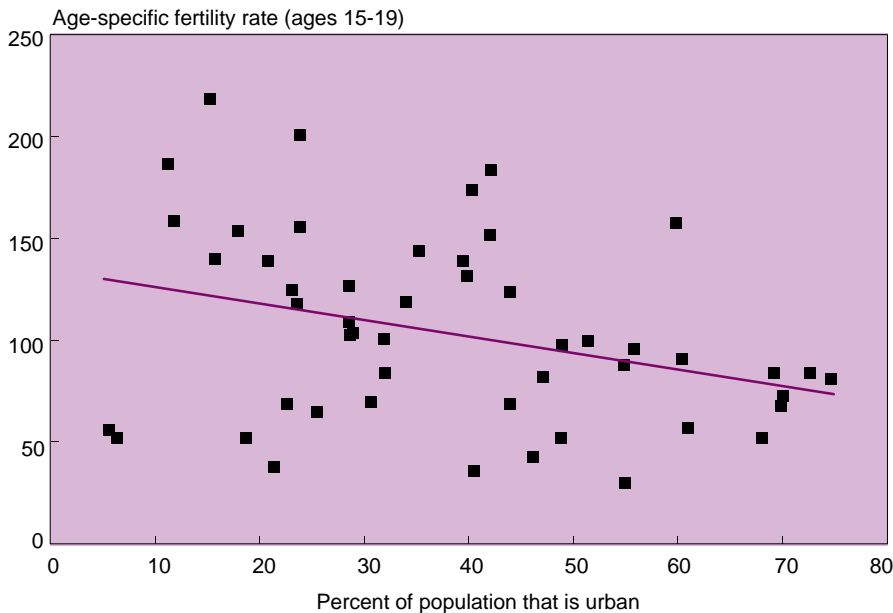
Residence and Childbearing

Region	Mean ¹ percentage who have begun childbearing ²		Percentage point difference
	Rural	Urban	
Asia, Near East, and North Africa	12.3	7.7	4.6
Sub-Saharan Africa	29.8	21.0	8.8
Latin America and the Caribbean	21.2	12.4	8.7
Developing world	23.6	15.8	7.8

¹ Unweighted means. Data are from DHS reports.

² DHS defines those who have begun childbearing to include women who have already given birth (mothers) or are pregnant with their first child.

Figure 12.

Adolescent Fertility and Urbanization: 1990
(50 countries)

regression line fitted to these data, particularly at lower percentages urban, also reflects the fact that residence by itself accounts for a small part of country-to-country variation in fertility. The slope of the fitted line implies that a 1 percentage point increase in urbanization is associated with about three-tenths of a percentage point decline in adolescent fertility.⁸

Trends in Urbanization and Childbearing

Between 1990 and the year 2000, the mean proportion of the population living in urban areas in Asia, the Near East, and North Africa may be expected to increase from around 32 percent to over 38 percent. In Sub-Saharan Africa, the urban population is projected to increase from about 28 percent to 34 percent; in Latin America and the Caribbean, from 71 to 76 percent (United Nations 1995: tables A.2 and A.3).

This trend and the negative relationships between urban residence and adolescent childbearing noted at both regional and country levels in the data presented here suggest that adolescent fertility in most developing countries will continue to fall during the remainder of the 1990's.

⁸ The point elasticity of ASFR with respect to urbanization is -0.28 at the mean level of urbanization for this group of countries.

Education

Female educational attainment is another important socioeconomic variable found in numerous surveys and studies to be associated with variation in reproductive behavior. More often than not, the data show that women with more education marry later and have lower fertility within marriage.

Education and Fertility

Education's effect on fertility has been described in terms of three causal paths (Cochrane 1979, United Nations 1987).

- Education dampens the demand for children. Education may directly affect desired family size and notions about acceptable styles of childrearing. Education also reduces the economic utility of children, creates aspirations for upward mobility that are not entirely consistent with having a large family, and increases the opportunity cost of women's time.⁹ Education also increases the earnings ability of women which should, in principle, represent a counterbalancing "income effect" — larger families become more affordable as a woman's

⁹ "Opportunity cost" refers to what a woman could be doing and, implicitly, what she could be earning if she were not devoting the level of time and effort that she does to childrearing.

contribution to household income rises — but the evidence seems to show that this effect is overshadowed by education's negative effects on demand in most contexts.

- Education has mixed effects with respect to the supply of children. Staying in school longer delays entry into marriage. However, in the absence of contraception, more education also may have a positive effect on the supply of children because better educated women may breastfeed less, and for shorter durations.

Better educated women tend to have lower rates of infant and child mortality, directly contributing to the "supply" of children but indirectly affecting fertility in the opposite direction, as birth intervals lengthen in response to higher infant and child survivorship.

- Finally, female educational attainment influences the cost of fertility regulation where the predominant methods of contraception are still female methods. Education reduces barriers to the adoption of family planning, in terms of awareness and willingness to use contraception.

The sign of the composite relationship between education and fertility

is indeterminate, though more education has generally been associated with lower fertility within and across countries. The United Nations' analysis of World Fertility Survey data indicated that in the late 1970's and early 1980's women with 7 or more years of schooling married nearly 4 years later, on average, than women with no education (reducing adolescent and, potentially, lifetime fertility). The same women also had about 25 percentage points higher contraceptive use (another fertility reducing effect) and breastfed children 8 months less than women with no education (a counterbalancing effect that could increase fertility) (United Nations 1987:214).¹⁰

Perhaps because the individual linkages between educational attainment, age at marriage, exposure to childbearing, and fertility are so clear-cut for women ages 15 to 19, the expected relationship between female education and adolescent fertility is pronounced in the data presented here.

¹⁰ However, the same study and others have found educational differentials in fertility to be nonmonotonically declining in a number of less developed countries in Africa, Asia, Latin America, and Oceania even after controlling for other variables (Cochrane 1979, 1983; United Nations 1985:66-71, United Nations 1987:238-244).

What the Data Show

Demographic and Health Surveys data collected in the late 1980's and early 1990's show that, regardless of the absolute level of fertility among adolescents, the proportion of young women who have begun childbearing (i.e., have either given birth or are now pregnant) among those with secondary or higher education is about 30 percent of that for women with no education. Even a primary education is associated with a significantly later onset of childbearing — the proportion having begun childbearing being 35 to 40 percent lower on average for young women with primary schooling vis-a-vis those with none (figure13 and appendix table 10).

Figure 13.
Adolescent Women Who Have Begun Childbearing by Level of Education

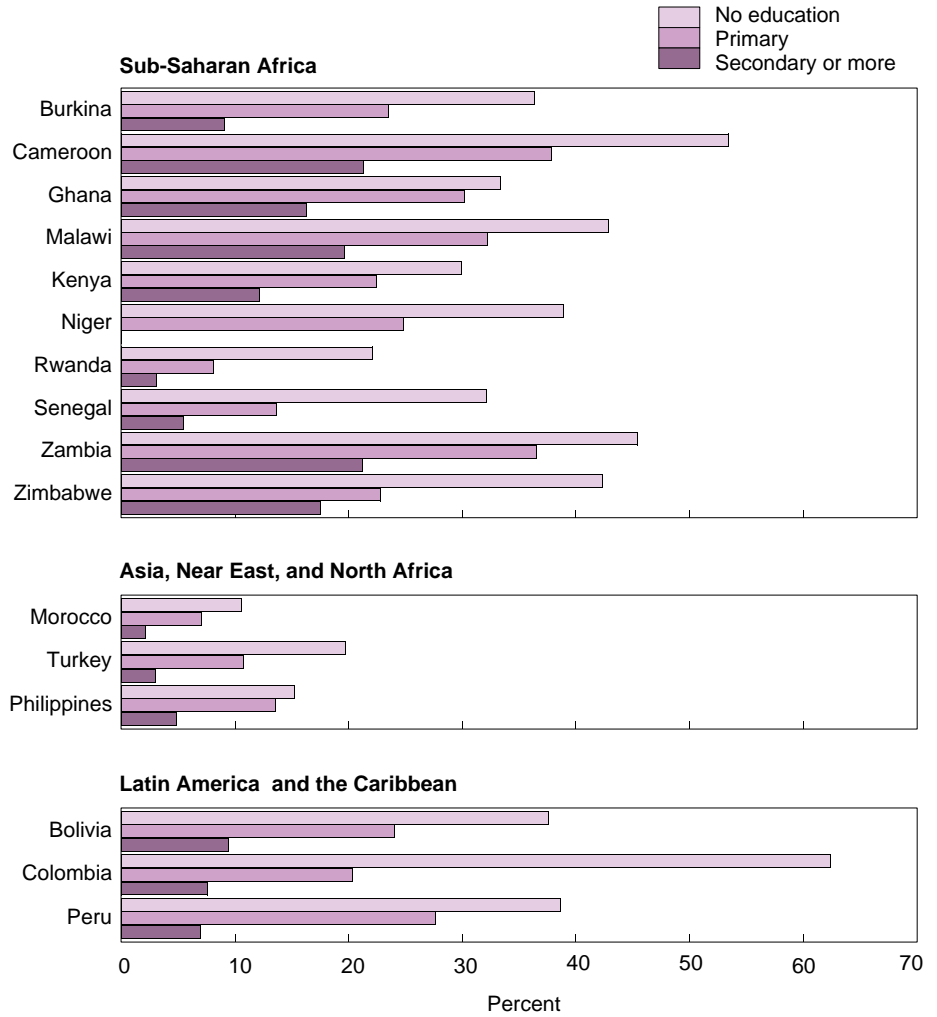
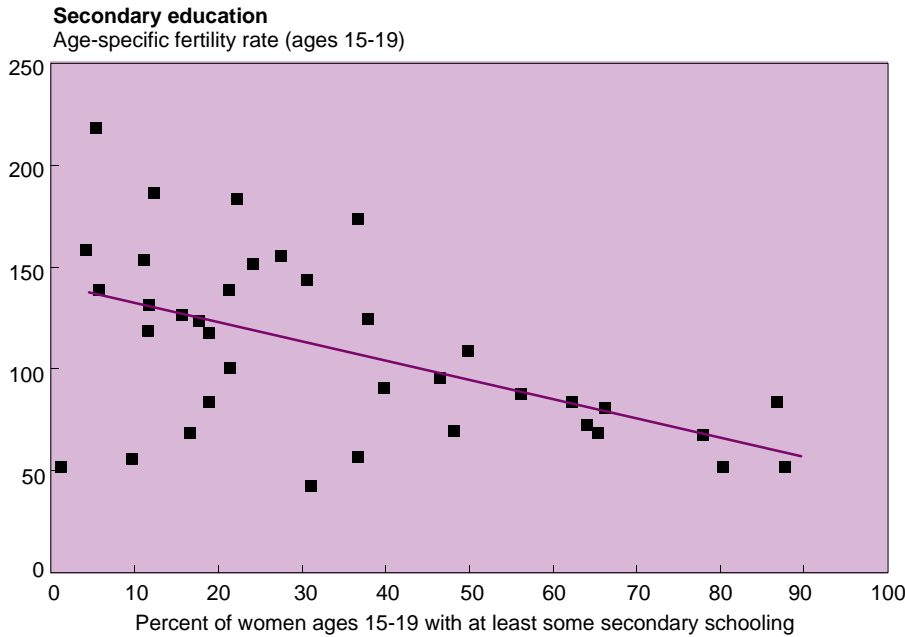
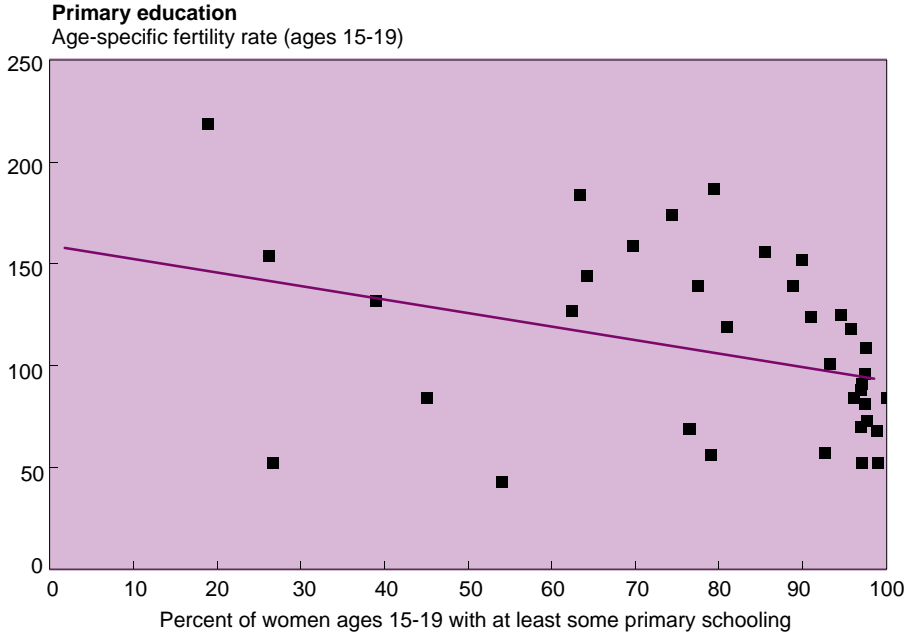


Figure 14.
Adolescent Fertility and Educational Attainment
 (38 countries)



The top panel of figure 14 shows the relationship for 38 DHS countries between percentage of women ages 15-19 who have at least some primary schooling and adolescent age-specific fertility.¹¹ The bottom panel shows the relationship for the same countries between the percentage who have attended secondary school or college and adolescent ASFR. Both relationships are inverse: the higher the levels of female educational enrollment in a population, the lower the adolescent fertility is in that population.

¹¹ Data for figure 14 are taken from appendix table 9.

Causal mechanisms relating education and fertility are generally assumed to include an indirect linkage between female educational attainment and age at first marriage which is, in turn, associated with the tempo of young adult pregnancy and childbearing. Data from 14 World Fertility Survey countries dating back to the late 1970's and early 1980's document the relationship between schooling and early adolescent marriage, which is of particular interest because of the special concern warranted in the case of early adolescent pregnancy and childbearing. Table 5 shows that the percentage of women who marry by age 17 is higher among those with no schooling and for those completing some primary schooling than for those completing some secondary schooling. With some exceptions, primary schooling is also associated with delayed first marriage.

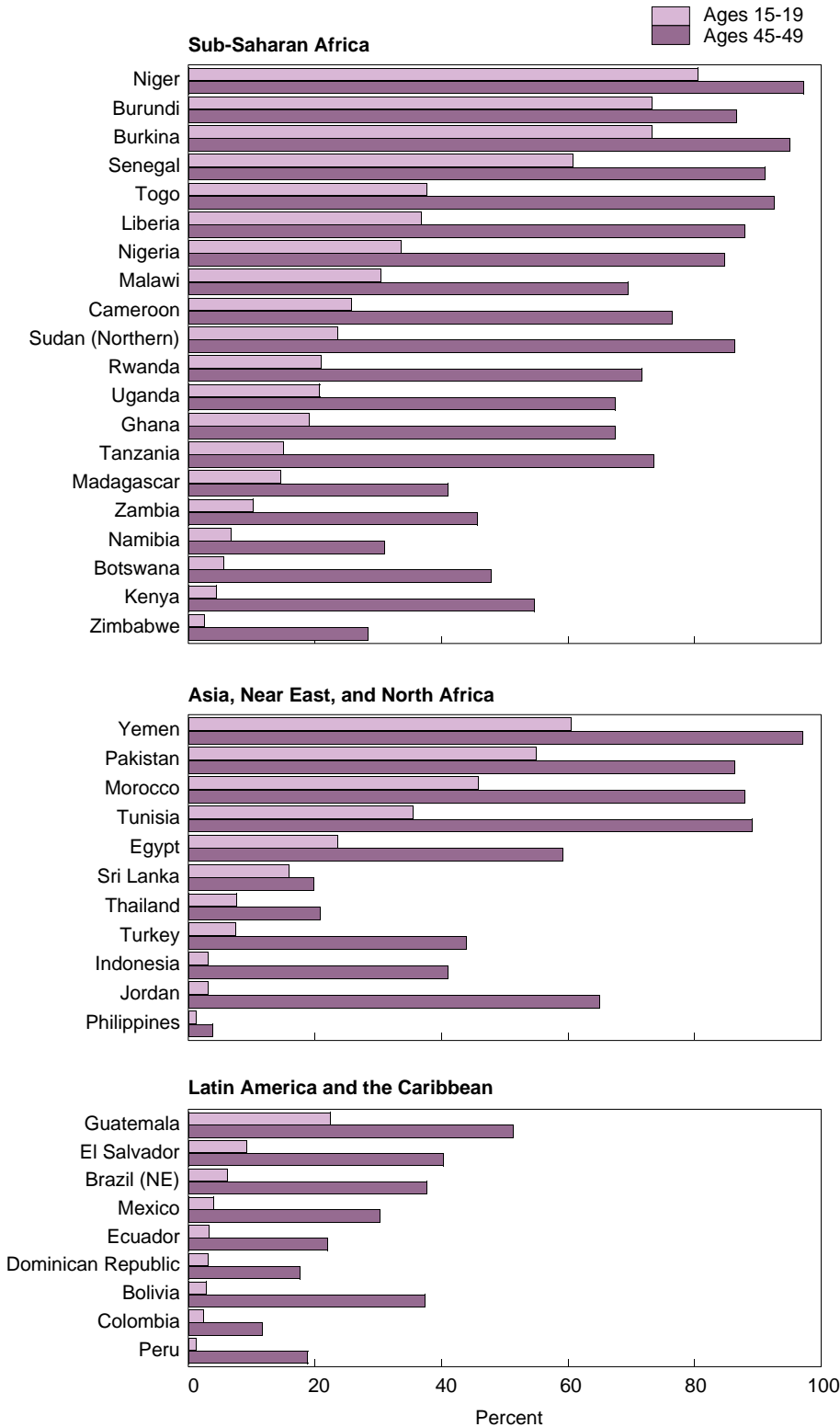
Table 5.

Percentage of Women Who Marry by Age 17 by Educational Level

Country	None	Some primary	Some secondary
Kenya	67.9	66.7	37.5
Jordan	73.5	74.1	54.5
Syria	59.1	63.6	50.0
Indonesia	80.7	85.3	33.3
South Korea	55.6	22.0	3.1
Pakistan	85.6	85.7	N/A
Sri Lanka	66.7	52.3	16.7
Thailand	47.1	40.5	0.0
Colombia	60.0	43.3	25.0
Costa Rica	42.9	36.4	10.7
Guyana	100.0	81.8	55.2
Mexico	66.7	52.5	22.2
Panama	75.0	51.0	14.0
Peru	50.0	45.8	17.4
Unweighted means	66.5	57.2	24.3

Source: UNESCO (1983: table A.3).

Figure 15.
**Women Ages 15-19 and 45-49
 With No Schooling**



Trends in Female Education and Childbearing

Improvements in the educational attainment of women have taken place over the past 30 years in all the countries for which survey data are available (figure 15 and appendix table 11). Percentages of women with no schooling have fallen over this period, in some cases dramatically. (See, for example, the values for Kenya, Indonesia, Jordan, Peru).

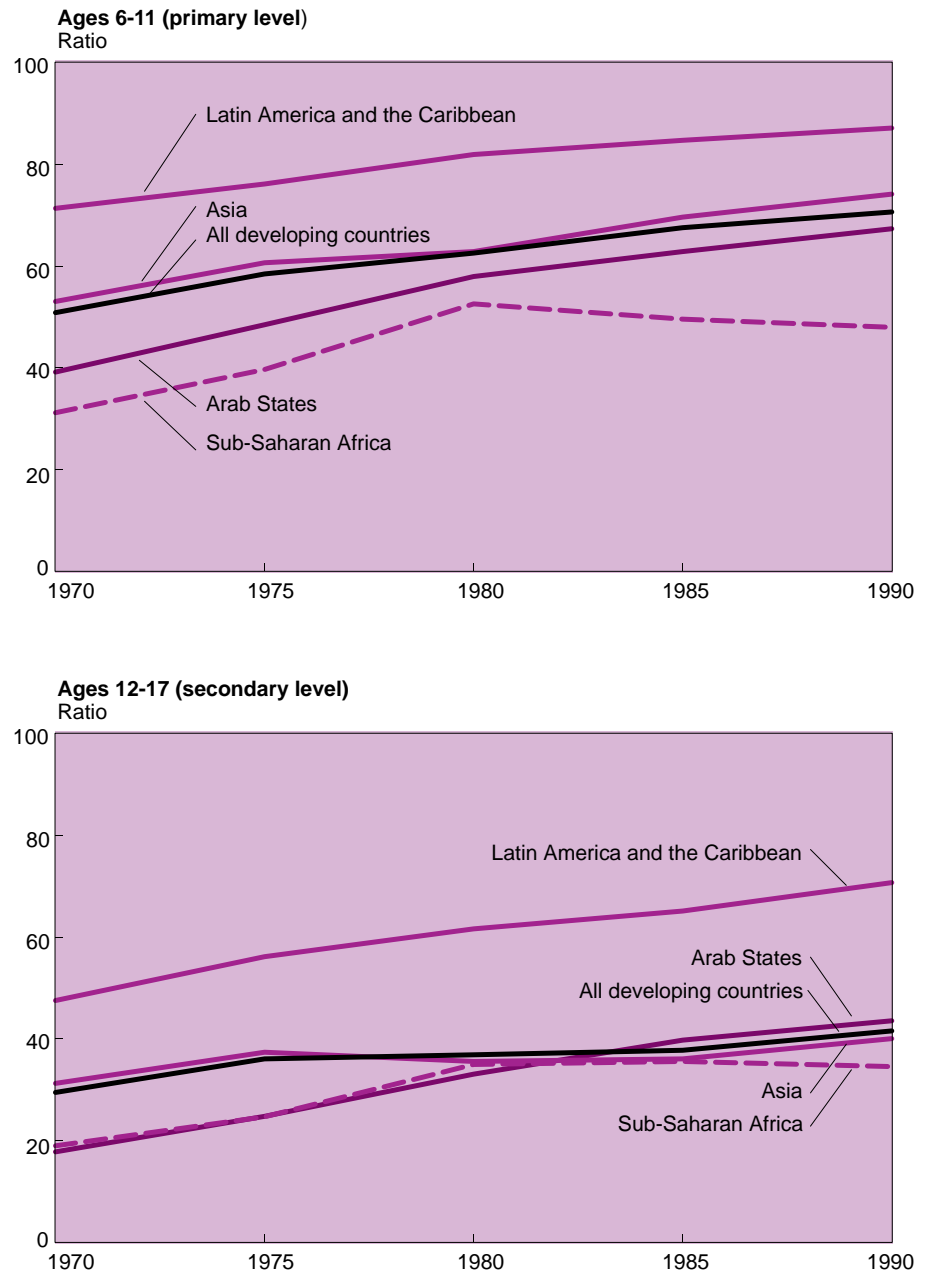
More than 20 percent of female adolescents in nearly half the countries shown in figure 15 continue to have no schooling — 5 of the 11 countries in the Asia, North Africa, and Near East group; 12 of the 20 countries in the Sub-Saharan Africa group; 1 of the 9 countries comprising the Latin America and Caribbean group. However, these percentages are substantially lower than the corresponding percentages of women ages 45-49 at the time of the surveys.

Trends in enrollment ratios¹² for the developing world, taken as a whole, and for 2 of the 3 regions distinguished in this report — Latin America and the Caribbean, and Asia, Africa, and the Near East — also show marked gains in female educational attainment. Percentages of girls ages 6 to 11 and 12 to 17 enrolled in school rose steadily from 1970 to 1990 in each region with the exception of Sub-Saharan Africa (figure 16 and appendix table 12). During the 1980's a number of lower-income African countries facing budgetary constraints, internal turmoil, or both, were unable to expand their education systems enough to keep up with population growth. Ghana, Liberia, Mali, and Tanzania are some of the examples the World Bank (IBRD 1990:79) gives in its discussion of weaknesses in progress in delivering social services in the developing world during the 1980's. Enrollment ratios in Sub-Saharan Africa actually fell by larger percentages for boys than for girls during the decade (UNESCO 1991: table 2.11).

While enrollment ratio figures are subject to a variety of kinds of errors, the fact that the recent trend in these ratios has been downward in the region with the highest current adolescent fertility is disturbing. The trend is consistent with the projected slower decline in adolescent fertility and the expected higher population growth rates in Sub-Saharan Africa vis-a-vis other parts of the developing world over the next 25 years.

¹² An enrollment ratio is the ratio of (1) number of students enrolled (typically, for an age range corresponding to a specific educational level) to (2) the corresponding age-sex-specific population.

Figure 16.
Female Enrollment Ratios by World Region



Source: UNESCO 1991.

Note: UNESCO does not report regional data for the Near East or North Africa. Data for Arab States are shown in lieu of both. Data for Africa less the Arab States are shown in lieu of data for Sub-Saharan Africa.

Marriage

Marriage and Fertility

Marriage is the predominant context for childbearing in all developing countries. Customs do vary governing whether men and women live together — and have children — outside of marriage or in consensual unions rather than in legal marriages. The initial timing of entry into unions and the prevalence and continuity of marriage also vary from country to country. But in spite of these variations, most births still occur to women in union, and this is also true for women ages 15 to 19.

Age at marriage is of particular interest because it marks the transition to adulthood in many societies; the point at which certain options in education, employment, and participation in society are foreclosed; and the beginning of regular exposure to the risks of pregnancy

and childbearing. Variation in age of entry into marriage helps explain differences in fertility across populations and also helps explain trends in fertility within individual populations over time (Adlakha et al. 1991; Moreno 1991 for Latin America).

The mechanisms linking age at marriage to fertility are well known, albeit complex, and involve other determinants of fertility, such as education (Henry and Piotrow 1979; Smith 1984; United Nations 1987:90):

- Delayed age at marriage directly affects completed fertility by reducing the number of years available for childbearing.
- In addition, populations with later mean ages at first marriage also tend to be more urbanized, to have higher levels

of educational attainment, and, more often, to use family planning within marriage. Fertility may be lower not only because of delayed marriage, which reduces the proportion of the adolescent cohort that is married, but also because marital fertility is lower in these populations.

- Finally, later marriage permits women to complete their educations, build labor force skills, and develop career interests that compete with childbearing within marriage. These career interests may, in turn, motivate women to limit family size and/or widen the spacing of their children.

Age at first marriage is the first of the two proximate determinants of teenage fertility considered in this report.

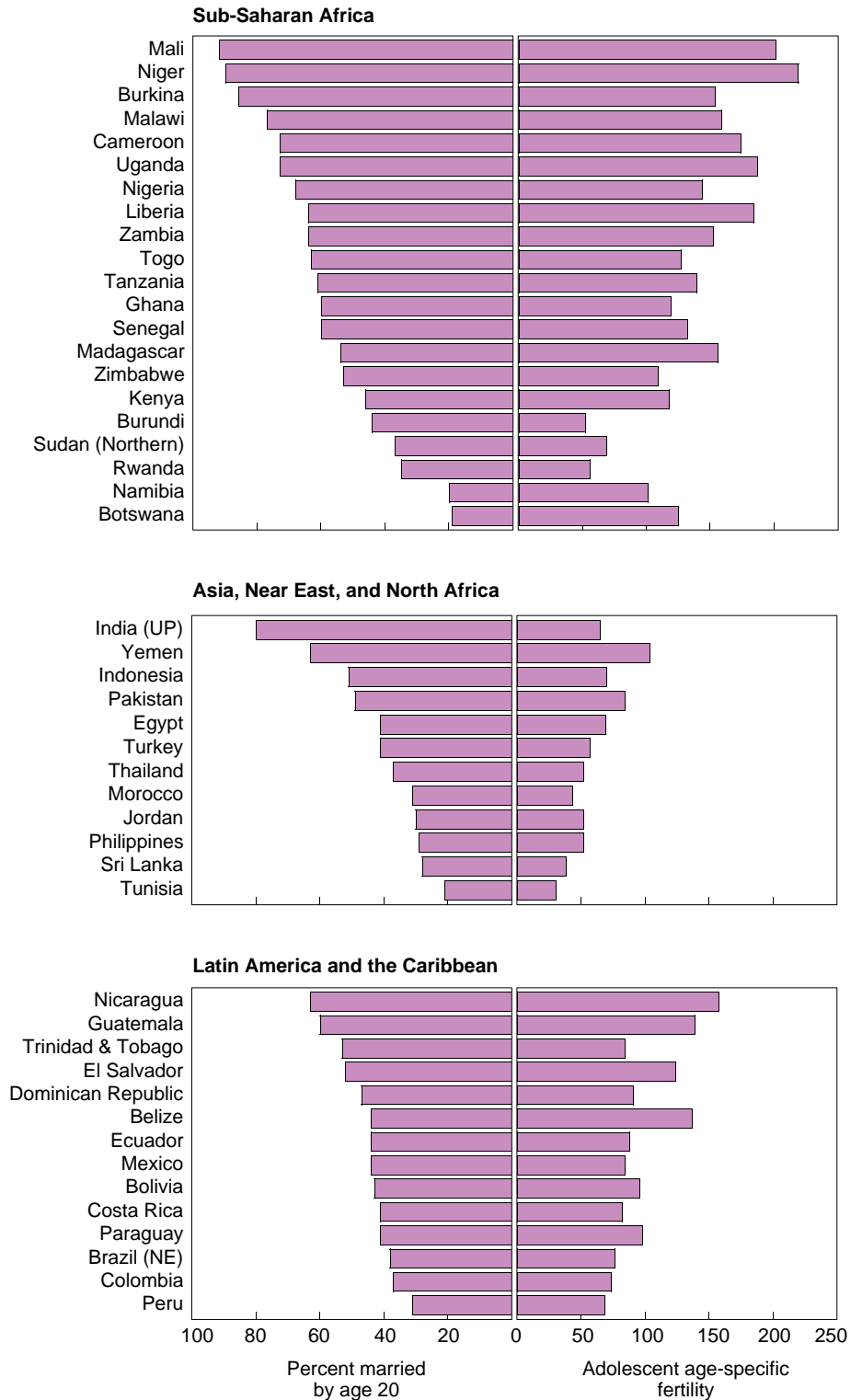
What the Data Show

Marriage is especially important in explaining differentials in adolescent fertility among countries because contraceptive use is less common among adolescents than among older population subgroups. The relationship between the pace of marriage to age 20 and adolescent age-specific fertility is illustrated in figure 17.¹³

Data from DHS and CDC surveys conducted in the late 1980's and early 1990's show that, even though there is a general trend towards later marriage (defined, in order to facilitate cross-national comparisons, to include both formal marriage and simply living in union with a man) throughout the developing world, teenage marriages continue to prevail in many countries, and in Africa in particular. In two-thirds of the Sub-Saharan African countries represented here, at least 1 out of every 4 women ages 15-19 is married, and nearly 60 percent of women in these countries marry by age 20.

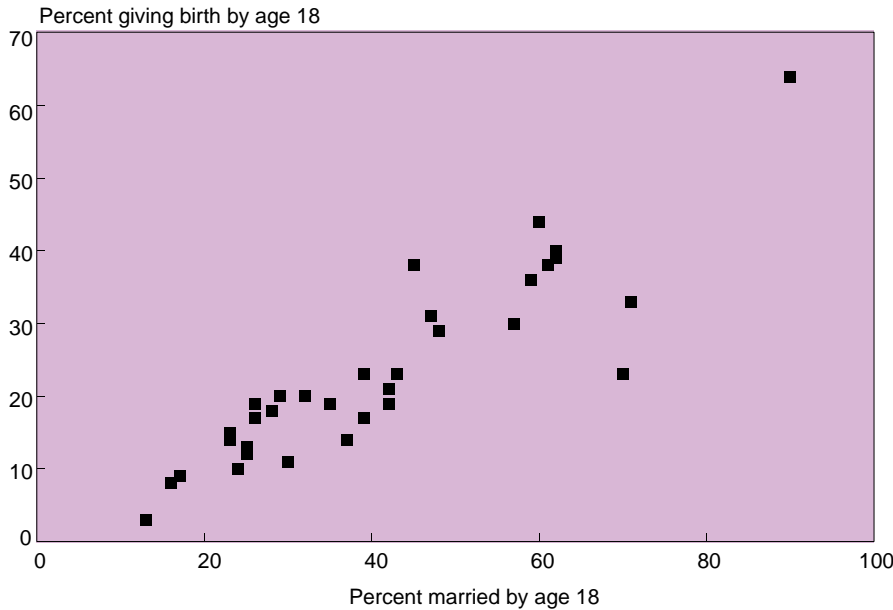
The data underscore a strong relationship between adolescent marriage and childbearing in each of the three regions. From Asia, the Near East, and North Africa, the four populations with the highest proportions married or in union by age 20 — India (Uttar Pradesh), Yemen, Indonesia, and Pakistan — have 3 of the 4 highest adolescent age-specific fertility rates. In Sub-Saharan Africa the six populations with the highest proportions married have four of the highest adolescent

Figure 17.
Percent of Women Ages 20-24 Married by Age 20 and Adolescent Fertility



¹³ Data for this section are from appendix tables 5, 13, and 14.

Figure 18.
Percent of Adolescents Married and Giving Birth by Age 18
 (33 countries)



ASFR's. In Latin America and the Caribbean, the four countries with the highest proportions married also include 3 of the highest 4 ASFR's among those shown.

The principal exceptions to the rule are Botswana and Namibia, in Sub-Saharan Africa. Proportions of women reported as married by age 20 are low in both countries and

unexpected given the corresponding levels of fertility in these countries. In Botswana, 59 percent of never-married women have given birth; in Namibia, 44 percent (Westoff et al., 1994:11). This departure from the general pattern found in other countries is attributed to a lengthy bridewealth process, the decline of polygyny, gender equality in rights to property (Botswana), the displacement of population associated with the struggle for independence (Namibia), and high levels of labor migration in both countries (Westoff, *ibid.*).

Data from the World Fertility Survey show that early adolescent fertility — together with its health risks and its negative connotations in terms of personal development for women— is strongly associated with early adolescent marriage. Figure 18 shows that those countries with high proportions of young women married by age 18 also have high proportions of first births by age 18.

Trends in Adolescent Marriage and Childbearing

Regardless of current levels, proportions of teenage women marrying are declining in most countries, including Sub-Saharan Africa.

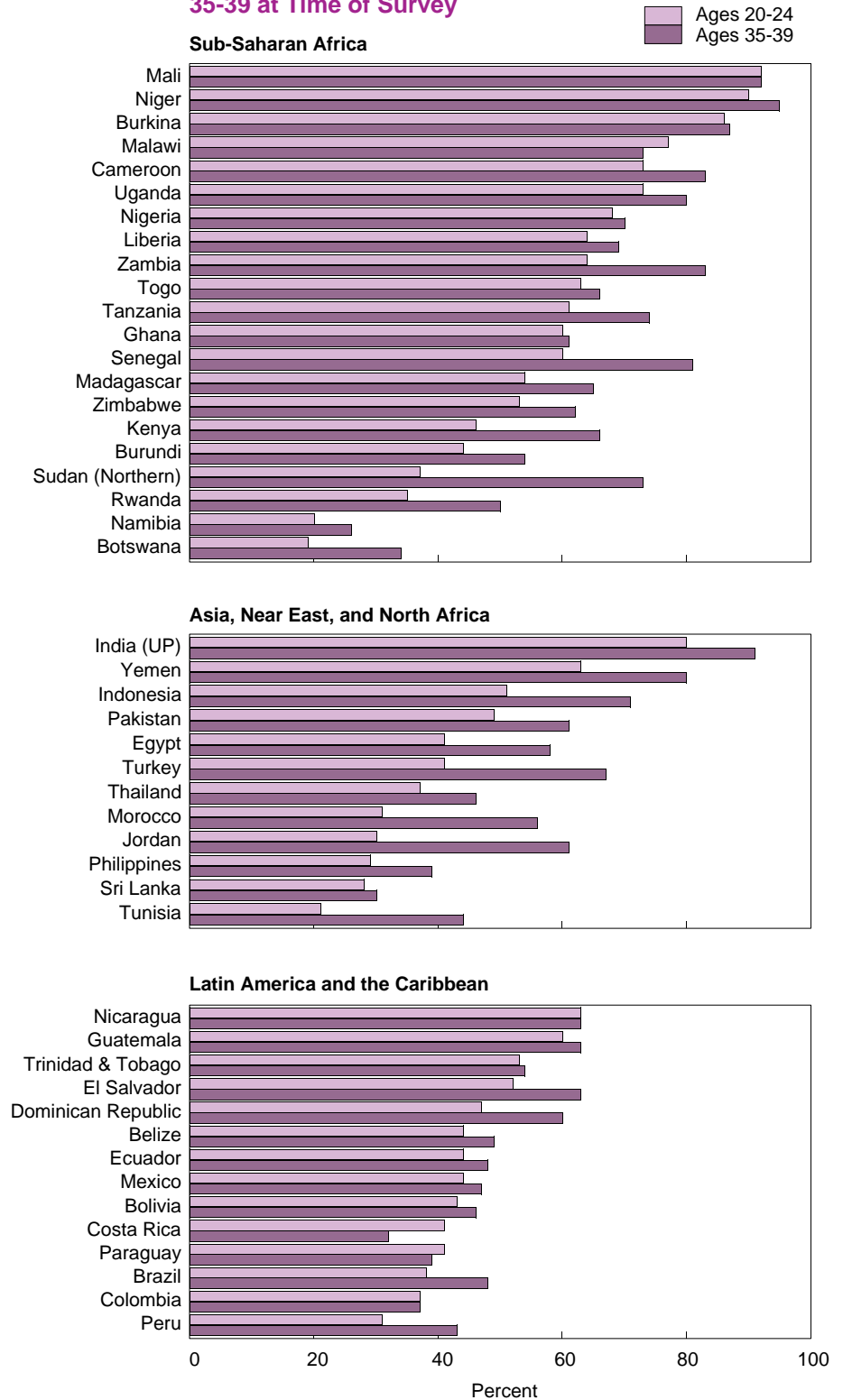
Figure 19 shows the percentage of women from two age groups (20-24 and 35-39) who reported being married by age 20. A comparison of these percentages provides evidence of the trend in teenage marriages over approximately a 15-year period.

With few exceptions, smaller proportions of the younger cohorts of women report being married when they were adolescents than do older women from the same populations. The differences are somewhat smaller for Latin America and the Caribbean, but the same general trend is evident for all three regions.

Given the strong relationship between adolescent fertility and age at marriage in the populations covered here and the clear trend toward somewhat later ages at marriage, it would appear that evolving patterns of timing of first marriage are directly responsible for some of the reduction in teenage childbearing in these same countries.

Unfortunately, comparable data are not available to tell us whether or not the decline in proportions married by age 20 has been matched by a shift from early to late adolescent entry into unions and childbearing.

Figure 19. Percent of Women Who Married Before Age 20 for Women Ages 20-24 and 35-39 at Time of Survey



Using Data From Multiple Sources for Programs Planning, Monitoring, and Evaluation: An Analytical Issue

The combination of the path-breaking WFS series dating to the early 1970's with DHS surveys has provided some useful new insights into the reproductive behavior of young women representing approximately 77 percent of the developing world (excluding China). However, from an analytical standpoint, the value of comparative studies like this one is limited where data from different sources refer to different populations and where questions asked differ. This report would be stronger, and future attempts to monitor adolescent marriage, pregnancy, and childbearing would be more productive, if efforts already evident in some DHS country reports to distinguish early from late adolescent behavior—and the correlates of that behavior—could be continued and strengthened.

Contraceptive Use

Contraceptive Use and Fertility

Contraceptive use is a second key proximate determinant of adolescent fertility, though accumulated evidence indicates that the use of family planning by women in this age group is less important a determinant of their fertility than age at entry into union.¹⁴

Maternal and child health and family planning programs have now been implemented in virtually all developing countries to make contraceptive information and services available to couples wishing to control their childbearing. Programs designed to motivate and inform couples interested in planning their families, as well as programs aimed at making services more accessible to couples, represent important tools of government and private sector agencies concerned with

improving maternal and child health in these countries.

Since the late 1960's, general improvements in public acceptance of women's rights in the area of fertility limitation and the expansion of government services to underserved populations have been associated with significant increases in the use of contraception by women in all age groups. These trends have been more pronounced in parts of Asia and Latin America, and less obvious in Sub-Saharan Africa. However, the extent to which contraceptive use rather than rising age at marriage has been significant in determining declines in fertility rates has varied from country to country. In addition, the impacts of changes in the distribution of the population, growing female literacy and enrollment ratios, and improved labor force opportunities for women on changes in motivation and actual use of contraception have also varied from country to country (see, for example, Cochran and Guilkey (1991, 1992)).

Actual use of contraception among adolescents (as among other age groups) may be considered a function of (1) interest or motivation in delaying, spacing, or limiting childbearing within a population, and (2) the accessibility of contraceptive services to that population. Effective access may, in turn, be defined in terms of:

- awareness or knowledge of sources of family planning information and other services;
- proximity to one or more sources of those services; and
- the extent to which other constraints exist that limit utilization of those services. Such constraints may include the cost of contraception, social barriers, and the quality of services available (a function of the availability of medical personnel, facility operating procedures, motivation of staff, adequacy of supplies, and other factors not dependent on proximity. See Lewis and Novak 1980:243).

¹⁴ See, for example, United Nations (1987:178), UNESCAP (1987:296), UNECLAC (1987:320), Farid (1987:347,352).

What the Data Show

Contraceptive prevalence is relatively low among adolescent women, and standard errors of survey statistics relating to prevalence are correspondingly relatively larger than for some other kinds of data. This being so, the reader should recognize the limitations of the conclusions drawn in this section of the report. This is particularly true of conclusions about (1) trends in adolescent contraceptive use, which rely on data from two or more surveys, each with its own sampling (and nonsampling) errors, and (2) prevalence among adolescent subgroups. With this word of caution in mind, let us turn now to the data, beginning with the relationship between contraceptive prevalence and fertility among married adolescent women.

Adolescents and Contraceptive Use: A Sensitive Issue

Interpreting and analyzing contraceptive use data, especially among teenagers, presents some difficulties. Most international comparisons of contraceptive use focus on the activities of married women. Because the customs governing marriage and the formation of marriage-like unions vary from country to country, the definition of a union equivalent to marriage may vary from study to study. However, it often includes some form of consensual union (as has been true for both the WFS and DHS programs). The real difficulty arises not from the definition of marriage but from the sensitivity of questioning unmarried teens about their family planning practices and, by implication, their sexual activities. Surveys in some countries (primarily Asia and the Near East) have not asked unmarried women about family planning practices, so that data are available only for ever-married women.

Even where questions have been asked, sample sizes from the World Fertility Survey program and the Demographic and Health Surveys program are too small to permit full and separate analysis of each country's prevalence rates among married and unmarried teenagers.

This report presents data for all adolescent women, both currently married and never married. However, most of the discussion in this section on contraceptive use refers only to currently married adolescent women because doing so allows comparison of results across more countries.

Some data on unmarried women are introduced on pages 40-42 because these women comprise a significant portion of adolescent users of contraception in many countries.

Figure 20.
Fertility and Contraceptive Use of Adolescent Women



The empirical association with fertility. A cross-national comparison of percentages of currently married women ages 15-19 using contraception and age-specific fertility data from surveys conducted in the late 1980's and early 1990's (figure 20) fails to show the kind of clear relationship expected for populations comprised of all women of reproductive age taken together. If the expected inverse relationship shows up at all in these data, it is for the countries making up the Latin America and Caribbean group. But even here the relationship is at best weak. In short, during the past decade, like the decade before, contraceptive use has not been the dominant proximate determinant of fertility for women in the age range 15 to 19. Age at marriage is the telling factor in determining exposure to pregnancy and childbearing for adolescent women.

Prevalence. Proportions of married adolescent women using any method of family planning, modern or traditional, are generally low, but with sizeable intraregional and interregional variation.¹⁵ In some countries (Brazil, Costa Rica, Jamaica, Mauritius, and Thailand, for example), more than 40 percent of married adolescent women are using some kind of contraception. However, at the other end of the

¹⁵The discussion and figures in this section of the report, and appendix tables 15 and 16 (which are the basis for much of the discussion), distinguish modern from traditional methods of contraception. Modern methods include the pill, condom, intra-uterine device (IUD), injection, implants, vaginal methods (including foam, jelly, diaphragm), female sterilization, and male sterilization (vasectomy). Traditional methods include the periodic abstinence/rhythm method, withdrawal, and folk methods.

*Data for Tanzania are from the 1991/1992 DHS. Data for other countries are from the latest DHS.

spectrum, in quite a few countries, mostly in Sub-Saharan Africa, contraceptive use by married women ages 15 to 19 is below 10 percent. For 12 of the 22 Sub-Saharan African countries listed in appendix table 15, the most recent survey figure on contraceptive prevalence is below 10 percent.

For modern methods, the median levels of contraceptive use in the regions, taking the most recent estimate available for each country, are:

Region	Percent
SSA	2.1
ANENA	9.7
LAC	22.6

Levels of contraceptive use among married women in the 15-19 age group, regardless of region, are low relative to levels of use among older women (ages 20-49 years, figure 21 and appendix tables 15 and 16). This is hardly surprising. Adolescent women are young, at the beginning of their reproductive lives and, once married, often are under social pressures to have children.

Method mix. Married adolescents use contraception less frequently than older women (as noted), and when they do use family planning to delay, space, or limit childbearing, they may use less efficient methods. Though figure 21 and appendix tables 15 and 16 show that age-specific differences in method mix are generally small, where there do seem to be sizeable within-country differences — as in Senegal and Tanzania in SSA; India, Jordan, and Yemen in ANENA; and Guatemala in LAC —

Figure 21.
Use of Contraceptive Methods by Selected Age Groups

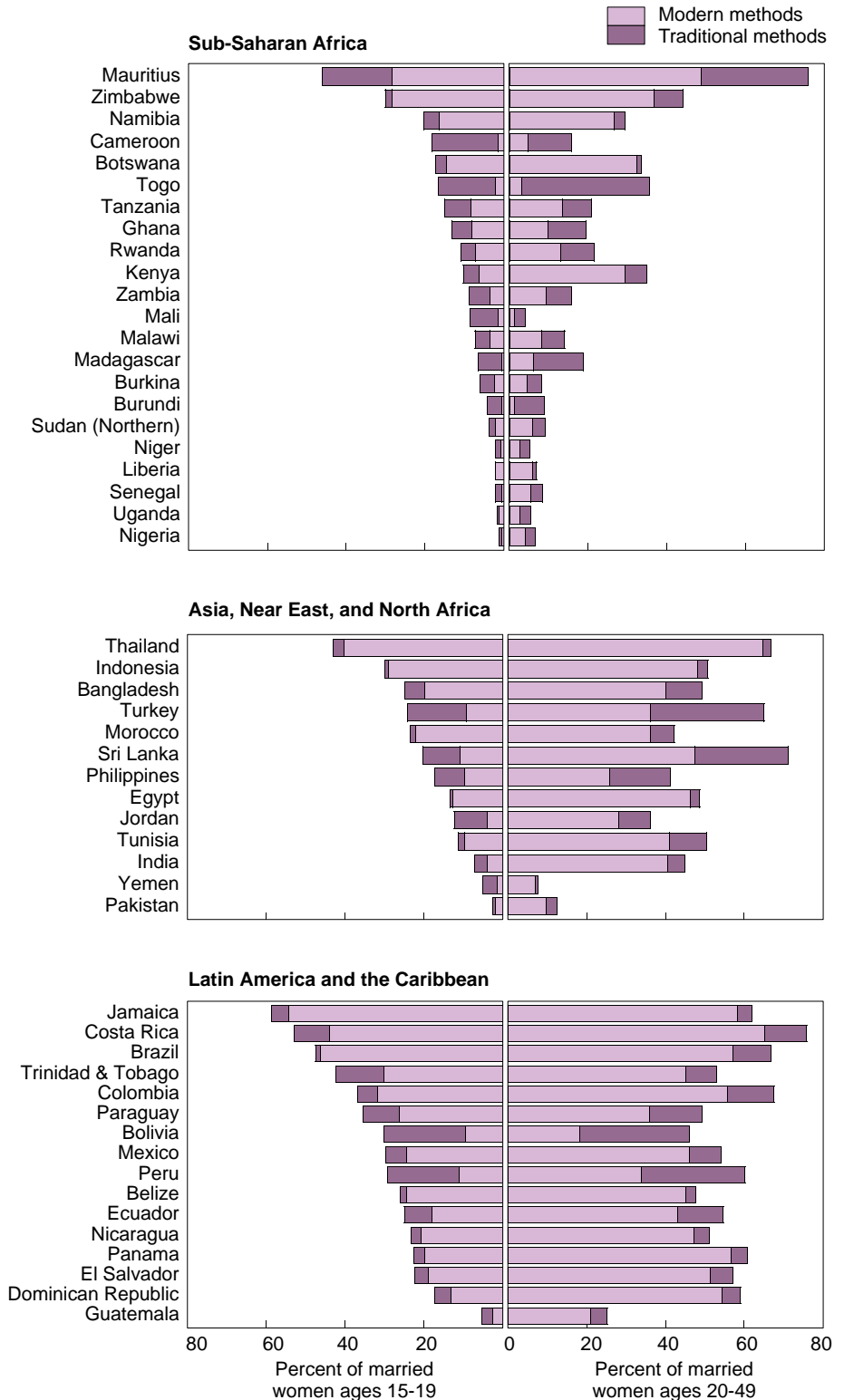


Figure 22a.
Use of Contraception by Knowledge of Source of Modern Method
 (30 countries)

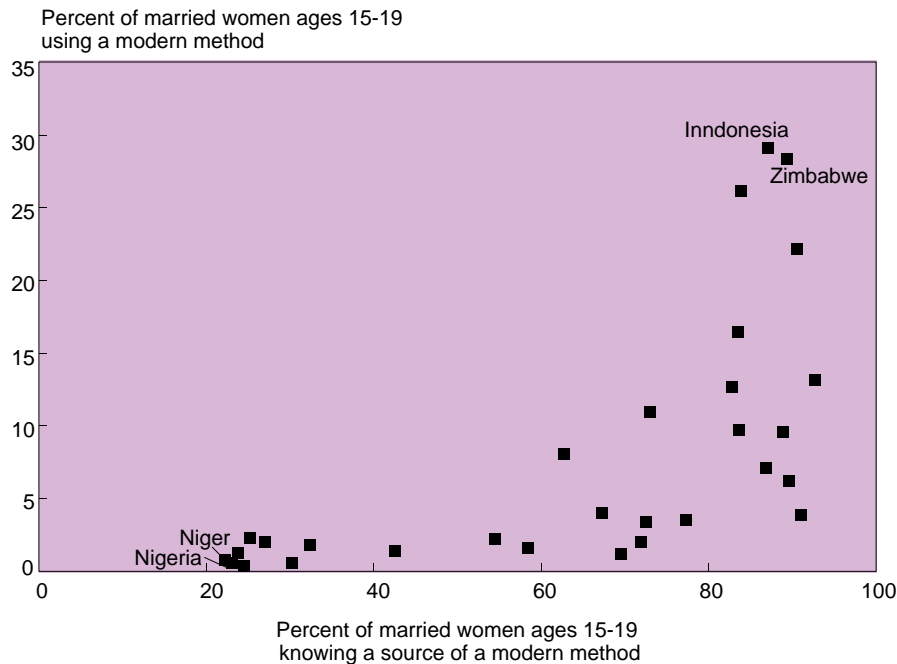
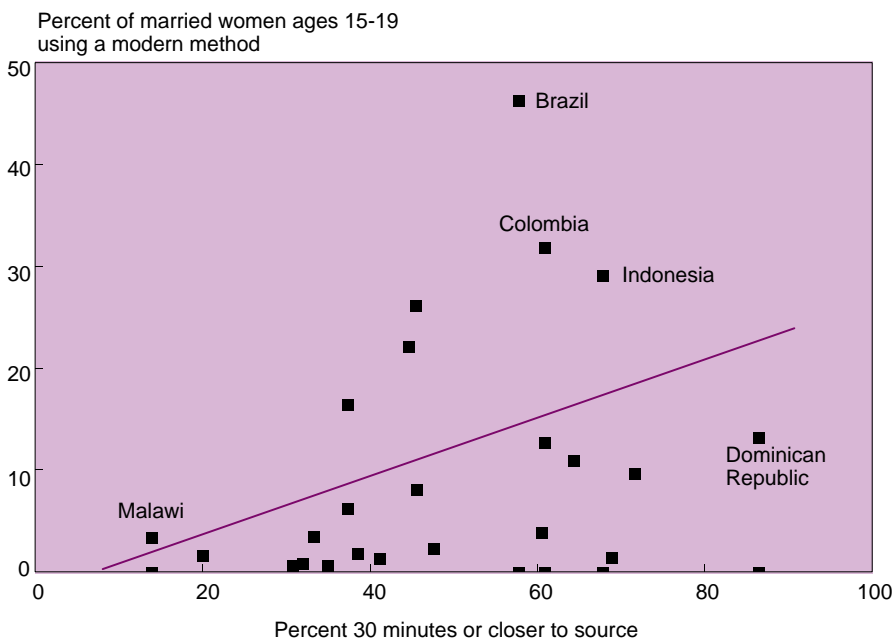


Figure 22b.
Use of Contraception by Proximity to Nearest Source
 (23 countries)



these consistently point to use of less effective methods by *adolescent* women.

Access. Knowledge of family planning methods, knowledge of a source of a method or of a modern method, proximity to or density of sources, and the financial cost of contraception are alternative indicators of effective “access” to family planning in a population. Relationships between these kinds of variables and levels of current use of modern contraception across populations suggest how resources devoted to family health services might be more efficiently utilized, at least for this particular age group.

Three measures of access are used here (figures 22a,b,c): (1) percent of married women ages 15-19 knowing a source for a modern method of contraception (taken from appendix table 17); (2) percent of women ages 15 to 49 who say they are within 30 minutes travel time of a source for a modern method (a proxy for proximity for married women ages 15-19); and (3) the cost of an annual supply of oral contraceptives as a percentage of gross national product per capita (from appendix table 18). The cost of oral contraceptives is used because young couples, who are more interested in delaying the start of childbearing or in spacing the births of their children, tend to use oral contraceptives more often than other methods (appendix table 15; United Nations 1987: 151-157).

The data, from DHS surveys undertaken in the late 1980's and early 1990's, show that:

- The relationship between contraceptive use (of any modern

method) and knowledge is positive: countries with higher percentages of married adolescent women knowing a source of a modern method are more likely to have higher levels of contraceptive use in this age group. However, as figure 22a shows, the relationship is more curvilinear than linear,¹⁶ reconfirming evidence from numerous sources on the relationships between motivation, contraceptive knowledge, and actual use: knowledge is a necessary but not a sufficient condition for use. For the 30 countries represented in this graph, only countries with high levels of awareness have higher levels of utilization among adolescents, but a number of countries with relatively high awareness do not have high proportions of adolescents using modern methods of family planning.

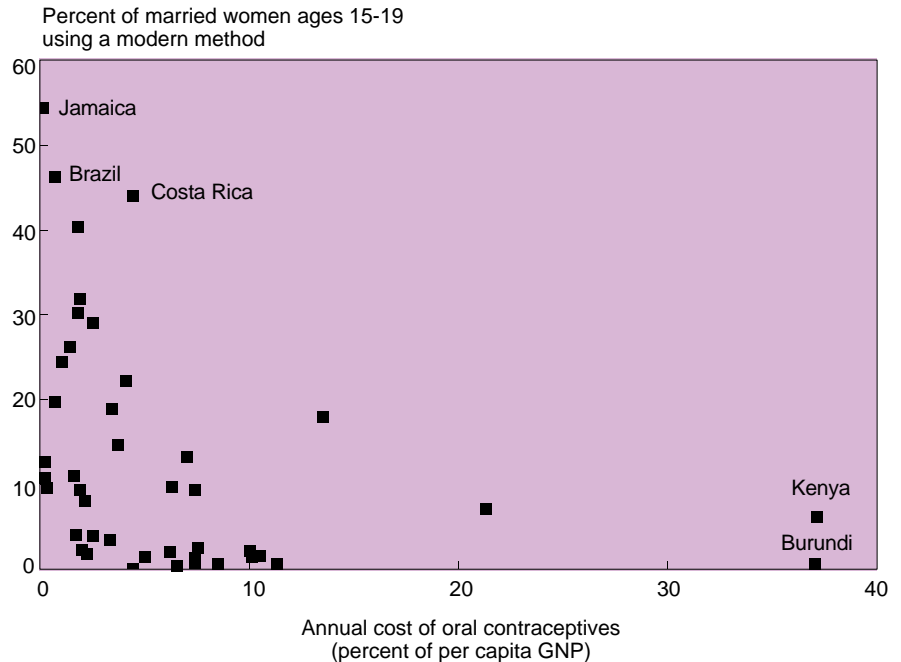
- Access to modern contraceptives, measured by reported proximity to a supply source, is also positively related to contraceptive use, though the relationship is weaker than that between knowledge and use (figure 22b). Colombia, Indonesia, and Brazil have relatively good access and relatively high prevalence among married adolescents. Malawi is a country with relatively poor access and low prevalence. However, there are also a number of countries

¹⁶ R-squared and the t-statistic for the estimated coefficient of the knowledge-of-source variable of an ordinary least-squares regression line through the data points shown in figure 22a are 0.41 and 4.4, respectively. If the natural logs of knowledge and contraceptive use are substituted in order to linearize the relationship, the fit is improved: R-squared and the t-statistic increase to 0.64 and 7.0, respectively.

Figure 22c.

Use of Contraception by Cost of Contraceptives

(41 countries)



with moderately high to high levels of access as measured by proximity, but low prevalence (the Dominican Republic, for example). Again, this is consistent with our understanding of contraceptive use as a function of both supply and demand factors.

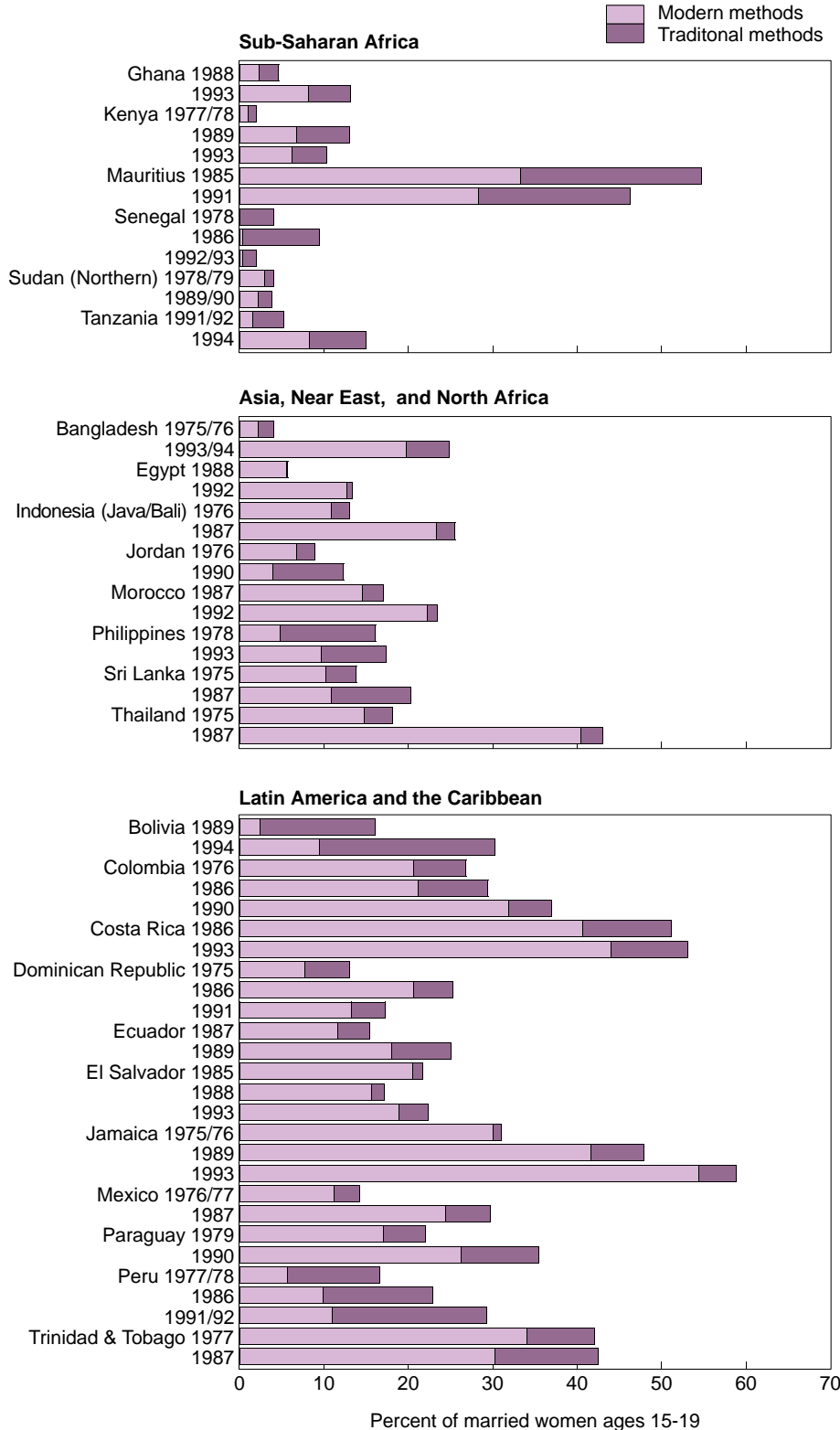
- As expected, use of modern contraception by married adolescent women is inversely related to its cost in 41 countries shown in figure 22c. However, once again, the relationship among countries is more convex than linear, suggesting that cost is not the only consideration underlying contraceptive use among married adolescents in the developing world.

Taken together, these graphs imply that access to family planning

methods may well be important, but is not a sufficient explanation for variation in prevalence levels across countries.

There are other possible reasons for not finding easily interpretable, linear relationships between the measures of access employed here and levels of contraceptive use among adolescent couples as well (see, for example, Tsui 1991; Cochran and Guilkey 1991; Casterline 1991). An obvious possibility is that simple 2-way associations based on aggregate level, cross-sectional data are only imperfectly able to capture relationships involving motivation as well as access and individual-level decisions affecting the beginning of childbearing and the spacing of children during the teenage years (cf. Wilkinson 1991).

Figure 23.
Trends in the Use of Contraceptive Methods by Adolescent Women



Trends in Contraceptive Use Among Married Adolescents

Data from the World Fertility Surveys conducted in the late 1970's and early 1980's can be combined with DHS data sets from the late 1980's and early 1990's to show trends (figure 23). These data show that contraceptive use among married adolescents has increased in most countries over the last 20 years.

There are exceptions. The Dominican Republic, Kenya, Mauritius, and Senegal appear to have witnessed recent declines in the use of contraception among adolescents. However, small apparent decreases (or increases) in prevalence also may be at least partly attributable to sampling error. And the declines in prevalence in Kenya and Senegal are the result of decreases in the less well-measured use of traditional methods.

Comparison of WFS and DHS data also provide some idea of regional changes that have occurred in the prevalence of *modern* methods of family planning.¹⁷ The data suggest that use of modern methods by married adolescents has risen in most, but not all, countries in the three regions; specifically, in 3 of 6 Sub-Saharan African countries; in 7 of 8 Asian, Near East, and North African countries; in 9 of 11 Latin American and Caribbean countries.

¹⁷ Trends in the use of modern methods are shown because modern method prevalence is arguably better measured than levels and changes in levels of use of nonmodern methods. Countries where modern method prevalence has risen then fallen, with the latest value greater than the earliest shown, are counted as cases of rising use here.

In Asia, the Near East, and North Africa, all countries surveyed had an increase in overall use of family planning. Most countries had increases in the use of modern methods, particularly Bangladesh and Thailand, where modern method use more than doubled.

Most Latin American and Caribbean countries also had increases in both overall use and use of modern methods. However, the Dominican Republic, El Salvador, and Trinidad and Tobago reported noticeable declines in the use of modern methods by adolescents.

Contraceptive Use by Unmarried Adolescents¹⁸

Up to this point, the data presented on contraceptive use have referred to married women ages 15 to 19. In many countries, sexual activity prior to marriage is uncommon, and so is the use of contraception. However, in other countries, young men and women are sexually active prior to marriage, and unplanned pregnancy among young

¹⁸ The term "unmarried," as used here, follows definitions used in the surveys from which the data are taken. It refers to women not currently in union; i.e., neither formally married nor living in union with a man.

unmarried women is a growing concern among health workers.

Recognizing this, most of the African and Latin American DHS samples have been designed to provide information about all women rather than ever-married women. The collection of information on current contraceptive use for all women, regardless of their marital status, permits a better description of contraceptive use on the part of young women for these countries. The collection of information about sexual activity among unmarried teens as part of the same series of surveys provides insight into the contexts within which that use takes place.

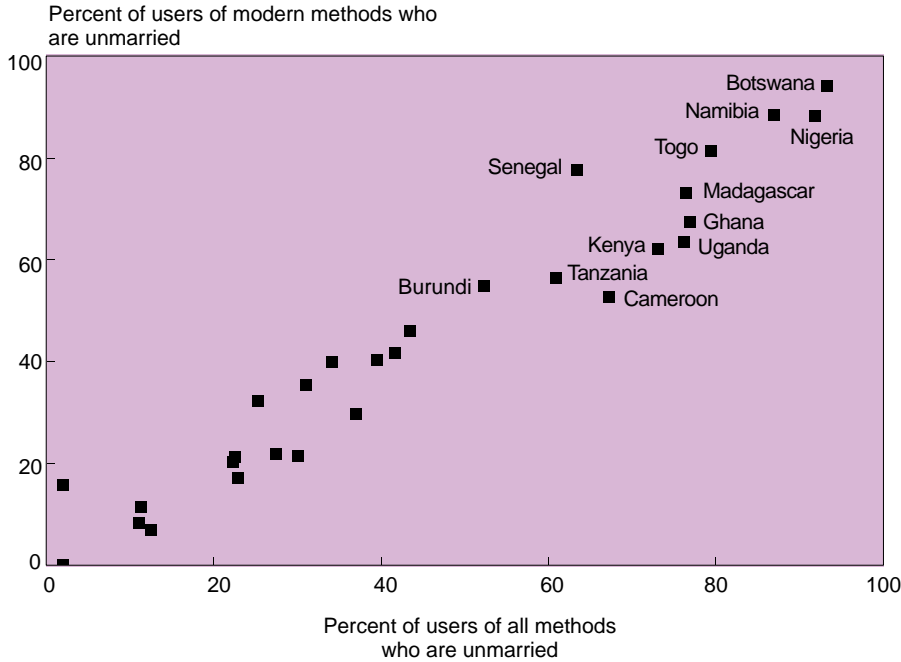
Data from 19 Sub-Saharan African and 9 Latin American/Caribbean DHS studies conducted in the late 1980's and early 1990's show that, as would be expected, contraceptive prevalence is lower among unmarried teens than for married women ages 15 to 19 (table 7, rows 1 and 2). Exposure to sexual intercourse, pregnancy, and childbearing is less for unmarried adolescents than for women in union, and this is reflected in the frequency of contraceptive use. However, the data also show that nearly 6 in 10 adolescent women in African countries and 2 in 10 adolescent women in Latin America who use contraception are *unmarried* (table 7, rows 3 and 4). In short, a substantial proportion of adolescent users of modern methods of family planning in Africa and Latin America, at least, are unmarried.

Table 7.
Contraceptive Use Among Married and Unmarried Adolescents: Regional Means

	Sub-Saharan Africa (19 countries)	Latin America/ Caribbean (9 countries)
Contraceptive prevalence (modern methods) among:		
Married women ages 15-19	3.0	3.7
Unmarried women ages 15-19	2.5	0.8
Percentage of users of contraception (women ages 15-19) who are unmarried:		
All methods	59.0	21.2
Modern methods	57.4	19.9
Percentage of methods used by women 15-19 that are modern:		
Married women	44.8	65.2
Unmarried women	42.9	95.6

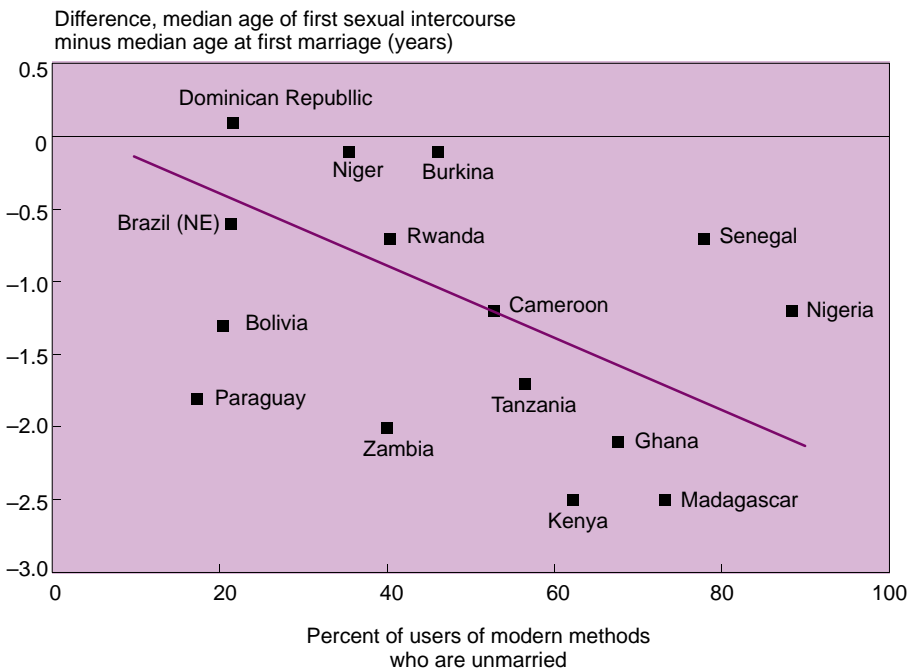
Note: Values shown are simple means for countries for which data are available. Data on use of contraceptives among currently married and all women ages 15-19 are available only for the Philippines out of all DHS countries in Asia, the Near East, and North Africa.

Figure 24.
Marital Status of Contraceptive Users Ages 15-19
 (29 countries)



Regional averages obscure the very considerable country-to-country variation in these numbers. Country-specific data presented in figure 24 draw attention to those countries where unmarried adolescents represent a particularly sizeable part of all adolescent users and where family planning communication and delivery strategies, as well as other outreach programs, should be designed with this fact in mind. Figure 24 shows that for some African countries — including Botswana, Nigeria, Namibia, Togo, Madagascar, Senegal, and 6 others — over one-half of all adolescent users are unmarried, whether all methods or just modern methods are considered. The Latin American and Caribbean countries are clustered in the under-50-percent-of-users range, but even here as many as one-fourth of teenage users of contraception are unmarried.

Figure 25.
Premarital Sexual Activity and Use of Modern Contraceptives by Unmarried Adolescents
 (15 countries)



Part of the explanation for country-to-country variation in proportions of adolescent contraceptive users who are unmarried lies in variability in the timing of first sexual intercourse from one population to the next. (The timing of first sexual intercourse in a population is one of the proximate determinants of fertility listed in the framework set out in figure 1, page 3). DHS data for 14 countries and 1 subnational region (Northeast Brazil) help define populations of young adults exposed to the risk of pregnancy prior to marriage (figure 25). These data show that modern method usage among unmarried teenagers is closely associated with premarital sexual activity (measured in terms of duration rather than frequency, as median age at first intercourse minus

median age at first marriage). Though data relating to premarital sexual activity may be subject to a variety of kinds of reporting error,¹⁹ these data suggest that countries where young women are sexually active for longer periods of time prior to marriage are also countries where relatively high percentages of adolescent users of modern methods are unmarried (figure 25).

This correlation does not indicate whether the need for contraception among unmarried adolescents is being met in these countries.

However, work recently completed using DHS data from seven African countries (Botswana, Ghana, Liberia, Nigeria, Togo, Uganda, and Zimbabwe) suggests that it may not be: only 1 in 6 (ever) sexually active unmarried teens in these countries is currently using contraception, and only 8 percent are using a modern method of contraception. (Figure 26 data are from Macro International 1993a - 1993g.)

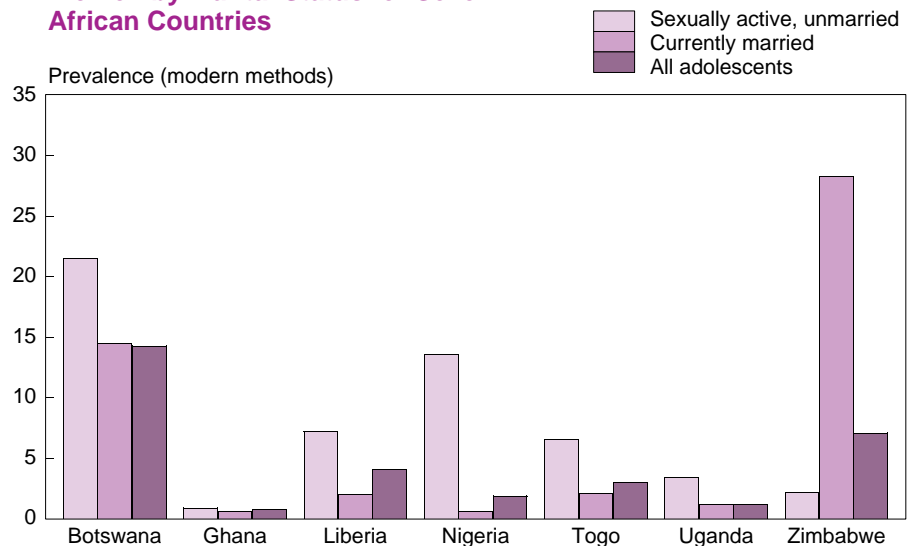
Unmet Need for Family Planning

The term “unmet need for family planning” refers to women at risk who do not want additional children or want to postpone their next birth but are not presently using any

¹⁹ See, for example, the cautionary statements to this effect from the 1988 Zimbabwe DHS or United Nations (1989:44-54).

Figure 26.

Contraceptive Prevalence of Adolescent Women by Marital Status for Seven African Countries



method of contraception.²⁰ Even where access to family planning information and services seems to be fairly good, the motivation to use contraception effectively may be weak, or women may face other obstacles — related to the quality of available care, for example — in taking advantage of those services. For whatever reasons, most age groups in most populations include

a group of women who may be said to have unmet need.

Data from Demographic and Health Surveys fielded in the late 1980's and early 1990's indicate that between 15 percent and about 45 percent of currently married adolescent women in each of the three regions are classified as having unmet need for contraception (appendix table 19). These figures may be considered lower bounds if some additional need is attributed to currently sexually active teens who are not using contraception.²¹

The implied number of *married* adolescents with unmet need is in itself a rather large figure. It represents approximately 3 million women in need in Sub-Saharan

²⁰ Unmet need has been measured from DHS data as the percentage of fecund, nonpregnant, nonamenorrheic women in union who, either for the last pregnancy or for those within some defined time frame, wanted to control their childbearing but were not practicing contraception (Westoff and Ochoa 1992:2-4). The treatment of pregnant and amenorrheic women has varied from report to report, however. (See, for example, Westoff and Ochoa 1992 and Philippines (NSO) and Macro International 1994:76:fn. 1 and 2). The figures shown in table 8 are taken from the same table in each report and use the same definition across age groups within each country. Figures in column 2 (for women ages 20 to 49) are weighted means, based on age-specific total unmet need (i.e., for spacing and for limiting) weighted by numbers of currently married women.

²¹ Unfortunately, the data required to estimate this possible additional unmet need — tables showing currently sexually active unmarried adolescents by use of contraception — have not been published by Macro International.

Figure 27.
**Percent of Currently Married Women Ages 15 to 19
With Unmet Need for Family Planning**

Map not available at this time.

Table 8.
Unmet Need of Adolescents and Older Women for Selected Countries

Country	Percent of married women ages 20-49 with unmet need	Percent of married women ages 15-19 with unmet need
Kenya	36.1	41.9
Cameroon	23.0	15.1
Philippines	26.1	31.5
Indonesia	12.5	15.6
Dominican Republic	15.6	36.3
Colombia	15.4	15.0

Sources: Figures are from most recent DHS final reports. Figures for adolescent women are also shown in appendix table 19.

Africa; 8.6 million women in Asia, the Near East, and North Africa; and over 1 million women in Latin America and the Caribbean.²²

Most of the unmet need reported is for spacing or postponement rather than fertility limitation, since very few couples in the age range 15-19 intend to stop family formation at this age. (Country data on type of unmet need are shown in appendix table 19).

If absolute numbers of young, married women with unmet need are used as a guide, the region with the highest unmet need is Asia, the

²² These figures are calculated by multiplying (1) unweighted mean regional percentages of unmet need for DHS countries (from appendix table 19) by (2) numbers of currently married women ages 15-19, taken from the International Data Base of the Bureau of the Census.

Near East, and North Africa, with its 8.6 million young women in need of family planning services. If intensity (or the proportion of women in individual countries with unmet need) is considered, then Sub-Saharan Africa, with four countries with 40 percent or more of married adolescents with unmet need and another three countries with 30 percent or more with unmet need has the highest overall gap (figure 27). Interestingly enough, the region of greatest need, measured as the proportion of *countries* with more than 30 percent of couples classified as having unmet need, is Latin America and the Caribbean. Six of the 10 countries from this region in figure 27 have over 30 percent unmet need among adolescents, compared with 2 to 4 countries out of 10 in the other two regions.

Because patterns (and certainly the absolute numbers of women with unmet need) at other ages may be quite different across regions, it would be misleading to suggest, on the basis of these data, that the region of greatest unmet need overall is ANENA (or SSA or LAC). But these data do indicate a serious need among adolescent women in all three regions. They further suggest that the need among this age group is somewhat more widespread in the region with the highest contraceptive prevalence levels (Latin America and the Caribbean).

Moreover, particularly in countries where proportions of married adolescents with unmet need are highest, adolescent unmet need may exceed that of older women (table 8).

The pregnancies associated with adolescent unmet need are high risk pregnancies (in terms of both maternal and infant health) as well as being unplanned. For this reason, perhaps even more than for reasons having to do with the various social disadvantages and societal costs of early childbearing, this group of women should be considered in need of special attention as governments of the developing world consider their responses to the reproductive health challenges highlighted in Cairo.

From the Cairo Program of Action:

“All countries should, over the next several years, assess the extent of national unmet need for good-quality family planning services and its integration in the reproductive health context, paying particular attention to the most vulnerable and underserved groups in the population. All countries should take steps to meet the family-planning needs of their populations as soon as possible and should, in all cases by the year 2015, seek to provide universal access to a full range of safe and reliable family-planning methods and to related reproductive health services...” (section 7.16).

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Appendix.

Detailed Tables

Table 1.
Women by Selected Age Groups and Region: 1995 to 2020
 (Midyear population in thousands)

Age group/region	1995	2000	2005	2010	2020
All Ages					
World	2,843,239	3,059,136	3,273,315	3,489,275	3,940,774
Sub-Saharan Africa	295,140	339,971	388,885	442,020	572,003
Asia/Near East/North Africa	1,078,659	1,187,542	1,297,539	1,408,207	1,634,463
North Africa	66,296	73,325	80,546	87,887	102,014
Asia, excluding Near East, China, and Japan	1,584,779	1,704,332	1,819,004	1,931,509	2,155,045
Near East	74,207	85,250	97,170	110,103	138,880
Latin America and the Caribbean	242,557	261,632	279,578	296,848	330,007
Remaining world	1,226,884	1,269,992	1,307,313	1,342,200	1,404,302
Asia: China (Mainland) and Japan	646,623	675,366	699,181	721,293	761,477
Europe	417,316	423,996	430,244	435,724	442,745
North America	148,974	155,721	162,109	168,564	181,838
Oceania	13,971	14,908	15,779	16,619	18,242
15 to 49 Years					
World	1,451,694	1,571,935	1,683,533	1,783,048	1,943,187
Sub-Saharan Africa	132,481	153,317	177,760	206,141	280,136
Asia/Near East/North Africa	547,200	615,812	680,332	740,277	848,182
North Africa	32,774	38,260	43,047	47,270	54,697
Asia, excluding Near East, China, and Japan	840,112	911,070	975,116	1,029,755	1,088,422
Near East	35,007	41,013	47,467	54,534	69,241
Latin America and the Caribbean	126,990	139,630	150,474	159,099	171,052
Remaining world	645,024	663,176	674,967	677,531	643,816
Asia: China (Mainland) and Japan	360,693	374,532	385,298	391,282	364,178
Europe	201,261	203,517	203,232	199,365	191,414
North America	75,902	77,616	78,589	78,751	79,630
Oceania	7,168	7,512	7,848	8,133	8,594
15 to 19 Years					
World	253,809	273,194	295,013	300,826	315,393
Sub-Saharan Africa	30,985	36,397	42,718	49,422	62,351
Asia/Near East/North Africa	108,346	119,976	127,132	134,652	144,388
North Africa	7,175	8,408	8,312	8,441	9,046
Asia, excluding Near East, China, and Japan	93,563	102,809	108,834	114,998	166,522
Near East	7,609	8,758	9,986	11,212	13,418
Latin America and the Caribbean	24,666	25,703	26,381	26,153	25,984
Remaining world	89,812	91,119	98,782	90,599	82,670
Asia: China (Mainland) and Japan	51,169	51,157	58,041	51,196	44,599
Europe	27,824	28,217	28,287	26,490	25,506
North America	9,717	10,603	11,232	11,658	11,292
Oceania	1,102	1,142	1,222	1,256	1,274

Source: U.S. Bureau of the Census, International Data Base.

Table 2.
Fertility of Women Ages 15 to 19 by Region: 1995 to 2020

Region	Annual births per 1,000 women				
	1995	2000	2005	2010	2020
World	60	56	53	52	48
Sub-Saharan Africa	143	132	121	110	87
Asia/Near East/North Africa	66	58	54	50	45
North Africa	54	49	46	44	41
Asia, excluding Near East, China, and Japan	66	57	53	49	44
Near East	79	72	70	67	60
Latin America/Caribbean	60	52	46	43	38
Remaining world	25	25	24	25	25
Asia: China (Mainland) and Japan	14	13	13	14	13
Europe	34	34	33	31	31
North America	55	56	56	58	59
Oceania	39	37	34	32	30
	Births (in thousands)				
World	15,313	15,295	15,591	15,569	15,029
Sub-Saharan Africa	4,416	4,797	5,169	5,423	5,403
Asia/Near East/North Africa	7,180	6,901	6,822	6,789	6,550
North Africa	385	415	385	372	370
Asia, excluding Near East, China, and Japan	6,195	5,853	5,740	5,662	5,379
Near East	600	633	696	754	802
Latin America/Caribbean	1,482	1,334	1,224	1,116	977
Remaining world	2,234	2,264	2,377	2,241	2,098
Asia: China (Mainland) and Japan	705	664	757	693	596
Europe	952	963	945	833	798
North America	535	595	633	675	665
Oceania	43	42	42	41	38
	Births to adolescents as a percentage of all births				
World	11	11	11	11	10
Sub-Saharan Africa	17	17	17	17	14
Asia/Near East/North Africa	11	11	10	10	10
North Africa	10	11	10	9	9
Asia, excluding Near East, China, and Japan	11	11	10	10	9
Near East	12	11	12	12	11
Latin America/Caribbean	13	12	11	10	9
Remaining world	6	6	7	7	6
Asia: China (Mainland) and Japan	3	3	4	4	3
Europe	9	9	9	8	8
North America	12	14	15	15	14
Oceania	8	8	8	8	7

Source: U.S. Bureau of the Census, International Data Base.

Table 3.
Fertility of Women Ages 15 to 19 by Region and Country: 1995 and 2020

Region/country	Women (in thousands)		Annual births per 1,000 women		Births (in thousands)	
	1995	2020	1995	2020	1995	2020
World.....	253,809	315,393	60	48	15,313	15,029
Sub-Saharan Africa.....	30,985	62,351	143	87	4,416	5,403
Angola.....	501	1,037	119	75	60	78
Benin.....	300	663	143	92	43	61
Botswana.....	80	97	90	36	7	4
Burkina.....	561	1,090	145	84	81	91
Burundi.....	327	602	57	76	19	46
Cameroon.....	733	1,486	132	98	96	145
Cape Verde.....	23	45	62	44	1	2
Central African Republic.....	163	267	146	86	24	23
Chad.....	293	500	196	114	57	57
Comoros.....	29	69	136	82	4	6
Congo.....	134	214	116	64	16	14
Cote d'Ivoire.....	777	1,727	223	107	173	185
Djibouti.....	22	40	202	112	4	5
Equatorial Guinea.....	21	41	161	95	3	4
Ethiopia.....	3,115	6,732	112	72	348	483
Gabon.....	54	79	155	87	8	7
Gambia, The.....	53	113	192	113	10	13
Ghana.....	859	1,883	116	74	100	140
Guinea.....	337	611	169	66	57	40
Guinea-Bissau.....	61	99	96	56	6	6
Kenya.....	1,667	2,596	128	52	214	136
Lesotho.....	106	159	65	42	7	7
Liberia.....	152	338	173	102	26	34
Madagascar.....	710	1,593	137	84	97	134
Malawi.....	523	989	159	97	83	96
Mali.....	504	1,128	244	152	123	172
Mauritania.....	121	273	165	96	20	26
Mauritius.....	55	51	47	41	3	2
Mayotte.....	5	13	260	139	1	2
Mozambique.....	953	1,903	124	77	118	147
Namibia.....	84	197	81	57	7	11
Niger.....	491	1,175	259	157	127	185
Nigeria.....	5,199	11,631	176	100	913	1,167
Reunion.....	28	37	51	41	1	2
Rwanda.....	477	906	76	56	36	51
Sao Tome and Principe.....	8	11	87	45	1	1
Senegal.....	488	1,014	141	91	69	92
Seychelles.....	4	3	46	40	-	-
Sierra Leone.....	244	493	219	119	53	59
Somalia.....	367	900	57	74	21	67
South Africa.....	2,228	4,072	81	54	181	221
Sudan.....	1,561	3,060	103	57	161	176
Swaziland.....	55	114	68	63	4	7
Tanzania.....	1,630	2,898	157	99	256	288
Togo.....	231	551	151	94	35	52
Uganda.....	1,040	1,816	170	92	177	166
Zaire.....	2,394	5,269	173	108	415	571
Zambia.....	533	954	160	98	85	93
Zimbabwe.....	685	809	93	40	64	33

Table 3.
Fertility of Women Ages 15 to 19 by Region and Country: 1995 and 2020—Con.

Region/country	Women (in thousands)		Annual births per 1,000 women		Births (in thousands)	
	1995	2020	1995	2020	1995	2020
Asia/Near East/North Africa	108,346	144,388	66	45	7,180	6,550
North Africa	7,175	9,046	54	41	385	370
Algeria	1,599	1,964	46	35	73	69
Egypt	3,280	4,071	59	39	194	157
Libya	261	655	142	94	37	62
Morocco	1,566	1,898	42	35	66	66
Tunisia	468	458	33	34	15	16
Asia, excluding Near East	93,563	121,924	66	44	6,195	5,379
Afghanistan	971	2,146	101	67	98	145
Bangladesh	7,112	10,128	113	49	802	498
Bhutan	81	146	87	62	7	9
Brunei	14	20	42	40	1	1
Burma	2,242	2,898	46	31	104	90
Cambodia	398	1,032	71	55	28	57
China, Taiwan	966	790	17	16	16	13
Hong Kong	183	143	7	7	1	1
India	43,939	54,701	71	41	3,102	2,237
Indonesia	11,068	11,240	58	38	637	423
Iran	3,363	7,435	111	63	374	471
Laos	254	476	105	54	27	26
Macau	17	15	7	8	-	-
Malaysia	881	1,365	31	35	27	48
Maldives	12	29	121	56	1	2
Mongolia	130	206	71	46	9	10
Nepal	1,155	1,934	100	58	116	111
North Korea	956	1,124	9	7	9	8
Pakistan	6,482	12,792	67	72	437	918
Philippines	3,874	4,342	42	35	162	152
Singapore	92	91	8	7	1	1
South Korea	1,919	1,683	6	6	11	10
Sri Lanka	873	779	31	30	27	23
Thailand	2,892	2,327	42	29	121	67
Vietnam	3,690	4,082	21	14	78	57
Near East	7,609	13,418	79	60	600	802
Bahrain	24	42	53	51	1	2
Cyprus	26	28	35	32	1	1
Gaza Strip	40	87	80	52	3	5
Iraq	1,124	2,475	100	68	112	168
Israel	229	265	19	17	4	5
Jordan	208	376	51	37	11	14
Kuwait	85	172	60	70	5	12
Lebanon	231	266	44	36	10	10
Oman	92	218	124	83	11	18
Qatar	18	24	52	35	1	1
Saudi Arabia	758	2,067	107	87	81	179
Syria	801	1,841	108	63	86	117
Turkey	3,164	3,754	54	36	171	135
United Arab Emirates	95	247	81	49	8	12
West Bank	78	102	63	34	5	3
Yemen	635	1,454	140	83	89	121

Table 3.
Fertility of Women Ages 15 to 19 by Region and Country: 1995 and 2020—Con.

Region/country	Women (in thousands)		Annual births per 1,000 women		Births (in thousands)	
	1995	2020	1995	2020	1995	2020
Latin America/Caribbean	24,666	25,984	60	38	1,482	977
Anguilla.....	-	-	14	23	-	-
Antigua and Barbuda.....	3	2	65	66	-	-
Argentina.....	1,584	1,658	56	39	89	64
Aruba.....	2	2	41	40	-	-
Bahamas, The.....	15	13	48	46	1	1
Barbados.....	10	9	60	59	1	1
Belize.....	11	17	106	43	1	1
Bolivia.....	419	583	75	43	31	25
Brazil.....	8,337	7,361	45	31	374	225
Chile.....	608	702	58	45	36	31
Colombia.....	1,722	1,765	53	32	91	56
Costa Rica.....	156	209	84	64	13	13
Cuba.....	373	363	90	87	33	31
Dominica.....	4	4	50	46	-	-
Dominican Republic.....	401	423	75	35	30	15
Ecuador.....	584	635	62	36	36	23
El Salvador.....	377	430	112	50	42	22
French Guiana.....	5	10	100	77	1	1
Grenada.....	5	6	105	53	1	-
Guadeloupe.....	17	15	32	27	1	-
Guatemala.....	602	879	102	46	61	40
Guyana.....	42	29	41	30	2	1
Haiti.....	326	498	81	45	26	23
Honduras.....	306	434	95	41	29	18
Jamaica.....	124	124	62	31	8	4
Martinique.....	16	16	25	23	-	-
Mexico.....	5,170	5,848	69	40	355	232
Netherlands Antilles.....	5	6	42	38	-	-
Nicaragua.....	243	331	116	42	28	14
Panama.....	133	154	84	43	11	7
Paraguay.....	266	437	82	45	22	20
Peru.....	1,290	1,380	55	36	71	49
Puerto Rico.....	165	132	42	30	7	4
Saint Kitts and Nevis.....	2	2	72	40	-	-
Saint Lucia.....	9	7	55	34	-	-
Saint Vincent and the Grenadines.....	7	5	46	30	-	-
Suriname.....	20	23	47	34	1	1
Trinidad and Tobago.....	65	62	49	31	3	2
Uruguay.....	136	136	53	37	7	5
Venezuela.....	1,105	1,273	61	38	68	48
Remaining world	89,812	82,670	25	25	2,234	2,098
Asia.....	51,169	44,599	14	13	705	596
China (Mainland).....	46,979	41,126	15	14	691	584
Japan.....	4,190	3,473	3	4	14	13
Europe.....	27,824	25,506	34	31	952	798
Albania.....	153	154	14	10	2	1
Andorra.....	2	2	19	18	-	-
Armenia.....	141	142	86	57	12	8
Austria.....	221	204	22	24	5	5
Azerbaijan.....	334	344	26	19	9	7

Table 3.
Fertility of Women Ages 15 to 19 by Region and Country: 1995 and 2020—Con.

Region/country	Women (in thousands)		Annual births per 1,000 women		Births (in thousands)	
	1995	2020	1995	2020	1995	2020
Remaining world-Con.						
Europe-Con.						
Belarus	361	319	43	40	16	13
Belgium	299	249	12	12	4	3
Bosnia and Hercegovina	179	139	36	37	6	5
Bulgaria	318	242	69	69	22	17
Croatia	159	122	30	30	5	4
Czech Republic	427	335	44	42	19	14
Denmark	156	145	10	10	1	1
Estonia	56	57	50	44	3	3
Faroe Islands	2	2	24	18	-	-
Finland	160	142	12	12	2	2
France	1,779	1,737	9	9	16	16
Georgia	206	197	59	51	12	10
Germany	2,036	1,970	17	16	34	32
Gibraltar	1	1	13	10	-	-
Greece	368	275	24	26	9	7
Guernsey	2	2	21	21	-	-
Hungary	402	313	42	41	17	13
Iceland	10	9	27	23	-	-
Ireland	162	121	14	13	2	2
Isle of Man	2	3	32	31	-	-
Italy	1,780	1,509	11	12	19	18
Jersey	2	2	12	13	-	-
Kazakhstan	755	689	46	38	35	26
Kyrgyzstan	222	269	42	30	9	8
Latvia	91	99	49	44	4	4
Liechtenstein	1	1	4	4	-	-
Lithuania	132	134	41	37	5	5
Luxembourg	11	11	12	12	-	-
Macedonia	92	76	42	38	4	3
Malta	14	12	11	10	-	-
Moldova	177	159	54	45	10	7
Monaco	1	1	9	9	-	-
Montenegro	26	21	27	26	1	1
Netherlands	445	409	6	6	3	2
Norway	130	109	17	15	2	2
Poland	1,574	1,285	29	26	45	34
Portugal	403	304	25	27	10	8
Romania	945	736	50	48	47	35
Russia	5,381	4,840	54	51	289	246
San Marino	1	1	10	10	-	-
Serbia	376	342	42	36	16	12
Slovakia	234	190	43	39	10	7
Slovenia	72	54	28	28	2	2
Spain	1,504	1,102	15	17	23	19
Sweden	246	257	13	12	3	3
Switzerland	191	196	7	7	1	1
Tajikistan	299	484	36	23	11	11
Turkmenistan	203	269	22	15	4	4
Ukraine	1,774	1,516	58	56	103	84
United Kingdom	1,665	1,643	32	31	53	51
Uzbekistan	1,141	1,560	40	27	45	42

Table 3.
Fertility of Women Ages 15 to 19 by Region and Country: 1995 and 2020—Con.

Region/country	Women (in thousands)		Annual births per 1,000 women		Births (in thousands)	
	1995	2020	1995	2020	1995	2020
Remaining world-Con.						
North America	9,717	11,292	55	59	535	665
Canada	924	965	26	25	24	24
Greenland	2	2	63	51	-	-
United States	8,790	10,325	58	62	511	641
Oceania	1,102	1,274	39	30	43	38
Australia	631	679	20	20	13	13
Fiji	41	44	60	49	2	2
French Polynesia	11	15	77	50	1	1
Marshall Islands	3	8	153	109	-	1
New Caledonia	9	10	43	35	-	-
New Zealand	122	103	31	27	4	3
Papua New Guinea	244	348	79	43	19	15
Solomon Islands	23	40	95	43	2	2
Tuvalu	-	1	28	24	-	-
Vanuatu	9	12	65	37	1	-
Western Samoa	10	16	56	39	1	1

- Represents less than 500.

Source: U.S. Bureau of the Census, International Data Base.

Table 4.
Women Ages 15 to 19 by Selected Countries: 1990 to 2010

(Midyear population in thousands)

Country	1990	1995	2000	2005	2010
Sub-Saharan Africa					
Botswana	70	80	94	101	101
Burkina	483	561	657	779	897
Burundi	283	327	413	478	521
Cameroon	568	733	841	951	1,089
Ghana	825	859	1,010	1,321	1,540
Kenya	1,367	1,667	1,908	2,205	2,418
Liberia	114	152	181	216	259
Madagascar	592	710	856	1,035	1,218
Malawi	499	523	619	734	839
Mali	419	504	585	681	823
Mauritius	48	55	52	48	52
Namibia	71	84	103	126	150
Niger	414	491	577	693	852
Nigeria	4,292	5,199	6,192	7,186	8,601
Rwanda	351	477	588	695	765
Senegal	421	488	549	640	753
Sudan	1,371	1,561	1,913	2,198	2,519
Tanzania	1,384	1,630	1,839	2,095	2,371
Togo	190	231	285	347	410
Uganda	908	1,040	1,243	1,497	1,655
Zambia	399	533	635	743	814
Zimbabwe	582	685	786	841	850
Asia/Near East/North Africa					
Bangladesh	6,151	7,112	7,928	7,851	8,650
Egypt	2,716	3,280	3,909	3,752	3,753
India	42,402	43,939	48,850	52,489	54,600
Indonesia	9,886	11,068	10,882	10,465	10,759
Jordan	185	208	247	290	347
Morocco	1,398	1,566	1,763	1,822	1,853
Pakistan	5,523	6,482	7,418	8,892	10,190
Philippines	3,500	3,874	4,141	4,239	4,300
Sri Lanka	849	873	940	841	795
Thailand	3,068	2,892	2,940	2,733	2,573
Tunisia	429	468	505	507	484
Turkey	2,879	3,164	3,439	3,617	3,708
Yemen	541	635	728	880	1,064
Latin America/Caribbean					
Belize	10	11	13	15	16
Bolivia	378	419	464	514	539
Brazil	7,846	8,337	8,482	8,294	7,611
Colombia	1,752	1,722	1,849	1,971	1,944
Costa Rica	149	156	181	201	206
Dominican Republic	385	401	432	455	451
Ecuador	531	584	628	647	642
El Salvador	319	377	330	379	411
Guatemala	510	602	672	770	822
Haiti	284	326	419	486	496
Jamaica	134	124	135	138	134
Mexico	4,953	5,170	5,337	5,563	5,774
Nicaragua	203	243	283	303	321
Panama	125	133	137	147	153
Paraguay	229	266	326	359	387
Peru	1,166	1,290	1,378	1,366	1,367
Trinidad and Tobago	57	65	75	70	64

Note: Countries selected for this table are those included in the report.

Source: U.S. Bureau of the Census, International Data Base.

Table 5.
Percentage Change in Fertility for Women Ages 15 to 19 and 20 to 34 by Country

Country	Year of survey	Annual births per 1,000 women ages 15 to 19		Average number of births by age 20		Percent change for women ages 15-19 adjusted to 10 years	Additional births by age 35		Percent change for women ages 20-34 adjusted to 10 years
		Mid-1980's to early 1990's	Mid-1970's to early 1980's	Mid-1980's to early 1990's	Mid-1970's to early 1980's		Mid-1980's to early 1990's	Mid-1970's to early 1980's	
Sub-Saharan Africa									
Botswana	1988	125	167	0.6	0.8	-25	3.0	4.0	-24
Burkina	1993	154	184	0.8	0.9	-16	4.2	4.8	-12
Burundi	1987	52	90	0.3	0.5	-42	4.4	4.6	-3
Cameroon	1991	174	207	0.9	1.0	-20	3.9	4.1	-7
Ghana	1993&1988	119	141	0.6	0.7	-12	3.5	4.2	-13
Kenya	1993	118	166	0.6	0.8	-36	3.6	4.7	-29
Liberia	1986	184	173	0.9	0.9	6	3.9	3.9	1
Madagascar	1992	156	169	0.8	0.8	-10	3.8	4.3	-13
Malawi	1992	159	193	0.8	1.0	-22	4.0	4.6	-17
Mali	1987	201	199	1.0	1.0	1	4.2	4.6	-8
Mauritius	1991&1985	36	25	0.2	0.1	88	1.9	1.5	49
Namibia	1992	101	107	0.5	0.5	-6	3.2	3.7	-14
Niger	1992	219	253	1.1	1.3	-13	4.5	5.1	-12
Nigeria	1990	144	166	0.7	0.8	-17	3.8	4.7	-22
Rwanda	1992	56	76	0.3	0.4	-33	4.0	5.1	-26
Senegal	1992/1993	132	174	0.7	0.9	-30	3.8	4.5	-17
Sudan (Northern)	1989/1990	69	134	0.3	0.7	-49	3.3	4.7	-30
Tanzania	1991/1992	139	158	0.7	0.8	-15	3.9	4.3	-12
Togo	1988	127	170	0.6	0.9	-25	4.0	4.5	-12
Uganda	1988/1989	187	222	0.9	1.1	-16	4.6	4.8	-5
Zambia	1992	152	200	0.8	1.0	-24	3.9	4.6	-14
Zimbabwe	1988	109	165	0.5	0.8	-34	3.7	4.4	-15
Asia/Near East/North Africa									
Bangladesh	1993/1994&1975	140	219	0.7	1.1	-18	2.3	3.9	-21
Egypt	1992	69	124	0.3	0.6	-44	3.1	4.1	-24
India (Uttar Pradesh)	1992/1993	65	133	0.3	0.7	-51	2.9	3.8	-25
Indonesia	1991	70	129	0.4	0.6	-57	2.2	3.2	-39
Jordan	1990	52	131	0.3	0.7	-60	4.1	5.5	-26
Morocco	1992	43	74	0.2	0.4	-52	2.6	3.8	-40
Pakistan	1990/1991	84	139	0.4	0.7	-33	3.6	4.7	-18
Philippines	1993	52	70	0.3	0.4	-26	2.9	3.6	-19
Sri Lanka	1987	38	44	0.2	0.2	-14	2.2	2.8	-24
Thailand	1987	52	72	0.3	0.4	-28	1.7	2.9	-42
Tunisia	1988	30	46	0.2	0.2	-35	3.2	4.0	-19
Turkey	1993	57	121	0.3	0.6	-53	2.0	3.3	-39
Yemen	1991/1992	104	198	0.5	1.0	-59	4.4	5.9	-31
Latin America/Caribbean									
Belize	1991	137	N/A	0.7	N/A	N/A	3.0	N/A	N/A
Bolivia	1994	96	122	0.5	0.6	-21	3.4	3.9	-15
Brazil	1986	81	86	0.4	0.4	-7	2.7	4.4	-47
Colombia	1990	73	91	0.4	0.5	-20	2.0	2.9	-28
Costa Rica	1993	82	95	0.4	0.5	-34	2.1	2.3	-19
Dominican Republic	1991	91	126	0.5	0.6	-28	2.4	3.0	-20
Ecuador	1987	88	101	0.4	0.5	-26	2.9	3.1	-16
El Salvador	1993	124	124	0.6	0.6	-	2.6	2.7	-7
Guatemala	1987	139	167	0.7	0.8	-17	3.8	4.3	-13
Haiti	1989&1977	103	57	0.5	0.3	58	3.5	3.9	-8

Table 5.
Percentage Change in Fertility for Women Ages 15 to 19 and 20 to 34 by Country

Country	Year of survey	Annual births per 1,000 women ages 15 to 19		Average number of births by age 20		Percent change for women ages 15-19 adjusted to 10 years	Additional births by age 35		Percent change for women ages 20-34 adjusted to 10 years
		Mid-1980's to early 1990's	Mid-1970's to early 1980's	Mid-1980's to early 1990's	Mid-1970's to early 1980's		Mid-1980's to early 1990's	Mid-1970's to early 1980's	
Latin America/ Caribbean—Con.									
Jamaica.....	1993&1975/1976	100	147	0.5	0.7	-18	1.9	3.3	-24
Mexico.....	1987	84	132	0.4	0.7	-45	2.7	3.3	-21
Nicaragua.....	1992/1993	158	175	0.8	0.9	-10	2.7	3.3	-17
Paraguay.....	1990	98	93	0.5	0.5	5	3.1	3.4	-7
Peru.....	1991/1992	68	96	0.3	0.5	-29	2.6	3.5	-25
Trinidad and Tobago.....	1987	84	94	0.4	0.5	-11	2.3	2.6	-10

N/A Not available. - Represents zero.

Note: Columns 4 and 5 and columns 7 and 8 show implied numbers of births by age 20 and by age 35 based on the reported age-specific fertility rates for ages 15 to 19 and 20 to 34, respectively, taken from birth history data from the most recent available survey or from surveys conducted in two time periods. Columns 6 and 9 show percentage changes in implied births standardized to a common 10-year intersurvey interval.

Source: World Fertility Surveys, Demographic and Health Surveys, and surveys conducted by the U.S. Centers for Disease Control.

Table 6.
Infant Mortality Rates for Women Ages 15 to 19 and 20 to 29

Region/country	Year of survey	Infant deaths per 1,000 live births by age of mother		Relative risk of dying in first year of life associated with mother's age (risk for mother ages 20 to 29 = 1.0)
		15-19	20-29	
Sub-Saharan Africa				
Botswana	1988	35	42	0.83
Burkina	1993	146	98	1.49
Burundi	1987	138	87	1.59
Cameroon	1991	105	68	1.55
Ghana	1993	91	69	1.32
Kenya	1993	75	58	1.29
Liberia	1986	177	155	1.14
Madagascar	1992	128	100	1.28
Malawi	1992	179	126	1.43
Mali	1987	177	116	1.53
Namibia	1992	67	64	1.05
Niger	1992	156	125	1.25
Nigeria	1990	121	79	1.53
Rwanda	1992	121	90	1.34
Senegal	1992/1993	92	71	1.29
Sudan (Northern)	1989/1990	88	76	1.15
Tanzania	1991/1992	126	89	1.42
Togo	1988	90	79	1.14
Uganda	1988/1989	120	104	1.15
Zambia	1992	123	92	1.33
Zimbabwe	1988	78	48	1.64
Asia/Near East/North Africa				
Egypt	1992	118	73	1.61
India (Uttar Pradesh)	1992/1993	151	104	1.45
Indonesia	1991	113	65	1.74
Jordan	1990	52	36	1.42
Morocco	1992	107	59	1.82
Pakistan	1990/1991	121	91	1.34
Philippines	1993	42	34	1.22
Sri Lanka	1987	34	33	1.03
Thailand	1987	40	33	1.21
Tunisia	1988	69	56	1.23
Turkey	1993	93	55	1.69
Yemen	1991/1992	125	94	1.33
Latin America/Caribbean				
Bolivia	1994	89	79	1.13
Brazil (North East)	1991	87	89	0.98
Colombia	1990	32	25	1.29
Dominican Republic	1991	67	38	1.77
Ecuador	1989	58	40	1.45
El Salvador	1993	54	32	1.69
Guatemala	1987	98	72	1.35
Mexico	1987	63	53	1.19
Paraguay	1990	52	29	1.79
Peru	1991/1992	79	58	1.36
Trinidad and Tobago	1987	43	28	1.51

Note: Relative risk is a ratio of infant mortality rates for mothers ages 20 to 29 to mothers ages 15 to 19.

Sources: Demographic Health Surveys and surveys conducted by the U.S. Centers for Disease Control.

Table 7.
Percentage of Women Ages 15 to 19 Who Have Begun Childbearing by Residence and Country

Country	Year of survey	Urban	Rural
Sub-Saharan Africa			
Botswana	1988	26	29
Burkina Faso	1993	19	35
Cameroon	1991	29	40
Ghana	1993	16	26
Kenya	1993	17	21
Madagascar	1992	15	33
Malawi	1992	29	36
Namibia	1992	24	20
Niger	1992	29	38
Nigeria	1990	17	33
Rwanda	1992	10	11
Senegal	1992/1993	13	33
Tanzania ¹	1991/1992	28	29
Zambia	1992	29	40
Zimbabwe	1988	15	24
Asia/Near East/North Africa			
Egypt	1992	5	14
Indonesia	1991	6	16
Jordan ¹	1990	7	8
Pakistan	1990/1991	10	19
Philippines	1993	5	9
Turkey	1993	10	7
Yemen	1991/1992	11	15
Latin America/Caribbean			
Bolivia	1994	15	22
Brazil (North East)	1991	14	16
Colombia	1990	12	16
Dominican Republic	1991	13	27
Paraguay	1990	13	21
Peru	1991/1992	8	25

Note: Data refer to all women ages 15 to 19. Women who have begun childbearing includes those who are mothers or are pregnant with their first child.

¹Figures for Jordan and Tanzania (mainland only) are weighted averages, weighted by locality size.

Source: Demographic and Health Surveys (DHS).

Table 8.
Percentage Urban: 1990 and 2000

Country	1990	2000	Country	1990	2000
Sub-Saharan Africa.....	27.8	34.6	Asia/Near East/North Africa—Con.		
Benin	29.0	33.9	Jordan	68.0	74.5
Botswana	23.1	33.3	Morocco	46.1	50.9
Burkina Faso	17.9	37.5	Nepal	10.9	16.7
Burundi	6.3	9.0	Pakistan	32.0	37.9
Cameroon	40.3	49.3	Philippines	48.8	59.0
Cote d'Ivoire	40.4	46.9	Sri Lanka	21.4	24.2
Ghana	34.0	39.2	Syria	50.2	54.9
Kenya	23.6	31.8	Thailand	18.7	23.1
Lesotho	19.4	27.1	Tunisia	54.9	59.9
Liberia	42.1	48.1	Turkey	60.9	74.8
Madagascar	23.8	30.8	Yemen	28.9	38.4
Malawi	11.8	15.6	Latin America/Caribbean.....	69.9	75.6
Mali	23.8	30.4	Belize	47.6	46.9
Mauritania	46.8	59.0	Bolivia	55.8	65.2
Mauritius	40.5	41.6	Brazil	74.6	81.2
Namibia	31.9	42.9	Colombia	70.0	75.2
Niger	15.2	19.2	Costa Rica	47.1	52.7
Nigeria	35.2	43.3	Dominican Republic	60.4	68.1
Rwanda	5.6	6.7	Ecuador	54.8	61.9
Senegal	39.8	45.1	El Salvador	43.9	46.8
Sudan	22.6	27.3	Grenada	N/A	N/A
Tanzania	20.8	28.2	Guatemala	39.4	44.1
Togo	28.5	33.7	Guyana	33.7	39.5
Uganda	11.2	14.2	Haiti	28.6	34.9
Zambia	42.0	44.7	Jamaica	51.4	56.2
Zimbabwe	28.5	36.0	Mexico	72.6	77.7
Asia/Near East/North Africa.....	29.1	34.4	Nicaragua	59.8	65.9
Bangladesh	15.7	21.3	Panama	51.7	55.3
Egypt	43.9	54.2	Paraguay	48.9	56.4
India	25.5	28.6	Peru	69.8	74.5
Indonesia	30.6	40.3	Trinidad and Tobago	69.1	74.3
			Venezuela	90.4	94.4

N/A Not available.

Source: United Nations, 1995.

Table 9.
Adolescent Fertility and Educational Attainment by Country

Country	Year of survey	Age-specific fertility of women ages 15-19 mid-1980's to early-1990's	Percentage of women ages 15-19 with—	
			Primary or higher education	Secondary or higher education
Sub-Saharan Africa				
Botswana	1988	125	94.5	37.8
Burkina	1993	154	26.2	11.1
Burundi	1987	52	26.6	1.2
Cameroon	1991	174	74.3	36.7
Ghana	1993	119	80.9	11.6
Kenya	1993	118	95.7	18.9
Liberia	1986	184	63.3	22.2
Madagascar	1992	156	85.4	27.4
Malawi	1992	159	69.7	4.1
Namibia	1992	101	93.2	21.4
Niger	1992	219	18.9	5.4
Nigeria	1990	144	64.2	30.5
Rwanda	1992	56	79.0	9.7
Senegal	1992/1993	132	38.9	11.7
Sudan (Northern)	1989/1990	69	76.5	16.6
Tanzania	1991/1992	139	88.8	5.7
Togo	1988	127	62.4	15.6
Uganda	1988/1989	187	79.4	12.3
Zambia	1992	152	89.9	24.1
Zimbabwe	1988	109	97.5	49.8
Asia/Near East/North Africa				
Egypt	1992	69	76.3	65.3
Indonesia	1991	70	96.9	48.1
Jordan	1990	52	97.0	87.7
Morocco	1992	43	54.0	31.0
Pakistan	1990/1991	84	45.0	18.9
Philippines	1993	52	98.9	80.3
Turkey	1993	57	92.6	36.7
Latin America/Caribbean				
Bolivia	1994	96	97.4	46.5
Brazil	1986	81	97.4	66.2
Colombia	1990	73	97.7	64.0
Dominican Republic	1991	91	97.0	39.8
Ecuador	1987	88	96.9	56.1
El Salvador	1985	124	91.0	17.6
Guatemala	1987	139	77.5	21.2
Mexico	1987	84	96.1	62.2
Peru	1991/1992	68	98.8	77.9
Trinidad and Tobago	1987	84	100.0	86.7

Note: Percentages are for persons attending, rather than completing, primary and secondary schooling, or better. Intermediate and middle levels are classed with primary level throughout. Data are for household populations or for sampled women where all women ages 15+ were sampled.

Source: Demographic and Health Surveys (DHS).

Table 10.
Percentage of Women Ages 15 to 19 Who Have Begun Childbearing by Level of Education and Country

Country	Year	No education	Primary	Secondary or higher
Sub-Saharan Africa				
Burkina	1993	36.3	23.5	9.0
Cameroon	1991	53.4	37.8	21.3
Ghana	1993	33.3	30.2	16.3
Kenya	1993	29.9	22.4	12.1
Malawi	1992	42.8	32.2	19.6
Niger ¹	1992	38.9	24.8	N/A
Rwanda	1992	22.1	8.1	3.1
Senegal	1992/1993	32.1	13.6	5.4
Zambia	1992	45.4	36.5	21.2
Zimbabwe	1988	42.3	22.8	17.5
Asia/Near East/North Africa				
Morocco	1992	10.5	7.0	2.1
Philippines	1993	15.2	13.5	4.8
Turkey	1993	19.7	10.7	3.0
Latin America/Caribbean				
Bolivia	1994	37.6	24.0	9.4
Colombia	1990	62.4	20.3	7.5
Peru	1991/1992	38.6	27.6	6.9

N/A Not available.

¹Primary education data refer to primary education or higher.

Source: Most recent Demographic and Health Surveys (DHS).

Table 11.
Percentage of Women Ages 15 to 19 and 45 to 49 With No Education by Country

Country	Year of survey	Age at time of survey	
		15-19	45-49
Sub-Saharan Africa			
Botswana	1988	5.5	47.8
Burkina	1993	73.2	95.1
Burundi ¹	1987	73.3	86.7
Cameroon	1991	25.7	76.4
Ghana	1993	19.0	67.4
Kenya	1993	4.3	54.7
Liberia ¹	1986	36.7	88.0
Madagascar	1992	14.5	41.0
Malawi	1992	30.3	69.5
Namibia	1992	6.6	31.0
Niger	1992	80.5	97.3
Nigeria	1990	33.6	84.7
Rwanda	1992	20.9	71.7
Senegal	1992/1993	60.7	91.2
Sudan	1989/1990	23.5	86.3
Tanzania	1991/1992	14.9	73.5
Togo ¹	1988	37.6	92.6
Uganda ¹	1988/1989	20.7	67.4
Zambia	1992	10.1	45.7
Zimbabwe ¹	1988	2.5	28.3
Asia/Near East/North Africa			
Egypt	1992	23.6	59.1
Indonesia	1991	3.0	41.0
Jordan	1990	3.0	65.0
Morocco	1992	45.8	87.9
Pakistan	1990/1991	54.9	86.3
Philippines	1993	1.1	3.8
Sri Lanka ¹	1987	15.8	19.8
Thailand ¹	1987	7.5	20.8
Tunisia ¹	1988	35.4	89.1
Turkey	1993	7.4	43.9
Yemen	1991/1992	60.4	97.1
Latin America/Caribbean			
Bolivia	1994	2.7	37.3
Brazil (North East)	1991	6.1	37.7
Colombia	1990	2.3	11.6
Dominican Republic	1991	3.0	17.5
Ecuador ¹	1987	3.2	22.0
El Salvador ¹	1985	9.1	40.3
Guatemala ^{1 2}	1987	22.4	51.3
Mexico ¹	1987	3.9	30.2
Peru	1991/1992	1.1	18.8

¹Based on surveyed female population.

²Data for ages 45 to 49 refer to ages 40 to 44.

Note: Data refer to female household population unless otherwise indicated.

Source: Demographic and Health Surveys.

Table 12.
Female Enrollment Ratios by Region: 1970 to 2000

Region	1970	1975	1980	1985	1990	Projected 2000 ¹
Primary, Ages 6-11						
All Developing Countries combined.....	50.8	58.4	62.5	67.5	70.6	76.8
Sub-Saharan Africa ²	31.1	39.6	52.5	49.5	47.9	44.7
Asia ³	53.0	60.6	62.8	69.6	74.1	83.1
Arab States ⁴	39.1	48.4	57.9	62.8	67.3	76.3
Latin America and the Caribbean.....	71.3	76.1	81.9	84.7	87.1	91.9
Secondary, Ages 12-17						
All Developing Countries combined.....	29.4	36.0	36.8	37.7	41.5	49.1
Sub-Saharan Africa ²	18.9	24.6	34.9	35.5	34.5	32.5
Asia ³	31.2	37.3	35.5	36.0	40.0	48.0
Arab States ⁴	17.7	24.7	33.0	39.7	43.5	51.1
Latin America and the Caribbean.....	47.5	56.1	61.6	65.1	70.7	81.9

¹Enrollment ratios for year 2000 were linearly projected at the U.S. Bureau of the Census using enrollment ratio estimates for 1985 and 1990 published in UNESCO (1991).

²Figures are those reported in source for Africa (excluding Arab States).

³Figures are those reported in source for Asia (excluding Arab States).

⁴Figures are in lieu of figures for North Africa and the Near East, which are not separately reported by UNESCO.

Note: An enrollment ratio is defined as the ratio of (1) number of students enrolled (typically, for an age range corresponding to a specific educational level) to (2) the corresponding age-sex-specific population. Ages 6-11 corresponds roughly to primary schooling in an educational system with 6 years of primary instruction. The age range 12-17 corresponds less closely to the secondary level cross-nationally because of the variation in educational systems.

Source: UNESCO (1991).

Table 13.
Percentage of Women Who Married by Exact Age 20 by Age at Time of Survey and Percentage of Women Ages 15 to 19 Who Are Ever Married

Country	Year of survey	Age at time of survey						Percent ever married ages 15-19
		20-24	25-29	30-34	35-39	40-44	45-49	
Sub-Saharan Africa								
Botswana	1988	19	30	32	34	33	27	6
Burkina	1993	86	86	87	87	88	88	45
Burundi	1987	44	57	58	54	58	54	7
Cameroon	1991	73	75	79	83	86	86	44
Ghana	1993	60	62	66	61	64	60	22
Kenya	1993	46	56	63	66	67	69	16
Liberia	1986	64	69	71	69	81	70	36
Madagascar	1992	54	58	65	65	70	71	27
Malawi	1992	77	77	80	73	69	66	41
Mali	1987	92	90	93	92	90	89	75
Namibia	1992	20	20	25	26	28	23	8
Niger	1992	90	94	94	95	94	93	59
Nigeria	1990	68	69	76	70	71	72	39
Rwanda	1992	35	41	48	50	58	64	10
Senegal	1992/1993	60	70	79	81	84	83	30
Sudan (Northern)	1989/1990	37	47	60	73	78	77	16
Tanzania	1991/1992	61	59	70	74	76	76	28
Togo	1988	63	69	71	66	69	66	27
Uganda	1988/1989	73	74	79	80	83	81	41
Zambia	1992	64	70	78	83	81	79	30
Zimbabwe	1988	53	66	70	62	69	63	20
Asia/Near East/North Africa								
Egypt	1992	41	51	55	58	59	64	14
India (Uttar Pradesh)	1992/1993	80	88	90	91	93	94	40
Indonesia	1991	51	62	68	71	76	76	20
Jordan	1990	30	42	52	61	62	63	11
Morocco	1992	31	36	50	56	64	74	13
Pakistan	1990/1991	49	58	63	61	61	57	25
Philippines	1993	29	34	37	39	38	40	8
Sri Lanka	1987	28	30	29	30	41	50	7
Thailand	1987	37	40	44	46	47	54	17
Tunisia	1988	21	28	36	44	54	51	4
Turkey	1993	41	50	59	67	66	68	14
Yemen	1991/1992	63	77	82	80	80	79	25
Latin America/Caribbean								
Belize	1991	44	47	51	49	50	NA	22
Bolivia	1994	43	45	48	46	45	41	16
Brazil (North East)	1991	38	47	49	48	44	49	16
Colombia	1990	37	39	43	37	42	49	13
Costa Rica	1986	41	40	37	32	23	26	17
Dominican Republic	1986	47	52	54	60	63	69	22
Ecuador	1987	44	52	49	48	51	46	19
El Salvador	1993	52	54	61	63	62	62	27
Guatemala	1987	60	65	63	63	56	NA	26
Haiti	1989	N/A	N/A	N/A	N/A	N/A	N/A	15
Mexico	1987	44	49	53	47	53	58	20
Nicaragua	1992/1993	63	63	64	63	66	67	37
Panama	1984	N/A	N/A	N/A	N/A	N/A	N/A	24
Paraguay	1990	41	45	43	39	44	42	15
Peru	1991/1992	31	38	40	43	45	44	11
Trinidad and Tobago	1987	53	53	53	54	52	62	25

N/A Not available.

Sources: Demographic and Health Surveys and surveys conducted by the U.S. Centers for Disease Control.

Table 14.
**Percentage of Women Married or Who Have Given Birth by Age 18 by Country:
 Late 1970's and Early 1980's**

Country	Married by age 18	Percent having a birth by age 18	Country	Married by age 18	Percent having a birth by age 18
Sub-Saharan Africa			Asia/Near East/North Africa—Con.		
Benin	42	21	Thailand	25	12
Cameroon	61	38	Tunisia	13	3
Cote d'Ivoire	60	44	Yemen	71	33
Ghana	48	29			
Kenya	45	38	Latin America/Caribbean		
Lesotho	39	17	Colombia	26	17
Mauritania	62	39	Costa Rica	23	15
Senegal	62	40	Dominican Republic	43	23
Sudan (Northern)	47	31	Ecuador	29	20
			Guyana	42	19
Asia/Near East/North Africa			Haiti	30	11
Bangladesh	90	64	Jamaica	59	36
Indonesia	24	10	Mexico	32	20
Jordan	39	23	Panama	26	19
Nepal	70	23	Paraguay	25	13
Pakistan	57	30	Peru	23	14
Philippines	17	9	Trinidad and Tobago	37	14
Sri Lanka	16	8	Venezuela	28	18
Syria	35	19			

Note: Data are for women ages 20 to 24, taken from World Fertility Surveys.

Source: United Nations, 1987, table 55.

Table 15.
Percentage of Currently Married Women Ages 15 to 19 Using Contraception by Method and Country

Country/year of survey	Modern methods									Traditional
	No method	All methods	All modern	Pill	IUD	Condom	Sterilization		Other modern	
							Male	Female		
Sub-Saharan Africa										
Botswana 1988	82.8	17.2	14.6	10.8	0.0	2.7	0.0	0.0	1.1	2.7
Burkina Faso 1993	94.1	5.9	2.3	0.8	0.1	1.2	0.0	0.0	0.2	3.7
Burundi 1987	95.7	4.3	0.6	N/A	N/A	N/A	N/A	N/A	N/A	3.7
Cameroon ¹ 1991	81.6	18.4	1.4	0.3	0.0	0.6	0.0	0.0	0.5	16.9
Ghana 1988	95.4	4.6	2.3	2.3	0.0	0.0	0.0	0.0	0.0	2.3
1993	87.0	13.0	8.1	1.9	0.6	3.7	0.0	0.0	1.9	5.0
Kenya 1977/78.....	98.0	2.0	1.0	N/A	N/A	N/A	N/A	N/A	N/A	1.0
1989	87.0	13.0	6.7	5.1	1.3	0.0	0.0	0.0	0.3	6.3
1993	89.7	10.3	6.2	4.6	0.0	0.4	0.0	0.0	1.2	4.1
Liberia 1986	97.9	2.1	2.0	N/A	N/A	N/A	N/A	N/A	N/A	0.1
Madagascar 1992	93.6	6.4	0.6	0.2	0.0	0.4	0.0	0.0	0.0	5.9
Malawi 1992	92.7	7.3	3.4	0.9	0.0	2.0	0.0	0.0	0.5	3.9
Mali 1987	91.4	8.6	1.4	N/A	N/A	N/A	N/A	N/A	N/A	7.2
Mauritius 1985	45.3	54.7	33.3	25.6	0.9	3.4	0.0	0.0	3.4	21.4
1991	53.7	46.3	28.3	20.8	0.0	1.5	0.0	0.0	6.0	17.9
Namibia 1992	79.5	20.5	16.5	7.2	0.0	0.0	0.0	0.0	9.3	3.9
Niger 1992	97.8	2.2	0.8	0.7	0.0	0.0	0.0	0.0	0.1	1.3
Nigeria ¹ 1986 (Ondo State)	97.4	2.6	1.7	1.7	0.0	0.0	0.0	0.0	0.0	0.9
1990	98.7	1.3	0.6	0.2	0.0	0.4	0.0	0.0	0.0	0.7
Rwanda 1992	89.2	10.8	7.1	3.4	0.0	0.0	0.0	0.0	3.7	3.7
Senegal 1978	96.0	4.0	0.0	N/A	N/A	N/A	N/A	N/A	N/A	4.0
1986	90.6	9.4	0.4	0.2	0.0	0.2	0.0	0.0	0.0	9.0
1992/93.....	98.0	2.0	0.4	0.2	0.0	0.2	0.0	0.0	0.0	1.6
Sudan (Northern) 1978/79.....	96.0	4.0	3.0	NA	NA	NA	NA	NA	NA	1.0
1989/90.....	96.2	3.8	2.2	1.9	0.3	0.0	0.0	0.0	0.0	1.6
Tanzania 1991/92.....	94.8	5.2	1.6	1.4	0.0	0.2	0.0	0.0	0.0	3.6
1994	85.0	15.0	8.3	5.0	0.0	2.5	0.0	0.0	0.8	6.7

Table 15.
Percentage of Currently Married Women Ages 15 to 19 Using Contraception by Method and Country—Con.

Country/year of survey	Modern methods									Traditional
	No method	All methods	All modern	Pill	IUD	Condom	Sterilization		Other modern	
							Male	Female		
Sub-Saharan Africa—Con.										
Togo										
1988	83.3	16.7	2.0	0.5	0.0	0.5	0.0	0.0	1.0	14.6
Uganda										
1988/89.....	98.3	1.7	1.2	1.2	0.0	0.0	0.0	0.0	0.0	0.5
Zambia										
1992	91.3	8.7	3.5	1.8	0.0	1.7	0.0	0.0	0.0	5.2
Zimbabwe										
1988	70.0	30.0	28.4	27.8	0.6	0.0	0.0	0.0	0.0	1.7
Asia/Near East/North Africa										
Bangladesh										
1975/76.....	96.0	4.0	2.2	1.1	0.1	0.9	0.0	0.1	0.0	1.8
1993/94.....	75.3	24.7	19.7	12.4	1.8	2.9	0.2	0.1	2.3	5.1
Egypt ¹										
1988	94.3	5.7	5.5	3.5	1.7	0.3	0.0	0.0	0.0	0.2
1992	86.7	13.3	12.7	4.1	8.4	0.2	0.0	0.0	0.0	0.6
India										
1992/93.....	92.9	7.1	4.0	0.8	0.6	1.2	0.1	1.3	0.0	3.1
1992/93 (Uttar Pradesh)....	97.4	2.6	2.0	0.6	0.0	1.2	0.0	0.0	0.2	0.7
Indonesia										
1976 (Java/Bali)	87.0	13.0	10.8	8.8	1.1	0.7	0.0	0.0	0.2	2.2
1987 (Java/Bali)	74.5	25.5	23.3	12.7	3.7	0.1	0.0	0.0	6.8	2.2
1991	70.0	30.0	29.1	11.8	3.5	0.1	0.3	0.0	13.4	0.9
Jordan										
1976	91.1	8.9	6.7	5.7	0.4	0.6	0.0	0.0	0.0	2.2
1990	87.7	12.3	3.9	1.1	2.0	0.5	0.0	0.0	0.3	8.4
Morocco ¹										
1987	83.0	17.0	14.5	14.1	0.0	0.0	0.0	0.0	0.4	2.5
1992	76.7	23.3	22.2	20.6	1.6	0.0	0.0	0.0	0.0	1.2
Pakistan ¹										
1990/91.....	97.4	2.6	1.8	0.2	0.4	0.8	0.0	0.0	0.4	0.7
Philippines										
1978	83.9	16.1	4.8	2.6	0.4	1.8	0.0	0.0	0.0	11.3
1993	82.8	17.2	9.7	7.0	2.7	0.0	0.0	0.0	0.0	7.6
Sri Lanka										
1975	86.2	13.8	10.2	1.1	5.4	3.2	0.0	0.5	0.0	3.6
1987	79.7	20.3	10.8	7.2	1.1	0.8	0.0	1.0	0.7	9.5
Thailand										
1975	81.9	18.1	14.8	13.3	1.0	0.0	0.0	0.5	0.0	3.3
1987	57.0	43.0	40.4	24.7	7.0	1.2	0.1	0.4	7.0	2.6
Tunisia ¹										
1988	88.9	11.1	9.6	1.6	4.8	0.0	0.0	0.0	3.2	1.6
Turkey ¹										
1993	75.9	24.1	9.3	0.6	6.2	2.5	0.0	0.0	0.0	14.8
Yemen ¹										
1991/92.....	94.9	5.1	1.3	1.1	0.2	0.0	0.0	0.0	0.0	3.8

Table 15.
Percentage of Currently Married Women Ages 15 to 19 Using Contraception by Method and Country—Con.

Country/year of survey	Modern methods									Traditional
	No method	All methods	All modern	Pill	IUD	Condom	Sterilization		Other modern	
							Male	Female		
Latin America/Caribbean										
Belize										
1991	73.8	26.2	24.4	12.8	1.7	0.6	0.0	0.6	8.7	1.7
Bolivia										
1989	84.0	16.0	2.4	1.4	0.8	0.1	0.0	0.0	0.1	13.6
1994	69.8	30.2	9.4	3.9	3.7	1.8	0.0	0.0	0.0	20.8
Brazil										
1986	52.4	47.6	46.3	40.3	0.5	1.4	0.0	1.0	3.1	1.3
1991 (North East)	58.7	41.3	38.3	30.7	0.0	6.3	0.0	0.6	0.7	3.0
Colombia										
1976	73.2	26.8	20.6	12.2	3.9	1.7	0.0	0.0	2.8	6.2
1986	70.6	29.4	21.1	13.3	4.8	0.0	0.0	0.0	3.0	8.3
1990	63.1	36.9	31.9	18.8	9.8	1.3	0.0	0.0	2.0	5.0
Costa Rica ¹										
1986	48.8	51.2	40.6	28.5	2.4	8.9	0.0	0.0	0.8	10.5
1993	47.0	53.0	44.0	N/A	N/A	N/A	N/A	N/A	N/A	9.0
Dominican Republic										
1975	87.0	13.0	7.7	4.7	0.0	1.2	0.0	0.0	1.8	5.3
1986	74.8	25.2	20.6	18.2	1.0	1.1	0.0	0.1	0.2	4.6
1991	82.6	17.4	13.2	12.3	0.3	0.2	0.0	0.4	0.0	4.0
Ecuador ¹										
1987	84.6	15.4	11.6	4.4	5.5	0.0	0.0	0.0	1.7	3.8
1989	75.0	25.0	18.0	7.3	9.2	1.1	0.0	0.0	0.4	7.0
El Salvador										
1985	78.3	21.7	20.5	13.1	4.4	1.9	0.0	0.9	0.2	1.2
1988	82.9	17.1	15.6	7.7	1.3	4.1	0.0	1.9	0.6	1.5
1993	77.7	22.3	18.9	9.7	2.1	0.8	0.0	0.2	6.1	3.4
Guatemala										
1987	94.6	5.4	2.5	1.8	0.0	0.7	0.0	0.0	0.0	2.8
Jamaica										
1975/76	69.5	30.5	29.7	12.2	0.8	10.6	0.0	0.0	6.1	0.8
1989	52.1	47.9	41.6	19.8	0.3	16.7	0.0	0.0	4.8	6.3
1993	41.2	58.8	54.4	16.6	1.1	34.4	0.0	0.0	2.4	4.4
Mexico										
1976/77	85.8	14.2	11.2	7.8	1.6	0.2	0.0	0.2	1.4	3.0
1987	70.3	29.7	24.4	N/A	N/A	N/A	N/A	N/A	N/A	5.3
Nicaragua										
1992/93	76.8	23.2	20.7	11.7	5.0	3.1	0.0	0.0	0.9	2.5
Panama ¹										
1984	77.4	22.6	19.7	11.9	5.8	1.0	0.0	0.2	0.8	2.9
Paraguay										
1979	81.0	19.0	17.0	N/A	N/A	N/A	N/A	N/A	N/A	5.0
1987	68.9	31.1	15.2	11.8	0.5	0.0	0.0	0.0	2.9	15.9
1990	64.6	35.4	26.2	17.8	1.4	0.8	0.0	0.0	6.2	9.2
Peru										
1977/78	83.4	16.6	5.7	3.2	0.4	0.0	0.0	0.0	2.1	10.9
1986	77.1	22.9	9.9	4.6	2.3	0.0	0.0	0.0	3.0	13.0
1991/92	70.9	29.1	11.0	4.7	4.9	0.7	0.0	0.0	0.7	18.2

Table 15.
Percentage of Currently Married Women Ages 15 to 19 Using Contraception by Method and Country—Con.

Country/year of survey	Modern methods									Traditional
	No method	All methods	All modern	Pill	IUD	Condom	Sterilization		Other modern	
							Male	Female		
Latin America/Caribbean—Con.										
Trinidad and Tobago										
1977	57.0	42.0	34.0	N/A	N/A	N/A	N/A	N/A	N/A	8.0
1987	57.6	42.4	30.2	18.0	1.4	7.9	0.0	0.0	2.9	12.2

¹Data for several World Fertility Surveys (WFS) are not included because the data reported were not for currently married women. Country data so excluded are for Cameroon, Nigeria, Egypt, Morocco, Pakistan, Tunisia, Turkey, Yemen, Costa Rica, Ecuador, and Panama.

N/A Not available.

Sources: World Fertility Surveys, Demographic Health Surveys, and surveys conducted by the U.S. Centers for Disease Control.

Table 16.
Percentage of Currently Married Women Ages 20 to 49 Using Contraception by Country

(Figures for components may not add to total because of rounding)

Region/country	Year of survey	No method	All methods	Modern	Traditional
Sub-Saharan Africa					
Botswana	1988	66.4	33.6	32.3	1.2
Burkina	1993	91.7	8.3	4.4	3.7
Burundi	1987	91.2	8.8	1.2	7.6
Cameroon	1991	84.2	15.8	4.7	11.1
Ghana	1993	80.7	19.3	9.8	9.6
Kenya	1993	65.1	34.9	29.4	5.5
Liberia	1986	93.2	6.8	5.8	1.0
Madagascar	1992	81.3	18.7	6.0	12.7
Malawi	1992	86.0	14.0	8.1	5.9
Mali	1987	95.9	4.1	1.3	2.8
Mauritius	1991	24.1	75.9	48.6	27.3
Namibia	1992	70.8	29.2	26.5	2.9
Niger	1992	95.1	4.9	2.7	2.4
Nigeria	1990	93.4	6.6	3.9	2.7
Rwanda	1992	78.3	21.7	13.1	8.5
Senegal	1992/1993	91.7	8.3	5.5	2.9
Sudan (Northern)	1989/1990	91.0	9.0	5.8	3.2
Tanzania	1994	79.2	20.8	13.5	7.4
Togo	1988	64.5	35.5	3.1	32.4
Uganda	1988/1989	94.6	5.4	2.7	2.7
Zambia	1992	84.2	15.8	9.4	6.4
Zimbabwe	1988	55.9	44.1	36.8	7.3
Asia/Near East/North Africa					
Bangladesh	1993/1994	50.9	49.1	40.0	9.2
Egypt	1992	51.4	48.6	46.2	2.4
India	1992/1993	55.2	44.8	40.5	4.4
India (Uttar Pradesh)	1992/1993	78.0	22.0	20.6	1.3
Indonesia	1991	49.2	50.8	48.0	2.7
Jordan	1990	64.0	36.0	28.0	8.0
Morocco	1992	57.7	42.3	36.1	6.1
Pakistan	1990/1991	87.6	12.4	9.5	2.9
Philippines	1993	58.9	41.1	25.7	15.5
Sri Lanka	1987	28.9	71.1	47.3	23.8
Thailand	1987	33.3	66.7	64.8	1.9
Tunisia	1988	49.5	50.5	40.9	9.5
Turkey	1993	35.0	65.0	36.1	28.9
Yemen	1991/1992	92.5	7.5	6.9	0.6
Latin America/Caribbean					
Belize	1991	52.3	47.7	45.1	2.5
Bolivia	1994	54.0	46.0	18.1	27.9
Brazil	1986	33.3	66.7	57.0	9.7
Colombia	1990	32.6	67.4	55.7	11.8
Costa Rica	1993	24.3	75.7	65.1	10.7
Dominican Republic	1991	41.0	59.0	54.3	4.7
Ecuador	1989	45.3	54.7	43.0	11.6
El Salvador	1993	43.0	57.0	51.4	5.6
Guatemala	1987	74.9	25.1	20.9	4.2
Jamaica	1993	38.0	62.0	58.3	3.7
Mexico	1987	45.9	54.1	45.9	8.3
Nicaragua	1992/1993	48.9	51.1	47.2	3.8
Panama	1984	39.2	60.8	56.7	4.1
Paraguay	1990	50.9	49.1	35.8	13.4
Peru	1991/1992	39.8	60.2	33.7	26.5
Trinidad and Tobago	1987	47.0	53.0	45.1	7.8

Sources: Demographic and Health Surveys and surveys conducted by the U.S. Centers for Disease Control.

Table 17.
Percentage of Currently Married Women Ages 15 to 19 With Contraceptive Knowledge by Country

Country	Year of survey	Knows any method	Knows a modern method	Knows a source for modern method
Sub-Saharan Africa				
Burkina	1993	62.9	60.2	25.2
Burundi	1987	67.1	59.2	N/A
Cameroon	1991	67.8	60.9	42.5
Ghana	1988	71.3	N/A	62.1
Ghana	1993	85.7	85.7	62.7
Kenya	1989	N/A	86.0	84.5
Kenya	1993	98.1	97.0	89.6
Liberia	1986	53.2	N/A	27.0
Madagascar	1992	52.1	44.7	30.2
Malawi	1992	88.0	84.2	72.5
Namibia	1992	88.0	88.0	83.5
Niger	1992	64.9	48.9	22.2
Nigeria	1990	31.7	30.5	23.0
Rwanda	1992	100.0	99.1	86.8
Senegal	1986	81.9	50.1	N/A
Senegal	1992/1993	62.4	59.5	24.5
Sudan (Northern)	1989/1990	N/A	67.3	54.5
Tanzania	1991/1992	70.9	68.7	58.4
Tanzania	1994	84.4	81.7	N/A
Togo	1988	76.6	N/A	71.9
Uganda	1988/1989	N/A	74.4	69.5
Zambia	1992	86.7	83.6	77.3
Zimbabwe	1988	N/A	96.7	89.4
Asia/Near East/North Africa				
Egypt	1988	N/A	96.9	91.6
Egypt	1992	98.2	97.9	82.8
India (Uttar Pradesh)	1992/1993	89.9	89.5	67.2
Indonesia (Bali and Java)	1987	93.4	93.4	N/A
Indonesia	1991	89.5	88.9	87.1
Jordan	1990	99.3	97.8	91.0
Morocco	1987	92.8	N/A	85.5
Morocco	1992	98.8	98.8	90.5
Pakistan	1990/1991	66.3	65.8	32.3
Philippines	1993	89.6	89.3	83.6
Thailand	1987	99.5	99.2	N/A
Tunisia	1988	100.0	N/A	88.9
Yemen	1991/1992	55.4	50.7	23.7
Latin America/Caribbean				
Bolivia	1994	76.9	68.3	N/A
Brazil	1986	100.0	100.0	N/A
Dominican Republic	1991	99.7	99.7	92.7
Guatemala	1987	58.2	58.0	N/A
Paraguay	1990	96.8	94.0	83.8
Peru	1991/1992	89.8	85.9	73.0
Trinidad and Tobago	1987	97.8	97.8	N/A

N/A Not available.

Source: Demographic and Health Surveys.

Table 18.
Percentage of Women by Knowledge, Proximity, and Cost of Contraception

Country	Year of survey	Married women ages 15-19 who know a source for a modern method	Population under 30 minutes to source	Population providing proximity data	Annual cost of oral pills as percent of GNP per capita
Sub-Saharan Africa					
Botswana	1988	N/A	N/A		3.7
Burkina	1993	25.2	47.6	MW	2.0
Burundi	1987	N/A	N/A		37.0
Cameroon	1991	42.5	68.9	MW	5.0
Ghana	1993	62.7	45.6	AW	2.1
Kenya	1993	89.6	37.3	MW	37.1
Liberia	1986	27.0	N/A		N/A
Madagascar	1992	30.2	35.0	AW	11.3
Malawi	1992	72.5	13.9	AW	N/A
Mali	1987	N/A	N/A		10.1
Namibia	1992	83.5	37.3	MW	N/A
Niger	1992	22.2	32.0	MW	N/A
Nigeria	1990	23.0	30.8	AW	8.5
Rwanda	1992	86.8	N/A		21.3
Senegal	1992/1993	24.5	N/A		6.5
Sudan	1989/1990	54.5	N/A		10.0
Tanzania	1991/1992	58.4	20.0	AW	10.5
Togo	1988	71.9	N/A		6.2
Uganda	1988/1989	69.5	N/A		N/A
Zambia	1992	77.3	33.3	AW	3.3
Zimbabwe	1988	89.4	N/A		N/A
Asia/Near East/North Africa					
Bangladesh	1993/1994	N/A	N/A		0.7
Egypt	1992	82.8	60.9	MW	0.2
India (Uttar Pradesh)	1992/1993	67.2	N/A		1.7
Indonesia	1991	87.1	67.8	EMW	2.5
Jordan	1990	91.0	60.5	EMW	2.5
Morocco	1992	90.5	44.6	EMW	4.1
Pakistan	1990/1991	32.3	38.5	EMW	2.2
Philippines	1993	83.6	71.6	AW	6.3
Sri Lanka	1987	N/A	N/A		0.2
Thailand	1987	N/A	N/A		1.8
Tunisia	1988	88.9	N/A		0.3
Turkey	1993	N/A	N/A		1.9
Yemen	1991/1992	23.7	41.2	MW	7.4
Latin America/Caribbean					
Bolivia	1994	N/A	N/A		7.4
Brazil	1986	N/A	57.8	AW	0.7
Colombia	1990	N/A	60.9	AW	1.9
Costa Rica	1993	N/A	N/A		4.4
Dominican Republic	1991	92.7	86.5	MW	7.0
Ecuador	1987	N/A	N/A		13.5
El Salvador	1985	N/A	N/A		3.4
Guatemala	1987	N/A	N/A		7.5
Jamaica	1993	N/A	N/A		0.1
Mexico	1987	N/A	N/A		1.0
Paraguay	1990	83.8	45.5	AW	1.4
Peru	1991/1992	73.0	64.4	AW	1.6
Trinidad and Tobago	1987	N/A	N/A		1.8

N/A Not available. MW Married women. EMW Ever married women. AW All women.

Note: Data on proximity are provided by different groups of respondents in different countries. The respondent group is indicated in column 4.

Sources: Demographic and Health Surveys and surveys conducted by the U.S. Centers for Disease Control. Cost data (column 5) are from Population Action International, 1991.

Table 19.
Currently Married Women Ages 15 to 19 With Unmet Need for Family Planning by Country

Country	Year of survey	Percent with unmet need		Total
		For spacing	For limiting	
Sub-Saharan Africa				
Botswana	1988	19.4	12.9	32.3
Burkina	1993	25.3	0.5	25.8
Burundi	1987	20.4	2.2	22.6
Cameroon	1991	13.3	1.8	15.1
Ghana	1993	42.9	5.0	47.8
Kenya	1993	37.5	4.4	41.9
Liberia	1986	31.1	12.1	43.2
Madagascar	1992	20.0	4.3	24.3
Malawi	1992	20.1	6.4	26.5
Mali	1987	30.5	1.9	32.4
Namibia	1992	24.2	7.7	31.9
Niger	1992	16.1	0.3	16.4
Nigeria	1990	15.7	0.3	16.0
Rwanda	1992	18.6	11.1	29.7
Senegal	1992/1993	23.4	1.1	24.5
Sudan (Northern)	1989/1990	17.2	1.1	18.3
Tanzania	1994	18.5	1.7	20.2
Togo	1988	39.4	0.9	40.3
Uganda	1988/1989	27.2	1.3	28.5
Zambia	1992	23.9	3.9	27.8
Asia/Near East/North Africa				
Egypt	1992	21.6	2.2	23.8
India (Uttar Pradesh)	1992/1993	35.7	3.0	38.6
Indonesia	1991	15.0	0.6	15.6
Jordan	1990	19.3	3.1	22.4
Morocco	1992	15.8	0.4	16.2
Pakistan	1990/1991	23.2	1.5	24.7
Philippines	1993	27.1	4.4	31.5
Sri Lanka	1987	23.4	1.7	25.1
Thailand	1987	18.9	3.0	21.9
Tunisia	1988	30.2	0.0	30.2
Turkey	1993	17.1	3.1	20.2
Latin America/Caribbean				
Belize	1991	N/A	17.8	N/A
Bolivia	1994	15.7	14.6	30.2
Brazil	1986	13.7	6.7	20.4
Colombia	1990	13.0	2.0	15.0
Dominican Republic	1991	27.5	8.8	36.3
Ecuador	1987	22.7	9.9	32.6
El Salvador	1985	28.4	13.3	41.7
Guatemala	1987	23.7	5.4	29.1
Paraguay	1990	14.5	3.0	17.5
Peru	1991/1992	18.2	13.2	31.4
Trinidad and Tobago	1987	26.6	6.5	33.1

N/A Not available.

Sources: Demographic and Health Surveys and surveys conducted by the U.S. Centers for Disease Control.