



## GHANA TREND REPORT

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# Trends in Demographic, Family planning and Health Indicators in Ghana

Further Analysis of Demographic  
and Health Surveys Data

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and Health Indicators in Ghana  
1960-2003**

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**DHS Trend Reports No. 2**

**Trends in Demographic, Family Planning,  
and Health Indicators in Ghana  
1960-2003**

**Trend Analysis of Demographic  
and Health Surveys Data**

**ORC Macro  
Calverton, Maryland USA**

**July 2005**

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The Demographic and Health Surveys program is designed to collect, analyse, and disseminate data on fertility, family planning, maternal and child health, nutrition, and HIV/AIDS. Additional information about the MEASURE DHS project can be obtained from ORC Macro, DHS, 11785 Beltsville Drive, Suite 300, Calverton, MD 20705 (telephone: 301-572-0200; fax: 301-572-0999; e-mail: reports@orcmacro.com; internet: www.measuredhs.com).

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# **1 Introduction**

This report highlights important trends in key population, family planning, and health indicators in Ghana over the past three decades. In particular, the report addresses the prevailing demographic situation and describes trends in fertility, family planning, maternal and child health as well as infant and child mortality. It was prepared with the primary objective of providing information needed by policymakers and program administrators to assess the current situation and to design more effective population, family planning, and maternal and child health programmes.

## **1.1 Data Sources**

Historically, the earliest method of demographic data collection in Ghana was the population census; this data-gathering activity dates back to the precolonial era when traditional rulers conducted prototypes of modern population censuses to obtain information about the population of their realm, particularly the number of fighting men available. The first population censuses conducted during the British Colonial Administration took place in 1891. After that, decennial censuses were regularly organized until 1941 when the Second World War disrupted the activity and necessitated a postponement to 1948.

Ghana became an independent country in March 1957, and the first modern census was conducted in 1960. Three other censuses have been conducted since that time, in 1970, 1984, and 2000. In addition, basic demographic data were collected in a number of surveys including the Post Enumeration Survey (1960), Supplementary Enquiry (1970), Ghana Fertility Survey (1979-80), three rounds of the Ghana Living Standards Survey (1987-88, 1988-89, and 1991-92), and four rounds of the Ghana Demographic and Health Survey (1988, 1993, 1998, and 2003).

Five of these surveys—the Ghana Fertility Survey (GFS) and the four Ghana Demographic and Health Surveys (GDHS)—are the principal data sources for this report. Details of these surveys are provided in the Appendix. Although the GFS and GDHS surveys were implemented by the same statistical institution in Ghana, differences in the data collection methodology and estimation methods among these surveys affect the comparability of some results. In a few instances, such differences limit the indicators amenable to trend analysis.

The report begins with a brief description of current population, family planning, and health policies and programs in Ghana, including targets, goals, and achievements. Information is then presented on key demographic, social, and economic trends. The remaining sections of the report deal with trends in other important demographic and social variables related to marriage, fertility, family planning, and maternal and child health.

## **1.2 Population and Family Planning Policies and Programs**

Ghana's population is growing rapidly. Estimated to be growing at a rate of 2.7 percent, the population was 18.9 million in 2000. The young age structure of the population—41 percent of the population is less than 15 years of age and only 5 percent are 65 or older—is a result of the high rate of population growth.

Ghana adopted an explicit and comprehensive population policy in 1969. Although the 1969 policy was retained by successive governments, very little progress was made during the following two decades in reducing the rate of population growth because political commitment was absent. In 1994, Ghana's population policy was revised in recognition of the fact that the socioeconomic conditions at the time were quite different from those prevailing in 1969 when the original policy was drafted. The new

policy seeks to ensure that Ghana will achieve and maintain a level of population growth that is consistent with national development.

The government's long-term vision (Ghana-Vision 2020) for the country is to attain a balanced economy as well as a middle-income status and standard of living by the year 2020. It sets a goal to reduce population growth from its present level of around 3 percent to 2 percent per annum. This would allow real income per capita to rise to more than four times the 1993 level.

A commitment to increasing family planning practice is considered basic to the achievement of the National Development Policy Framework's (NDFP) goals. In Ghana, a wide gap exists between knowledge of family planning and the level of contraceptive practice. Efforts are therefore being made through maternal and child health activities to expand the availability of family planning services and to enhance the capabilities of the private agencies providing these services.

### **1.3 Health Priorities and Programs**

The overall objective of a national health policy is to improve the health status of all Ghanaians. Currently, the average life expectancy at birth in Ghana is 56 years, which represents a considerable improvement over the 1957 level (45 years). Life expectancy at birth is heavily influenced by the rates of infant and under-five mortality. In 2003, these rates were estimated at 64 and 111 deaths per 1,000 live births, respectively. The relatively high childhood mortality in Ghana is due to an amalgam of various factors, especially the lack of protection from preventable diseases. To address the latter issue, the Ministry of Health has been pursuing a policy to achieve universal child immunization.

Other factors that contribute to ill health and low child survival in Ghana include lack of access to safe drinking water, unsanitary living conditions, and poor nutrition. To deal with these problems, policies have been put in place to effectively control risk factors that expose children and adults to the major communicable diseases; reduce the incidence of water-borne and other environmental diseases arising from unsanitary practices and inadequate housing; eradicate child malnutrition; increase access to health services, especially in rural areas; establish a health system that effectively delivers public health services; and strengthen the overall management of the health system.

## 2 Demographic, Social, and Economic Indicators

### 2.1 Population Growth and Spatial Distribution

As noted, Ghana's population has been growing rapidly. During the 27-year period between 1921 and 1948, the country's population almost doubled, from 2.2 million to 4.1 million (Figure 2.1). In 1960, the population of Ghana had reached 6.7 million, and, by 1984, it had increased to 12.3 million, triple its size in 1948 and nearly double its 1960 size. The population continued to expand throughout the 1980s and 1990s; by 2000, there were 18.9 million people in Ghana, an increase of 6.6 million, or 54 percent, over the population in 1984.

**Figure 2.1**  
**Size of the Population**

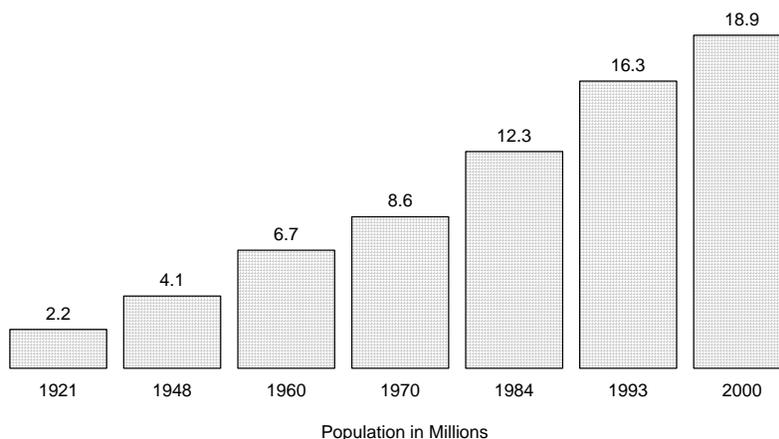


Table 2.1 shows the growth in the population at the regional level between the 1960, 1970, 1984, and 2000 censuses. Between 1960 and 1970, Greater Accra, Northern, Ashanti, and Brong Ahafo regions grew at a faster rate than the national average (2.4 percent). From 1970 to 1984, the highest growth rates were in Greater Accra and Northern regions, followed by Brong Ahafo and Western. Between 1984 and 2000, Greater Accra again experienced the highest growth rate, followed by Ashanti, Western, and Northern regions.

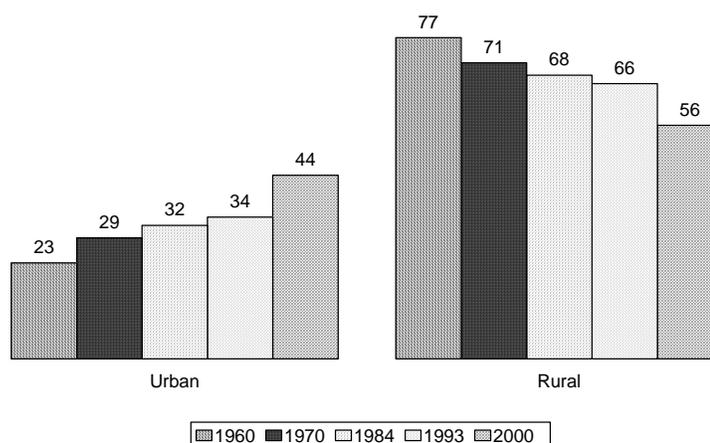
In terms of absolute size, the Ashanti Region was the most populous region in Ghana throughout the period between the 1960 and 2000 censuses. In 2000, 19 percent of the total population was living in Ashanti. Upper West Region, which had 3 percent of the total population in 2000, was the smallest region.

Finally, while Ghana's population is predominantly rural, increasing urbanization between 1960 and 2000 is one of the most significant demographic trends. The proportion of the population living in urban areas has grown gradually from 23 percent at the time of the 1960 census to 44 percent at the time of the 2000 census (Figure 2.2). In other words, the proportion of Ghana's population that is urban has almost doubled since 1960.

Region	Population size (in thousands)				Annual growth rate		
	1960	1970	1984	2000	1960-70	1970-84	1984-2000
Western	625	770	1,158	1,925	2.1	3.0	3.2
Central	725	890	1,142	1,594	1.7	1.8	2.1
Greater Accra	542	852	1,431	2,906	5.2	3.4	4.4
Eastern	1,044	1,262	1,681	2,107	1.5	2.4	1.4
Volta	777	947	1,212	1,635	2.0	1.8	1.9
Ashanti	1,109	1,482	2,090	3,613	2.9	2.3	3.4
Brong Ahafo	587	767	1,207	1,815	2.7	3.3	2.5
Northern	532	728	1,165	1,821	3.2	3.4	2.8
Upper West	289	320	438	577	1.0	2.3	1.7
Upper East	469	543	773	920	1.5	2.6	1.1
Total	6,701	8,561	12,296	18,913	2.4	2.6	2.7

Source: Census data

**Figure 2.2**  
**Percent Distribution of De Facto Household Population**  
**by Urban-Rural Residence**



## 2.2 Social and Economic Indicators

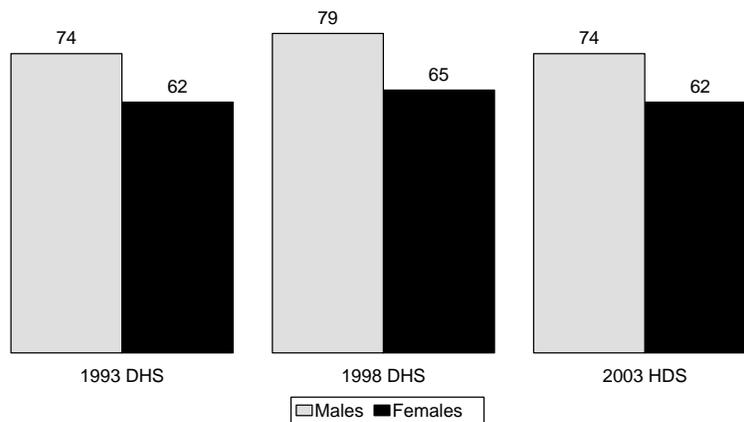
The economy of Ghana is mixed, consisting of a large, traditional agricultural sector made up primarily of small-scale farmers; a small, capital-intensive modern sector involving mining and a few manufacturing establishments; and a growing informal sector of small businessmen, artisans and technicians. The agricultural sector absorbs three-fifths of the country's labor force and accounts for about one-third (34 percent) of the gross domestic product (GDP). The leading exports are gold, timber and cocoa.

After independence, the economy was at its worst during the late 70s and early 80s, with the GDP growing at a negative rate of 0.5 percent between 1975 and 1982. The Economic Recovery Program (ERP) was introduced in 1983 in an effort to halt the deterioration of the economy and to stabilize the macroeconomic framework. The program was successful, and Ghana achieved a remarkable increase

(52 percent) in the GDP between 1984 and 1993. The estimated annual growth of the GDP for 2004 was 5.4 percent.

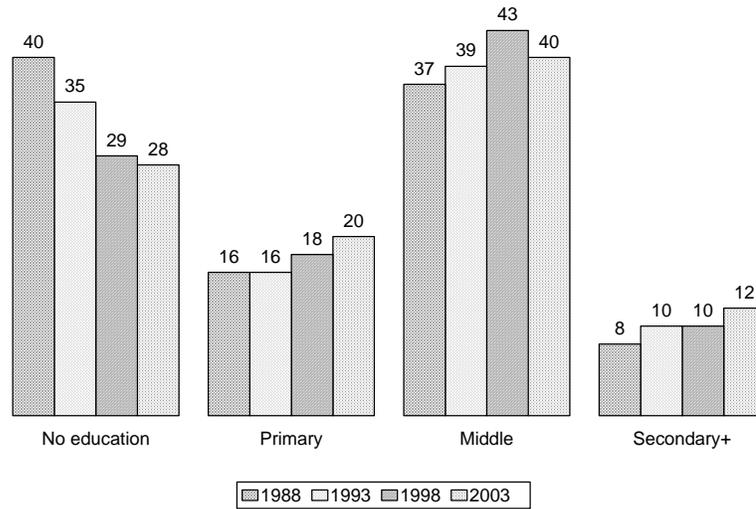
One of the more important indicators of economic and social development in a country is the educational level of its population. Moreover, education, especially for women, is closely associated with a number of the key indicators for which trends are examined in this report, including fertility, use of contraception, and the health status of children. There have been substantial improvements in educational levels since the country's independence, as more children take advantage of the opportunities to attend school. Figure 2.3 shows that in 1993, 74 percent of males and 62 percent of females age 6 and over had attended school at some time. By 1998, the proportions were 79 percent for males and 65 percent for females. The figures from the 2003 GDHS indicate a slight decline, with 74 percent of males and 62 percent of females reported as having attended school.

**Figure 2.3**  
**Percentage of De Facto Male and Female Household Population**  
**Age 6 and Over Who Ever Attended School**



Data from the GDHS can be used to examine in greater detail the changes in educational attainment among women of reproductive age (15-49). As Figure 2.4 shows, the percentage of women 15-49 with no education fell from 40 percent in 1988 to 28 percent in 2003 while the proportion with primary schooling only increased from 16 to 20 percent over the same period. The proportion of women with junior secondary or middle school education showed a small increase, from 37 percent in 1988 to 40 percent in 2003. Figure 2.4 also shows that the proportion of women with secondary school or higher increased from 8 to 12 percent between 1988 and 2003. Despite these gains, fewer than 1 in 8 women of reproductive age in Ghana has attended school at the secondary level or higher.

**Figure 2.4**  
**Percent Distribution of Women 15-49**  
**by Level of Education**



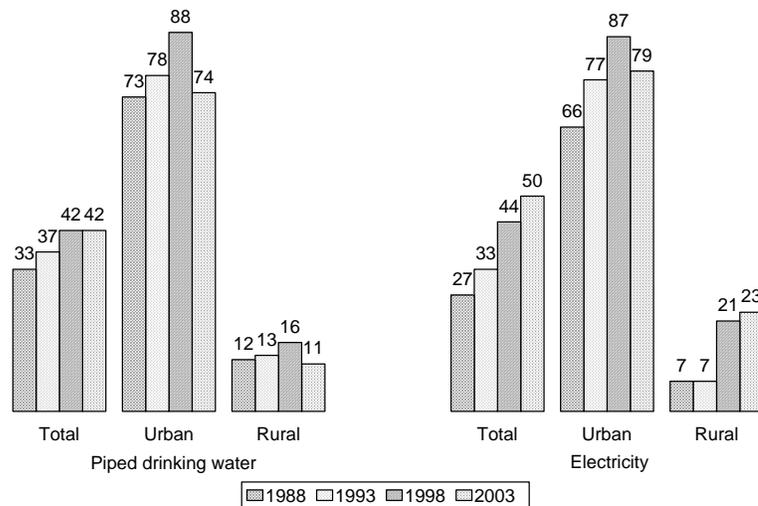
### 3 Household Characteristics

Household characteristics such as housing conditions and ownership of consumer durables serve as indirect indicators of a household's standard of living. Trends in these characteristics reflect a society's material progress, which has implications both for the economic well-being of the population and for maternal and child health. This section examines the relationship between household characteristics and women's welfare.

#### 3.1 Housing Characteristics

Figure 3.1 presents data on trends in the proportion of women 15-49 who live in households with piped drinking water and households with electricity, by urban-rural residence. Overall, between 1988 and 2003, there was an increase of 9 percentage points in the households with piped drinking water. Throughout this period, the percentage of women living in urban households with piped drinking water was about six times that of women in rural households.

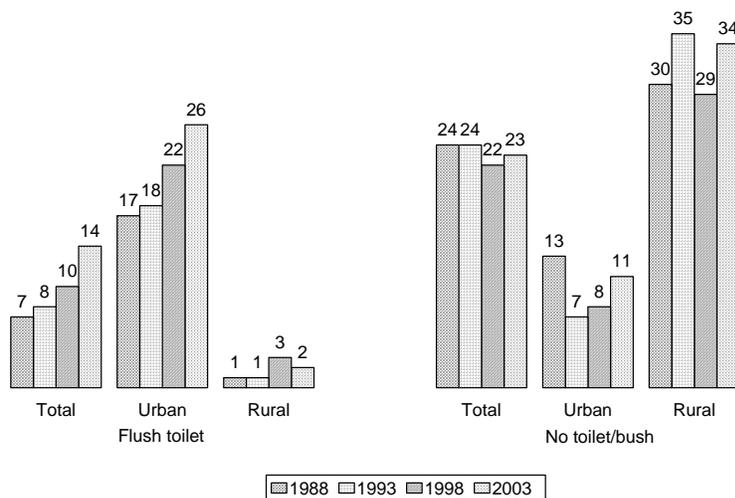
**Figure 3.1**  
**Percentage of Women Living in Households with**  
**Piped Drinking Water and with Electricity,**  
**by Urban-Rural Residence**



The proportion of women living in households with access to electricity increased from 27 percent in 1988 to 50 percent in 2003. Although the proportion of women living in urban households with electricity is more than three times that of women living in rural households with electricity, the increase in rural areas was substantial, from 7 percent in 1988 to 23 percent in 2003.

Access to sanitary toilet facilities is an important indicator of the well-being of the population. Figure 3.2 shows that, for the country as a whole, the proportion of women living in households with a flush toilet almost doubled between 1988 and 2003. At the same time, those living in households with no toilet facilities remained about the same. There is a considerable gap between urban and rural households in the availability of toilet facilities. In urban areas, the proportion of women living in households with a flush toilet increased from 17 to 26 percent, while in rural areas it increased only from 1 to 2 percent. There was a slight decrease in the proportion of households with no toilet facilities in urban areas, but the proportion in rural areas increased.

**Figure 3.2**  
**Percentage of Women Living in Households with a Flush Toilet**  
**and with No Toilet/Bush, by Urban-Rural Residence**



### 3.2 Exposure to Mass Media

Another important household socioeconomic indicator is the ownership of radios and televisions. Research has shown that radio and television can be powerful tools not only to create awareness about new technology but to stimulate the desire for information and to facilitate efforts to apply this information to individual behavior. Families who own a radio or television are likely to have greater exposure to health education messages about the management of common childhood diseases, infant feeding practices, and the importance of vaccinating young children. The percentage of women 15-49 in households that have a radio increased from 41 percent in 1988 to 74 percent in 2003. Only 9 percent of women lived in households with a television in 1988, compared with 31 percent of women in 2003 (Figure 3.3).

**Figure 3.3**  
**Percentage of Women 15-49 Living in Households with a Radio**  
**and with a Television**

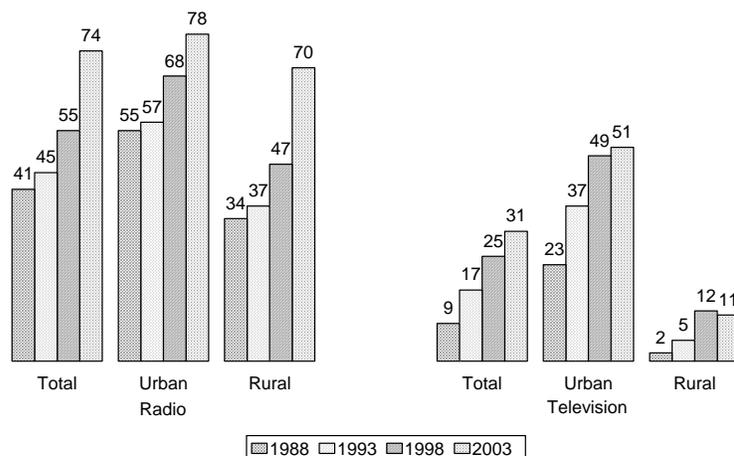
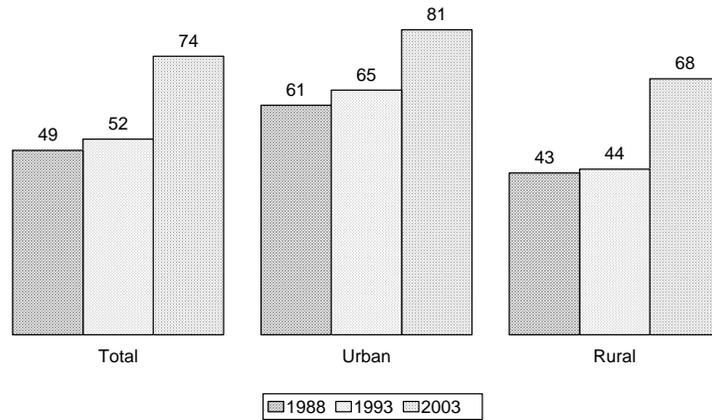


Figure 3.4 shows the trends in the proportion of women of childbearing age who listened to the radio every week. The results suggest that there was an increase in women's exposure to radio broadcasts between 1988 and 2003. Overall, 74 percent of women reported hearing a radio broadcast at least weekly in 2003 compared with 49 percent in 1988. Radio exposure levels increased somewhat more among rural residents, making the difference between urban and rural areas smaller in 2003 than it was in 1988. Weekly radio exposure was not available from the 1998 GDHS data.

**Figure 3.4**  
**Percentage of Women 15-49 Who Listen to Radio at Least**  
**Once a Week, by Urban-Rural Residence**

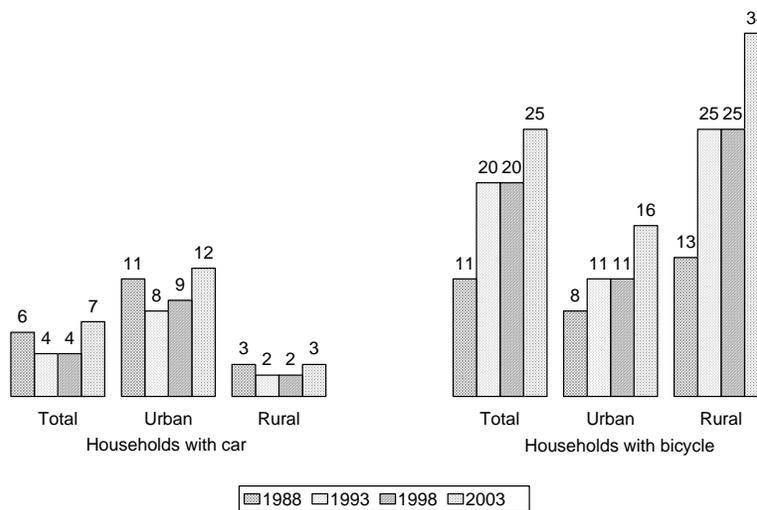


Note: Data on weekly radio listening were not available for the 1998 survey.

### 3.3 Ownership of Means of Transportation

In Ghana, ownership of a means of transportation is an indicator that a household has a relatively high living standard. Figure 3.5 indicates that the percentage of women 15-49 living in households that own a car increased only slightly from 1988 to 2003. Over the same period, ownership of bicycles rose from 11 to 25 percent.

**Figure 3.5**  
**Percentage of Women 15-49 Living in Households with a Car and with a Bicycle, by Urban-Rural Residence**



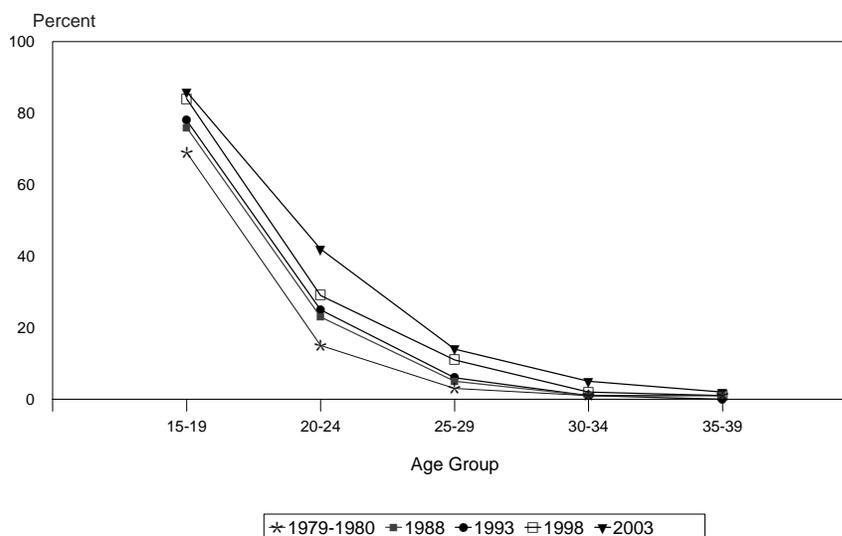
## 4 Marriage Patterns

There are various types of marriages and unions in Ghana, ranging from customary, civil, and religious marriages to a variety of informal unions. Childbearing is therefore not confined to marital unions, and there are both premarital births and births occurring in informal unions. However, most births occur within marriage, making marriage an important indicator of the onset of the primary period of exposure to the risk of pregnancy for the majority of women.

### 4.1 Never-married Women

In the GFS and GDHS surveys, “marriage” was defined as a stable cohabitation between a man and a woman irrespective of whether or not any validating legal, religious, or customary rites or ceremonies had been performed. The data indicate that Ghanaian women are delaying the age at which they establish a stable marital union. As Figure 4.1 shows, the proportion of women who have never married (according to the survey definition) has increased over time in each age group. The increases are especially striking for women under age 30. For example, between 1979 and 2003, the proportion of never-married women 15-19 increased from 69 to 86 percent. Among women 20-24, the proportion rose from 15 to 42 percent. These increases in the proportion of women who have never married is a trend toward delaying the onset of the primary period of exposure to the risk of pregnancy, which may partially account for the noticeable drop in fertility over the period (see Section 5).

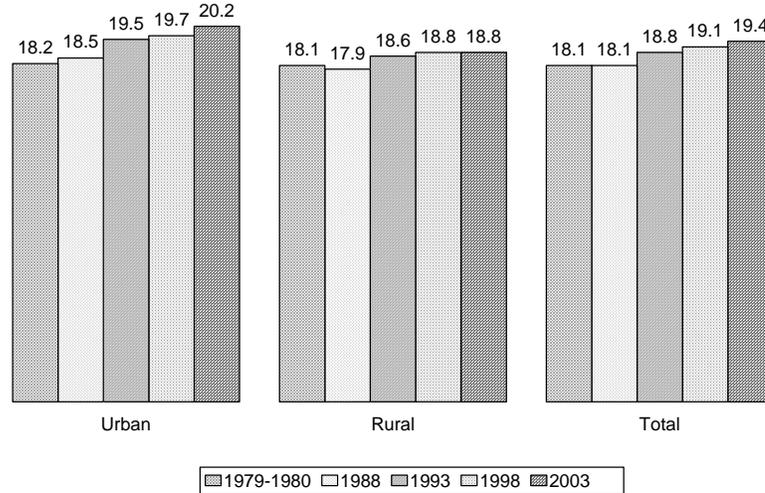
**Figure 4.1**  
**Percentage of Women Never Married,**  
**by Five-Year Age Group**



### 4.2 Median Age at First Marriage

One indicator that is used to explore trends in the timing of marriage is the median age at first marriage, i.e., the age by which 50 percent of women in a group were married for the first time. In Ghana, the median age at first marriage for women 25-49 years was 18 years between 1979-80 and 1988, but increased to 18.8 years by 1993, and to 19.4 by 2003 (Figure 4.2).

**Figure 4.2**  
**Median Age at First Marriage Among Women 25-49,**  
**by Urban-Rural Residence**

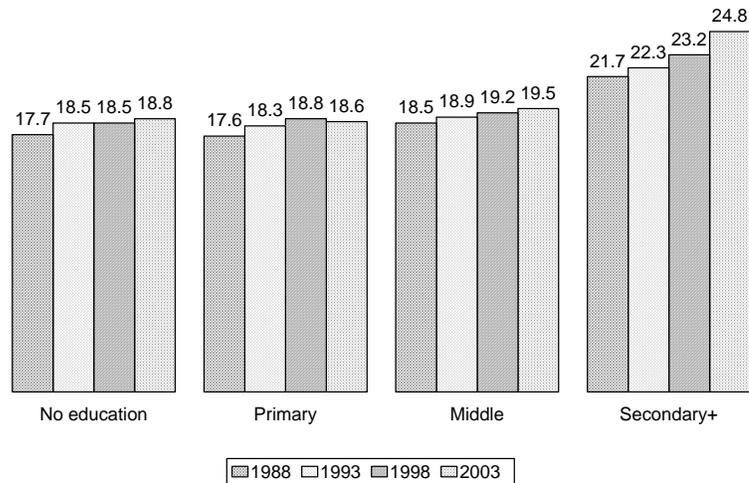


Urban women generally marry at a later age than their rural counterparts. Figure 4.2 shows that the increase over time in the median age at first marriage is more pronounced among urban than rural women. For urban women, median age at first marriage increased from 18.2 years in 1979-80 to 20.2 years in 2003, an increase of two years. For rural women, the median age at first marriage was 18.1 years in 1979-80 and 18.8 years in 2003, an increase of less than one year.

Figure 4.3 shows that there is usually a strong positive association between the age at which women first marry and the number of years of schooling they have attained. For example, in 2003, the median age at first marriage among women who had attended secondary school or higher was 25 years, 6 years greater than the median age among women who never attended school (19 years). The relationship between age at marriage and level of schooling is partially explained by the postponement of marriage in order to continue school attendance; however, education also places a woman in a social context in which early marriage is less attractive. These women have alternatives to marriage, including further education and employment in the formal sector.

With regard to trends in the age at marriage, the results in Figure 4.3 show gradual increases in the median age at first marriage among women at all educational levels, with the most notable increases among women with the highest level of education.

**Figure 4.3**  
**Median Age at First Marriage Among Women 25-49,**  
**by Level of Education**



### 4.3 Prevalence of Polygyny

The extent of the practice of polygyny in Ghana was assessed in the 1979-80 GFS and the GDHS surveys by asking married women whether their husband had other wives and, if so, the number of wives. One of the major connections between polygyny and fertility is that polygyny provides women who might otherwise have remained single the opportunity to marry and contribute to a greater level of exposure to the risk of pregnancy among women (especially those in the younger age groups) than might have prevailed in the absence of polygyny.

Overall, the level of polygyny fell from 35 percent in 1979-80, to 33 percent in 1988, and to 23 percent in 2003. However, between 1998 and 2003, the decline slowed and polygyny remained at about the same level. Urban marriages are less likely to be polygynous than rural marriages, and between 1988 and 1998, the decrease in polygyny was more rapid among urban than rural women. Between 1998 and 2003, polygyny remained at about the same level or increased slightly in both urban and rural areas (Figure 4.4).

**Figure 4.4**  
**Percentage of Currently Married Women 15-49 in a Polygynous Union, by Urban-Rural Residence**

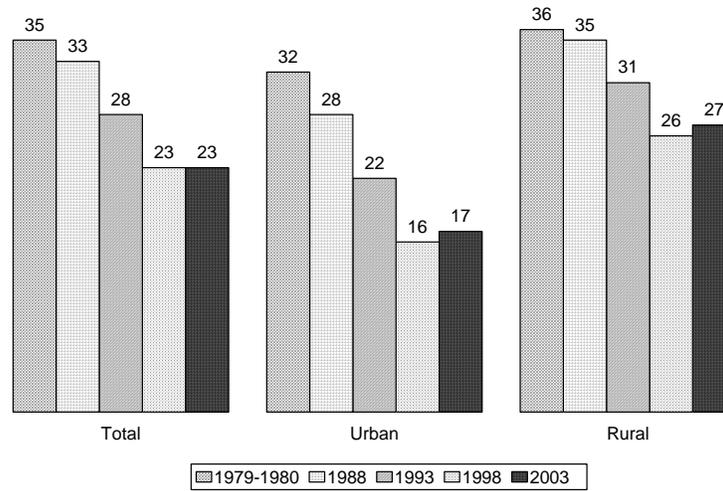
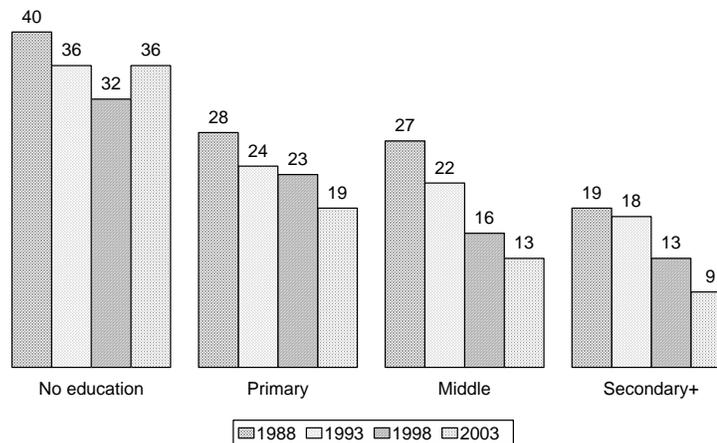


Figure 4.5 shows that the level of polygyny in the Ghana is negatively related to women's level of education. Also, the level of polygyny associated with each educational category has declined over time, with the most rapid declines among women with the the higher levels of education. While the proportion of women with no education in a polygynous union decreased by less than 10 percent between 1988 and 2003, the proportion for women with primary education dropped by more than a third over the same period, and the proportion for women with middle/JSS and secondary school or higher education decreased by more than half.

**Figure 4.5**  
**Percentage of Currently Married Women 15-49 in a Polygynous Union, by Level of Education**



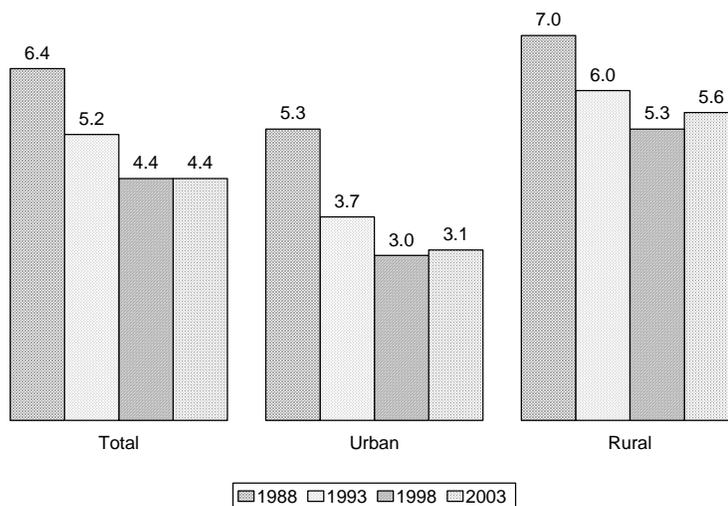
## 5 Fertility

Data from the four GDHS surveys can be used to assess changes in the fertility behavior. The results suggest that Ghana has begun the transition to lower fertility that is characteristic of more developed countries.

### 5.1 Total Fertility Rates

The total fertility rate (TFR) is an estimate of the average number of births a woman would have at the end of her reproductive years if she bears children at the prevailing age-specific fertility rates throughout her childbearing years. Figure 5.1 shows the trend in the total fertility rate based on results from the GDHS surveys for the period 1988 through 2003. These surveys show evidence of an overall decrease in fertility. However, the pace of decline was most rapid from 1988 to 1998. Between the 1988 and 1993 GDHS, the TFR decreased from 6.4 to 5.2 births per woman. By the 1998 GDHS, the TFR had fallen to 4.4 births, a decrease in fertility of two children per woman since 1988. There was no decrease in the TFR between 1988 and 2003.

**Figure 5.1**  
**Total Fertility Rates for the Three-Year Period Preceding the Survey, by Urban-Rural Residence**



### 5.2 Total Fertility Rates by Residence

Fertility trends in urban and rural areas differed between the 1988 and the 2003 GDHS surveys. There was a substantial decline in urban fertility, from 5.3 to 3.1 births per woman. The decline among rural women was smaller, from 7.0 to 5.6 births per woman. As a result, the urban-rural differential in fertility has widened from 1.7 births in the late 1980s to 2.5 births in 2003.

Table 5.1 shows that fertility levels have fallen sharply in almost all regions. Currently, the total fertility rate ranges from 2.9 births per woman in Greater Accra to 7 births per woman in the Northern Region. Changes in the TFR at the regional level generally reflect the national trend, declining between 1988 and 1998, and then a leveling off from 1998 to 2003. Throughout the period, the TFR in Greater Accra was substantially lower than TFRs in the other regions.

Brong Ahafo and Volta are among the regions with the greatest fertility decline since 1988. In contrast, the TFRs for Northern and Upper West are not only higher than those of other regions, but have generally increased since 1993, the first year for which data are available.

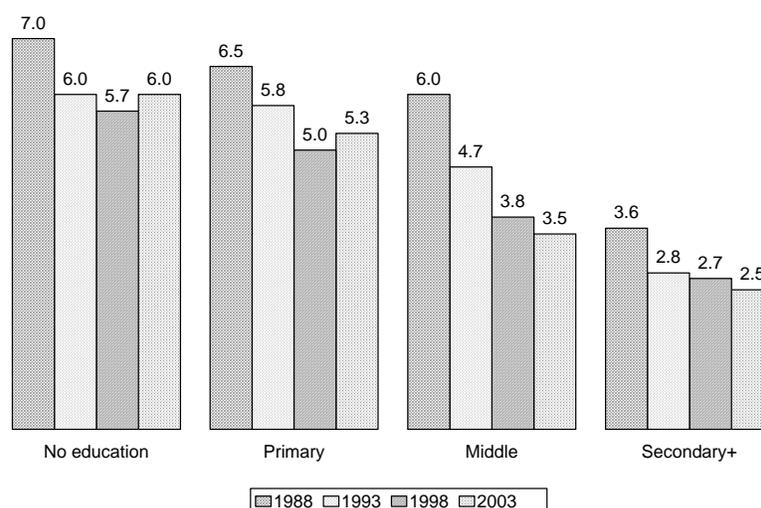
Region	1988	1993	1998	2003
Western	6.4	5.4	4.3	4.5
Central	6.6	5.4	4.7	5.0
Greater Accra	4.7	3.4	2.7	2.9
Volta	7.2	5.4	4.3	4.4
Eastern	6.0	5.0	4.5	4.3
Ashanti	6.3	5.4	4.9	4.1
Brong-Ahafo	7.6	4.7	5.2	4.8
Northern, Upper West, Upper East	6.9	6.0	5.4	6.0
Northern	u	6.4	6.6	7.0
Upper West	u	5.2	5.9	5.5
Upper East	u	5.7	4.4	4.7
Total	6.4	5.2	4.4	4.4

u = Unknown (not available)

### 5.3 Total Fertility Rates by Women's Education

Research has shown that women who are more educated tend to want and have fewer children than less educated women. A partial explanation for this pattern is that better educated women have higher expectations for their children and therefore plan to have fewer children in order to make a greater investment in each child's well being and education. Women with greater earning potential (as a result of education) are also likely to value their time more highly and to appreciate the high "opportunity costs" of having a large family. According to the survey findings, fertility levels are inversely associated with the number of years of schooling attended. Looking at trends in fertility by educational category, all categories show declines. However, the largest decline in the total fertility rate was seen among women who attended up to middle school/JSS (Figure 5.2).

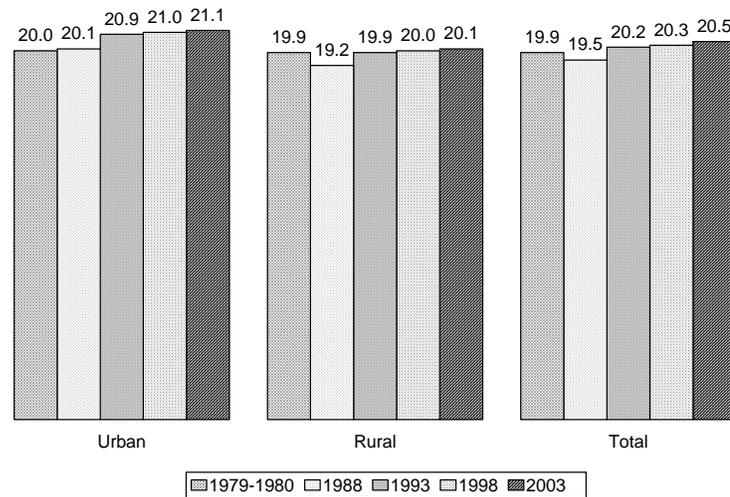
**Figure 5.2**  
Total Fertility Rates for the Three-Year Period Preceding the Survey, by Level of Education



## 5.4 Median Age at First Birth

Women who have their first birth early tend to have a greater number of children than those who delay their first birth. The median age at which women started childbearing increased from 19.5 years to 20.5 years between the 1988 GDHS and the 2003 GDHS (Figure 5.3). The rise in the median age at first birth was evident among both urban and rural women. As a result, there was almost no change in the urban-rural differential in age at onset of childbearing. On average, rural women continue to start childbearing about one year earlier than urban women.

**Figure 5.3**  
**Median Age at First Birth Among Women 25-49,**  
**by Urban-Rural Residence**

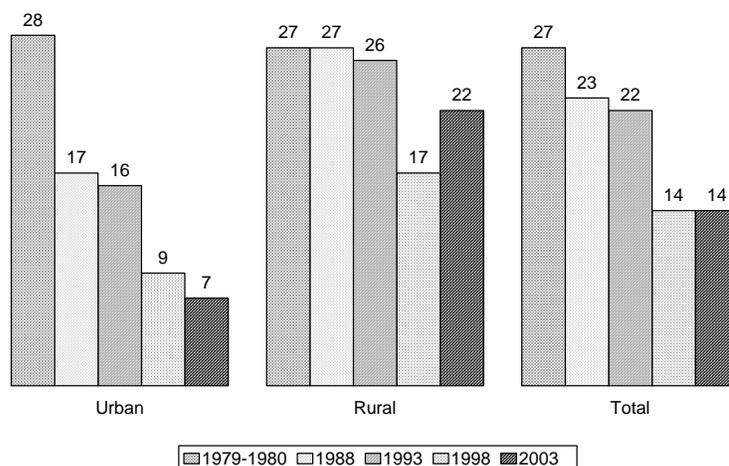


## 5.5 Adolescent Fertility

Research suggests that teenagers are more likely than older women to suffer from pregnancy-related complications that can lead to death. Furthermore, adolescent pregnancy is risky not only for the young woman but for the child as well, particularly when the young mother is not adequately prepared for the experience of childbearing. Figure 5.4 shows that there has been a decline in the percentage of teenage girls who are pregnant or who are already mothers. In 1979-80, 27 percent of teenage girls had started childbearing. By 1993, the figure had fallen to 22 percent, and in 2003 it reached 14 percent.

Marked differentials exist in the pattern of teenage childbearing by residence (Figure 5.4). In 1979-80, the proportion of teenage girls who were mothers or pregnant with their first child was similar in urban (28 percent) and rural (27 percent) areas. However, between 1979-80 and 1988, there was a substantial decrease in the proportion of urban teenage girls who were mothers, and another large decrease followed between 1993 and 1998. By 2003, the level of teenage childbearing in rural areas was three times that in urban areas.

**Figure 5.4**  
**Percentage of Women 15-19 Who Are Mothers Or Are Pregnant**  
**with Their First Child, by Urban-Rural Residence**

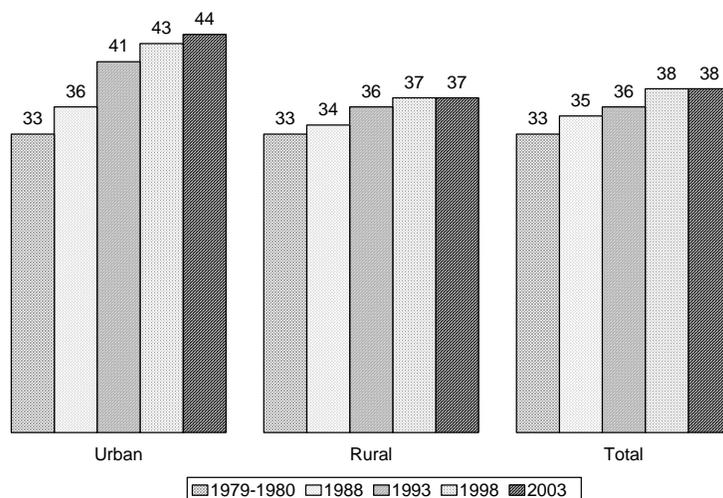


## 5.6 Birth Intervals

A child's health status is related to the length of the preceding birth interval. Children born shortly after a prior birth are at greater risk of illness and death than those born after a long interval. Further, the occurrence of closely spaced births gives the mother insufficient time to restore her health, which may limit her ability to take care of her children.

Figure 5.5 shows that the length of the median birth interval increased from 33 months for births in the five years preceding the GFS survey to slightly more than 38 months for births in the five years preceding the 2003 GDHS. The median interval between births in urban areas and births in rural areas was similar at the time of the GFS; however, by 2003, urban mothers were waiting more than 6 months longer than rural mothers for the next birth.

**Figure 5.5**  
**Median Length of the Preceding Birth Interval,**  
**by Urban-Rural Residence**



## **6 Family Planning**

Information on knowledge, attitudes, and practice of family planning is of particular interest to policymakers, program managers and researchers concerned with planning and evaluating population and family planning interventions. In Ghana, the introduction of modern family planning activities as a public welfare service dates back to 1961 when the Christian Council of Ghana opened a Family Advice Center in Accra to offer advice on family planning and responsible parenthood to married couples. A second organized effort to promote fertility control began in 1967, when the Planned Parenthood Association of Ghana (PPAG) was set up with branches at various centers throughout the country. The most comprehensive and positive move on the part of the Government of Ghana to control population growth was in 1969, when Ghana became the first sub-Saharan country to adopt a population policy. In pursuance of the objectives of the policy, a secretariat was established in 1970 to develop and operate a national family planning program. A range of family planning services are currently offered at both government hospitals and clinics and facilities operated by nongovernmental organizations (NGOs).

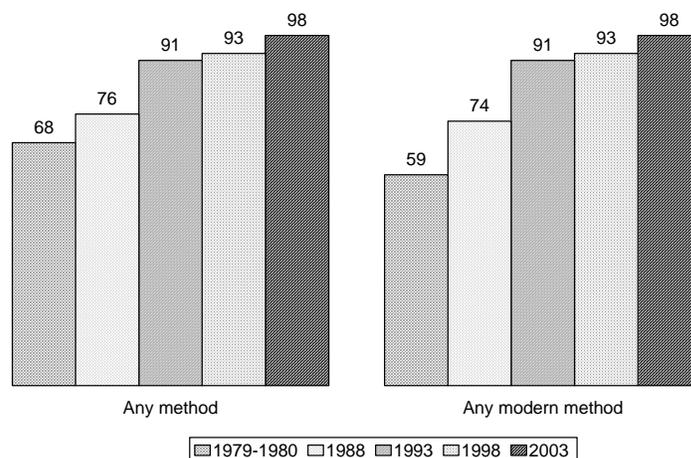
### **6.1 Knowledge of Family Planning**

Familiarity with contraceptive methods is among the prerequisites for the adoption of fertility regulation methods. Since the initiation of family planning programs in Ghana, information about contraceptive methods has been disseminated through a variety of channels, including the mass media. An examination of GFS and GDHS data indicates that knowledge of family planning has increased over time, a result that can, at least in part, be attributed to information campaigns.

Figure 6.1 shows that contraceptive knowledge was already moderately high among Ghanaian women in the early 1980s. According to the GFS survey, 68 percent knew at least one family planning method in 1979-80 and 59 percent reported knowing a modern method. By 1988, the proportion had increased to 76 percent, with 74 percent knowing a modern method. Knowledge of contraception continued to increase between 1988 and 1993, when 91 percent of women reported knowing at least one method and the same proportion could identify a modern method. After 1993, knowledge of contraception continued to increase, although at a slower pace because the number of women remaining to be exposed had decreased. In 1998, 93 percent of women reported knowing a method of contraception, and the same proportion knew a modern method. By 2003, 98 percent of women reported knowing at least one method of family planning method and at least one modern method of family planning.

Table 6.1 shows that knowledge of all methods of contraception has increased steadily, although there has been considerable change in which methods are best known since the late 1970s. Knowledge of the male condom increased substantially over this period, and it was the most widely known contraceptive method according to the 1993, 1998, and 2003 GDHS survey data. Knowledge of injection also showed large increases. The male condom, injection, and the pill have been the three most widely known methods of contraception in every GDHS survey since 1993. Knowledge of the female condom, first measured in the 2003 GDHS, was over 80 percent. Knowledge of another new contraceptive, the implant, rapidly increased from 21 percent in 1998 to 62 percent in 2003. Knowledge of male sterilization was one of the least known methods. In the 2003 GDHS, less than half of the respondents reported knowing about male sterilization. Lastly, only 28 percent had knowledge of emergency contraception.

**Figure 6.1**  
**Knowledge of Contraceptive Methods Among**  
**All Women 15-49**

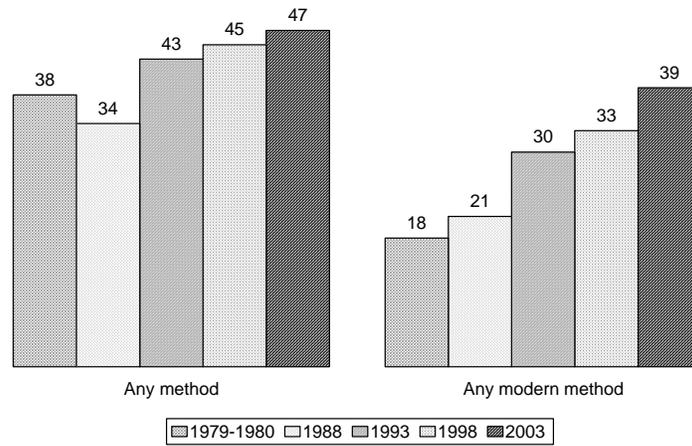


Method	1979-80	1988	1993	1998	2003
Female sterilization	29	54.1	67.3	65.4	70.2
Male sterilization	4	10.7	21.4	26.3	42.8
Pill	47	59.7	79.4	78.4	87.5
IUD	33	36.7	44.5	49.3	61.3
Injection	22	42.6	74.8	77.6	88.9
Implants	-	-	4.4	21.2	61.5
Condom	30	48.5	79.5	86.8	95.3
Female condom	-	-	-	-	83.2
Diaphragm/foam/jelly	-	36.6	53.5	42.0	50.9
Lactational amenorrhea	-	-	-	18.0	32.1
Emergency contraception	-	-	-	-	28.2
Periodic abstinence	21	39.0	57.1	59.4	65.4
Withdrawal	19	31.0	52.3	54.5	61.3
Any traditional or folk method	-	49.2	67.9	69.4	75.4
Total	-	4,488	4,562	4,843	5,691

## 6.2 Ever Use of Family Planning

Figure 6.2 shows the percentage of all women who have ever used a method of contraception. This figure provides a measure of the cumulative experience with family planning use in a population. In Ghana, the proportion of women who have ever used a method of contraception was 47 percent in 2003, an increase of 9 percentage points since 1979-80 (38 percent).

**Figure 6.2**  
**Percentage of All Women 15-49 Who Have Ever Used a Contraceptive Method**

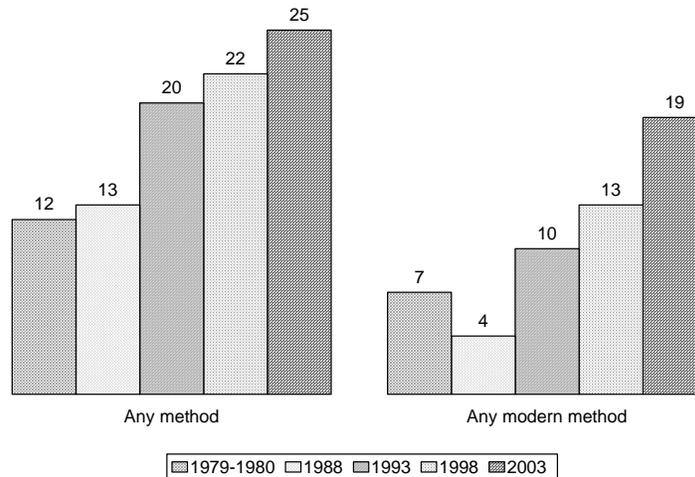


### 6.3 Current Use of Family Planning

The current level of contraceptive use is a measure of actual contraceptive practice at the time of the survey. It takes into account all use of contraception, whether the concern of the user is permanent or temporary cessation of childbearing or a desire to space births. The current contraceptive use rate is an important indication of the success of family planning programs.

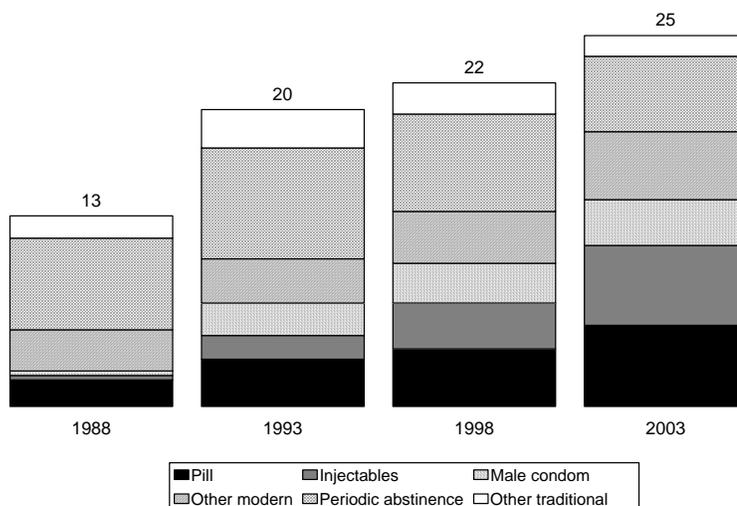
Among married women, use of contraception has been increasing steadily. Figure 6.3 shows that 25 percent of married women were using a method of family planning in 2003, and 19 percent were using a modern method. These figures are more than double the levels in 1979-80 when 12 percent of married women reported using a method, and 7 percent were using a modern method.

**Figure 6.3**  
**Percentage of Currently Married Women 15-49 Currently Using a Contraceptive Method**



With regard to the method mix among users, starting with the 1993 GDHS, women have been more likely to use a modern method of contraception than a traditional method (Figure 6.4). Use of withdrawal and periodic abstinence has declined steadily since the 1993 GDHS; however, in the 2003 GDHS, periodic abstinence remained one of the top three methods used by currently married women. The use of the contraceptive pill and injection has increased substantially. Use of the male condom and female sterilization has also showed moderate gains.

**Figure 6.4**  
**Percentage of Currently Married Women Age 15-49 Currently Using a Contraceptive Method, by Type of Method**



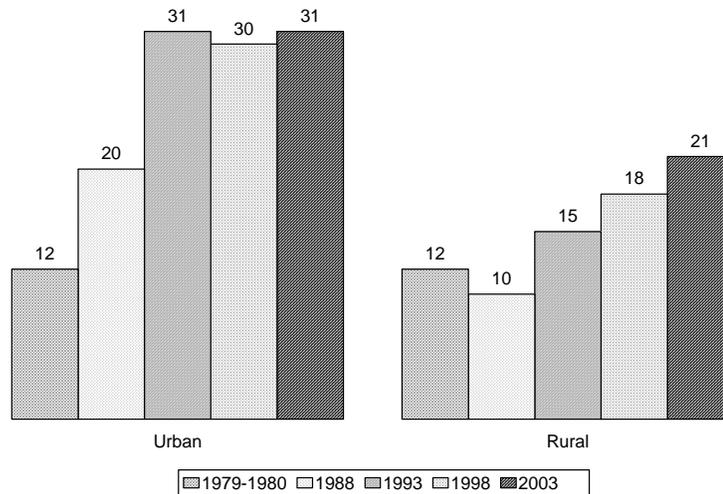
## 6.4 Current Use of Family Planning by Background Characteristics

### *Residence*

At the time of the 1979-80 GFS, rural women were as likely as urban women to be using a method of contraception. However, Figure 6.5 shows that a marked difference in the use of contraception was evident by the 1988 GDHS, with the level of current use twice as high among urban women (20 percent) as rural women (10 percent). Another marked differential was observed in the 1993 GDHS, when 31 percent of urban women and 15 percent of rural women were reported as currently using contraception.

Since 1993, however, contraceptive use among currently married rural women has increased while contraceptive use among urban women has showed little change. In 2003, the urban-rural differential in current use of contraception was smaller than it was in 1993. The rate for currently married urban women was still 31 percent, but the rate for currently married rural women had increased to 21 percent.

**Figure 6.5**  
**Percentage of Currently Married Women 15-49 Currently Using**  
**a Contraceptive Method, by Urban-Rural Residence**



### **Region**

The level of current use of contraception rose in all regions of Ghana between 1979-80 and 2003, although the trends were not steady and many regions showed declines between surveys at least once (Table 6.2). Throughout the period, the proportion of currently married women currently using a method of contraception was highest in Greater Accra. Among the southern regions, Ashanti and Brong Ahafo had the largest gains, while growth in Accra, Volta, and Central regions was smallest. As a group, the Northern, Upper West, and Upper East regions showed modest increases in contraceptive use. Separate data for the three regions, which became available beginning with the 1993 survey, show the Northern and Upper East regions with similar levels of contraceptive use and no marked increase between the 1993 and 2003 GDHS surveys. In contrast, contraceptive use in the Upper West Region increased substantially during the period, from 7 percent in the 1993 GDHS to 26 percent in the 2003 GDHS.

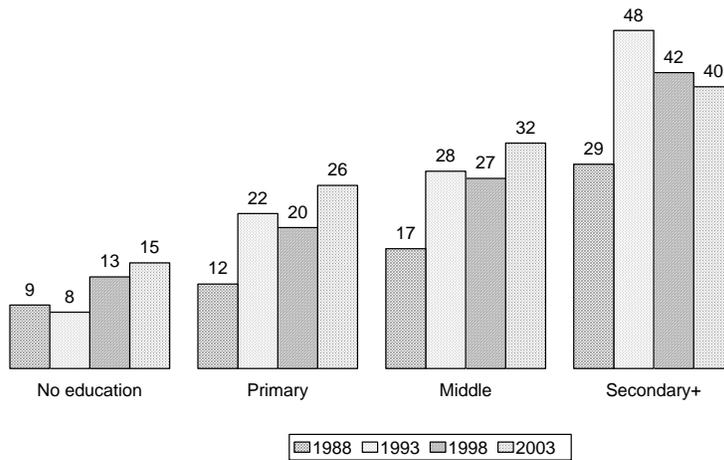
Region	1979-80	1988	1993	1998	2003
Western	11	8.2	26.4	18.3	28.2
Central	6	9.7	15.6	19.3	15.2
Greater Accra	24	27.2	36.8	32.2	34.0
Volta	20	14.6	25.2	21.1	23.6
Eastern	21	11.4	25.9	26.6	27.1
Ashanti	9	10.1	13.7	24.6	29.7
Brong-Ahafo	10	12.0	25.4	24.7	33.0
Northern, Upper West, Upper East	2	10.7	10.0	9.9	14.1
Northern	u	u	11.2	10.0	12.1
Upper West	u	u	6.6	11.9	26.3
Upper East	u	u	10.2	9.0	11.9
Total	12	12.9	20.3	22.0	25.2

u = Unknown (not available)

### *Women's Level of Education*

Figure 6.6 shows the trends in current use of contraception (any method) by level of education attained by currently married women. The results indicate that contraceptive use increased among women with no education, women with primary education, and women with middle school education. Among those with secondary education or higher, current use decreased between 1993 and 2003. Nevertheless, in every survey, the proportion of currently married women currently using contraception increased with level of education. From 1988 to 2003, the proportion of women using contraception increased the most among women with some primary or some middle school education. As a result, the differences in contraceptive use between these groups and women with secondary education or higher are smaller in 2003 than in 1988.

**Figure 6.6**  
**Percentage of Currently Married Women 15-49 Who Are Currently Using a Contraceptive Method, by Level of Education**



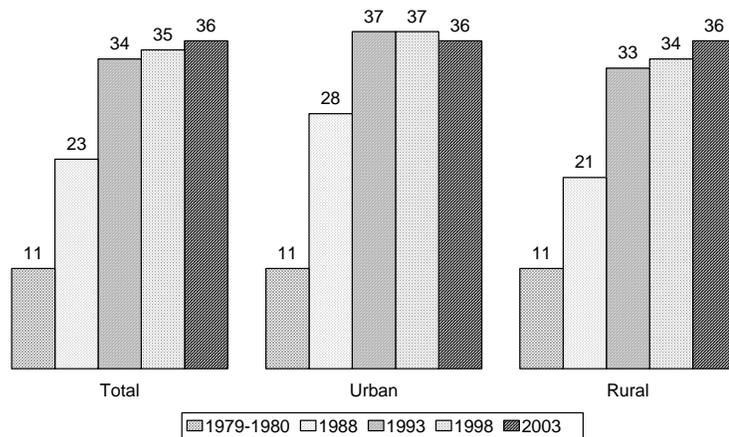
## 7 Fertility Preferences

A major reason for the establishment of the Ghana National Family Planning Program was to reduce the level of unmet need for family planning. Thus, it is important to determine the extent of women's desire to control their own fertility, whether for spacing or limiting births.

### 7.1 Desire for Children

The trend in the percentage of married women wanting no more children provides the clearest evidence of the profound shift in childbearing aspirations that is taking place in Ghana. Figure 7.1 shows that changes in the desire for more children are shared by both urban and rural women. At the time of the 1979-80 GFS, for example, comparatively few women—11 percent—expressed a desire to avoid future births. By 1993, the proportion wanting no more children had tripled for both urban and rural women. The desire for more children has stabilized since 1993, with about the same proportion of women wanting no more children in the 1998 and 2003 GHDS surveys as in the 1993 GDHS.

**Figure 7.1**  
**Percentage of Currently Married Women 15-49 Who Want No More Children, by Urban-Rural Residence**



Note: Includes women who are sterilized or whose partner is sterilized

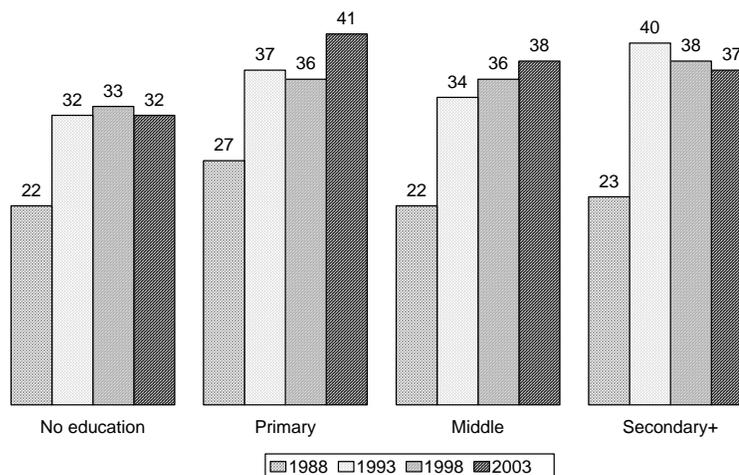
An increase in the percentage of women wanting no more children was observed in all the major regions in Ghana (Table 7.1). By 2003, more than 40 percent of women in the Greater Accra, Volta, Central and Eastern regions said that they wanted no more children. The proportion exceeded 30 percent in all the other regions, except the Northern, Upper East, and Upper West regions, where 15, 22, and 23 percent, respectively, reported that they wanted to avoid further childbearing.

Region	1979-80	1988	1993	1998	2003
Western	13	16.8	31.2	30.5	37.6
Central	7	22.5	37.5	42.7	43.7
Greater Accra	19	36.1	41.3	41.5	45.7
Volta	14	29.5	43.0	43.2	45.6
Eastern	11	28.8	38.8	39.9	46.7
Ashanti	11	24.3	36.7	32.5	37.1
Brong-Ahafo	15	18.0	36.2	34.5	33.5
Northern, Upper West, Upper East	u	7.0	20.6	20.2	18.3
Northern	4	u	17.3	17.9	15.1
Upper West	3	u	22.1	25.3	23.2
Upper East	3	u	25.0	19.9	21.9
Total	11	22.8	34.0	35.0	36.0

Note: Includes women who are sterilized or whose partner is sterilized  
u = Unknown (not available)

Between the 1979-80 GFS and the 1993 GDHS, the proportion of women who who said they wanted no more children increased substantially at all educational levels. For example, Figure 7.2 shows that among women who never attended school, only 22 percent reported they wanted no more children at the time of the 1988 GDHS. By the 1993 GDHS, 32 percent of women with no formal education expressed a desire to limit further childbearing. In general, similar increases in the desire to limit childbearing were observed at all levels of education.

**Figure 7.2**  
**Percentage of Currently Married Women 15-49 Who Want No More Children, by Level of Education**



Note: Includes women who are sterilized or whose partner is sterilized

## 7.2 Ideal Family Size

Another indicator of changing fertility attitudes can be seen in the trends in women's ideal family size. To obtain this information, the respondents in all three surveys were asked to consider a hypothetical

situation independent of their current family size and to state the number of children they would choose to have if they could start their reproductive years again.

During the period 1979-80 to 2003, there was a noticeable decline in the average family size reported by women as ideal (Figure 7.3). Overall, the average ideal family size for currently married women declined from 5.9 children in 1979-80 to 4.8 children in 2003. All of this decline occurred before the 1993 GDHS. Since 1993, the mean ideal family size has remained relatively stable.

All the major population subgroups shared in the declines in desired family size. Figure 7.3 shows that the mean ideal family size decreased among both urban and rural women during the period 1979-80 to 2003, although the decrease was greater among urban women than rural women. By 2003, currently married urban women reported an average of 4.2 children as ideal while currently married rural women reported an average of 5.2 children. This compares with the average of 5.9 children both groups considered ideal at the time of the 1979-80 GFS.

**Figure 7.3**  
**Mean Ideal Family Size Among Currently Married Women 15-49, by Urban-Rural Residence**

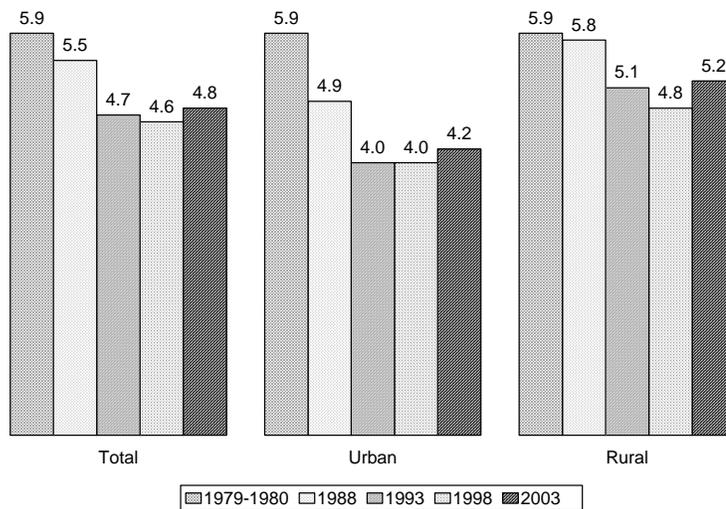


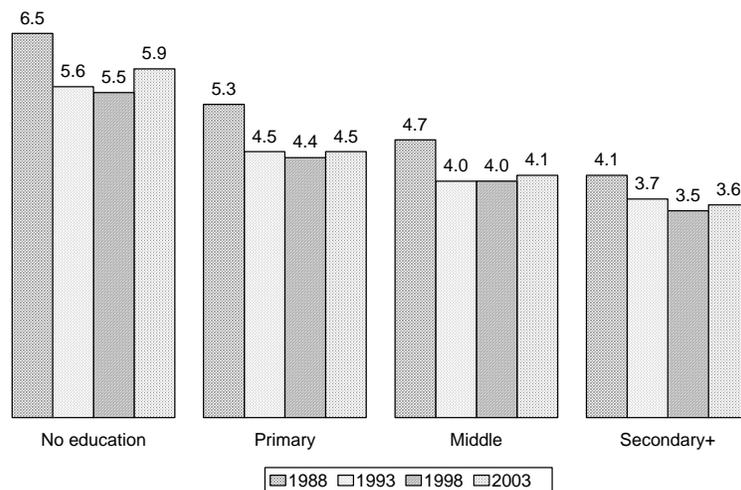
Table 7.2 indicates that, at the time of the 1979-80 GFS, the average ideal family size exceeded 5 children in all regions except Greater Accra (4.9 children). By 2003, the family size women considered ideal exceeded 5 children only in the Northern Region (7.0 children), the Upper West Region (5.9 children), and the Upper East Region (6.0 children). In Greater Accra, women reported wanting an average of 3.8 children. In most regions, the decline in ideal family size occurred before 1993. Since 1993 or 1998, the mean ideal family size has increased slightly in Western, Ashanti, Brong Ahafo, Northern, and Upper East Regions. Again, the Upper West Region shows a different trend from the Northern and Upper East regions. While the mean ideal family size in the Northern and Upper East regions increased slightly from 1993 to 2003, it declined sharply in the Upper West Region.

Region	1979-80	1988	1993	1998	2003
Western	5.7	5.5	4.2	4.4	4.5
Central	6.0	5.1	4.2	4.3	4.0
Greater Accra	4.9	4.9	3.7	3.8	3.8
Volta	5.7	5.2	4.3	4.1	4.1
Eastern	5.9	5.0	4.2	4.3	4.1
Ashanti	5.8	5.1	4.5	4.3	4.8
Brong-Ahafo	6.2	5.6	4.8	4.3	4.6
Northern, Upper West, Upper East	u	8.5	6.3	6.5	6.6
Northern	7.7	u	6.7	7.0	7.0
Upper West	6.9	u	6.7	6.1	5.9
Upper East	6.9	u	5.5	6.1	6.0
Total	5.9	5.5	4.7	4.6	4.8

u = Unknown (not available)

Figure 7.4 shows that the family size women consider ideal decreased sharply for all levels of education. There was a decline in the mean ideal family size for all levels of education prior to 1993. This was followed by a period of little change from 1993 to 2003. Despite the overall decline, there were large differentials in the mean ideal family size by level of education throughout the period; in 2003, the average ideal family size reported by women who never attended school was more than 2 children higher than the ideal family size among women who had attended secondary or higher education.

**Figure 7.4**  
**Mean Ideal Family Size Among Currently Married Women 15-49, by Level of Education**



## 8 Child Health Indicators

Improving the health of children has been a continuing goal of Ghana's national health programs. Results from the five population surveys can be used to assess the progress being made in improving the health situation of young children.

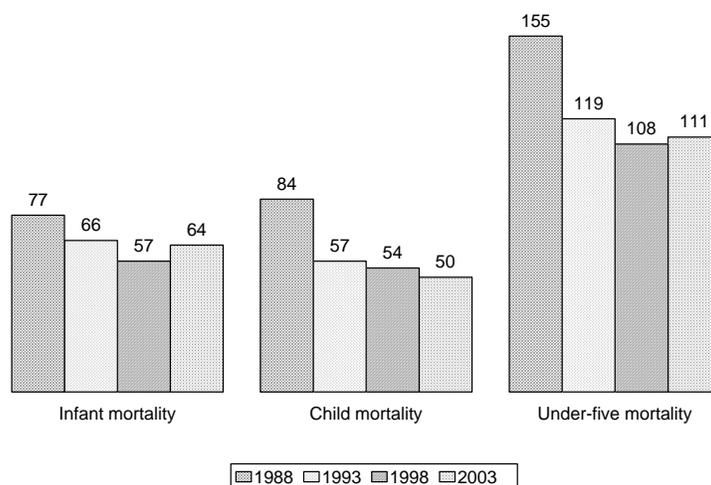
### 8.1 Early Childhood Mortality

The mortality level of a society is closely linked to the health and well-being of the population. Of all mortality measures, infant and child mortality are seen as among the most important indications of how well a society meets the needs of its people.

Although current levels of both infant and child mortality in Ghana remain unacceptably high, the survey results show that progress has been made in reducing the levels of both infant and child mortality. Figure 8.1 documents an overall downward trend in mortality levels among young children. It shows that in the five years preceding the 1988 GDHS, 77 of every 1,000 babies born alive died in the first year of life. By the 2003 GDHS, this rate had dropped 64 per 1,000.

Under-five mortality levels also improved, falling from 155 deaths per 1,000 live births in 1988 to 111 per 1,000 in 2003. This may be the result of more effective control of infectious and parasitic diseases that are the main causes of under-five mortality. It should be noted, however, that the decline in both infant mortality and under-five mortality leveled off between the 1998 and 2003 GDHS.

**Figure 8.1**  
**Infant, Child, and Under-Five Mortality for the Five Years Preceding the Survey**

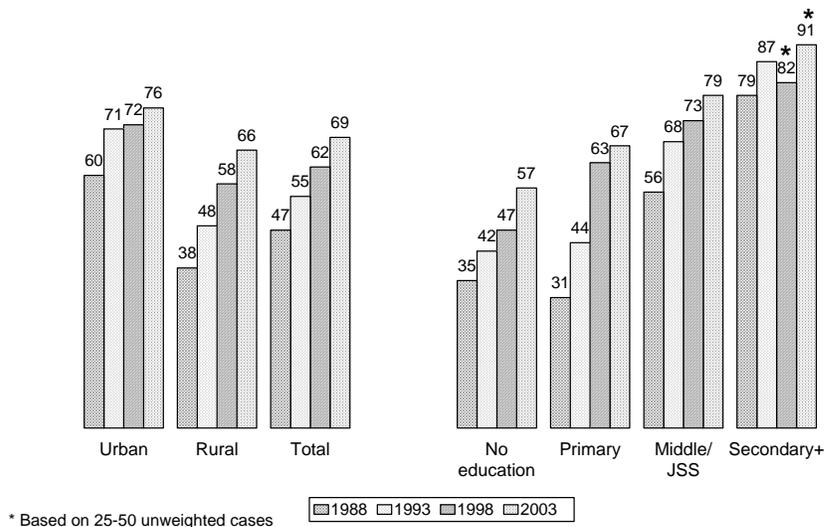


## 8.2 Immunization

Immunization against childhood diseases contributes to reductions in morbidity, mortality, and permanent disability among children. To combat the six major childhood diseases (tuberculosis, diphtheria, pertussis, polio, tetanus, and measles), the national immunization program's objectives are to achieve at least 80 percent coverage for all vaccines in 80 percent of Ghana's districts by 2005, and to attain polio-free certification by 2005.

Figure 8.2 shows the percentage of children age 12 to 23 months who are fully immunized. The data indicate that the level of vaccination coverage increased from 47 percent in 1988 to 69 percent in 2003. The figure also shows that coverage levels rose in both urban and rural areas during the period 1988 to 2003. Although urban children continue to enjoy an advantage in immunization coverage over rural children, coverage in rural areas has grown faster than in urban areas, making the differences smaller in 2003 than in 1988. Similarly, the association between immunization rates for young children and the mother's level of education continues to be strong despite increases in coverage levels that have occurred among children in all subgroups.

**Figure 8.2**  
**Percentage of Children 12-23 Months Who Are Fully Immunized,**  
**by Urban-Rural Residence and by Mother's Level of Education**



## 8.3 Treatment of Childhood Diseases

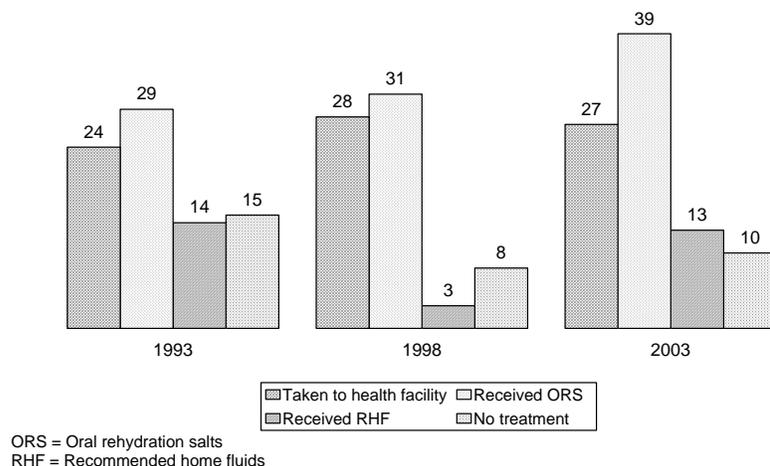
Dehydration associated with severe diarrhea is recognized as a major cause of morbidity and mortality among young children. It is preventable by the early administration of rehydration solutions. Typically, rehydration solution is prepared from prepackaged oral rehydration salts (ORS); however, it may also be made at home from sugar, salt, and water—recommended home fluids (RHF).

Figure 8.3 shows that among children with diarrhea in the two weeks preceding the survey, the majority received some form of treatment. The percentage of children who received no treatment varied between 8 and 15 percent in the 1993, 1998, and 2003 GDHS surveys. (The 1988 GDHS is excluded from Figures 8.3, 8.4, and 8.5 because the questions were asked differently, and the data are not comparable.)

Among children who were treated, there was an increase in the proportion receiving ORS from 29 percent in 1993 to 39 percent in 2003.

The use of recommended home fluids to treat children with diarrhea was about the same in 1993 and 2003 (14 and 13 percent, respectively). The proportion of children who received RHF in the 1998 GDHS (3 percent) is substantially lower than that reported in the other two surveys. This finding should be interpreted with caution because respondents in the 1998 GDHS provided only spontaneous responses about RHF. In 1993 and 2003, respondents were asked directly whether they had provided this type of treatment to their sick child.

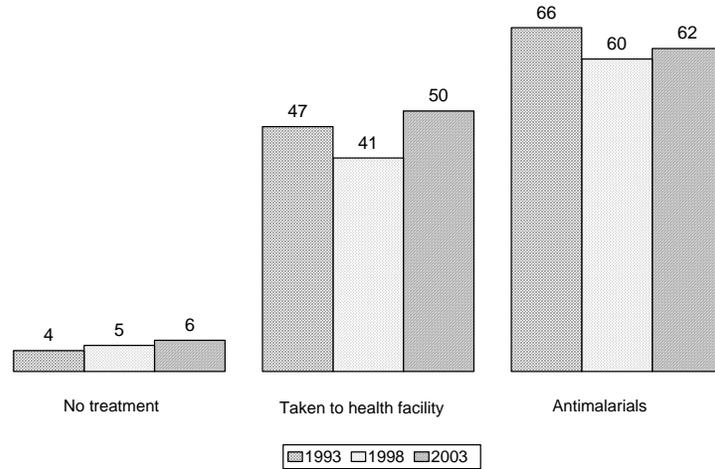
**Figure 8.3**  
**Among Children Under Three Who Had Diarrhea in the**  
**Two Weeks Preceding the Survey, Percentage Who**  
**Received Various Treatments**



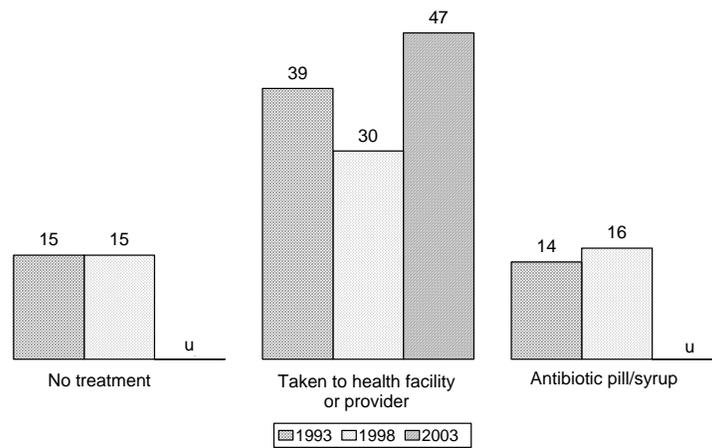
Malaria is endemic to Ghana and is among the most common causes of morbidity among children. To obtain an indication of the approaches used to treat malaria in young children, mothers were asked whether their child had a fever in the two weeks before the survey. If the response was yes, they were asked what they had done to treat the fever. Figure 8.4 shows there has been little change in the treatment of fever between the 1993 and 2003 GDHS surveys. Among children under three years with fever in the 1993, 1998 and 2003 surveys, between 41 and 50 percent were taken to a health facility, and 4 to 6 percent received no treatment at all. The proportion of children with fever who were given antimalarials was 66 percent at the time of the 1993 GDHS. This dropped to 60 percent in the 1998 GDHS, then increased to 62 percent in the 2003 GDHS.

Both the 1993 and 1998 GDHS surveys obtained information on the prevalence of cough with rapid breathing and the treatment of these symptoms of acute respiratory infection (ARI) in young children. Treatment for symptoms of ARI was not available from the 2003 data. Figure 8.5 shows that less than half of the mothers reported taking their children with symptoms of ARI to a health facility or provider. The percentage of children receiving no treatment was 15 percent in both the 1993 and 1998 surveys. The proportion of children with symptoms of ARI taken to a health facility increased from 39 percent in 1993 to 47 percent in 2003, and the proportion who received an antibiotic increased slightly from 14 percent in 1993 to 16 percent in 1998.

**Figure 8.4**  
**Among Children Under Three Who Had Fever in the**  
**Two Weeks Preceding the Survey, Percentage Who**  
**Received Various Treatments**



**Figure 8.5**  
**Among Children Under Three Who Had Symptoms of ARI in the**  
**Two Weeks Preceding the Survey, Percentage Who**  
**Received Various Treatments**



u = Unknown (not available)

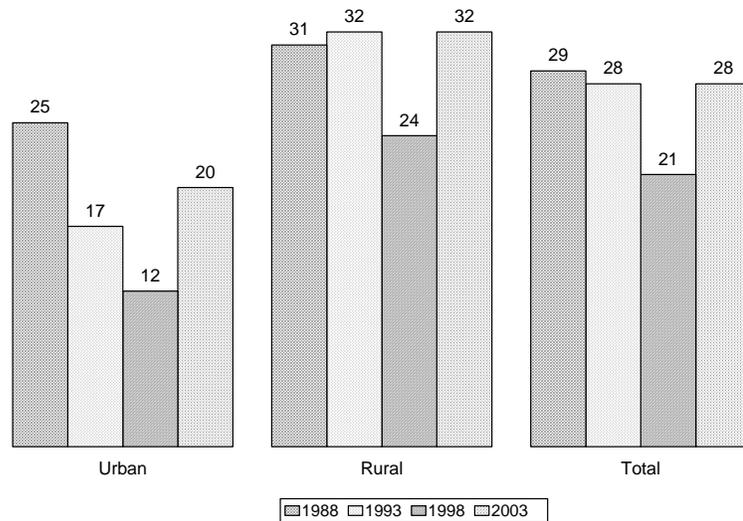
## 8.4 Nutritional Status of Children

Nutritional status is an objective indicator of children's overall health and well-being. Childhood undernutrition results from prolonged and improper treatment of illness and inadequate food intake. Undernourished children are at greater risk of dying than well-nourished children.

To assess the nutritional status of children, DHS surveys obtained measurements of children's height and weight. Children whose height-for-age is more than two standard deviations below the median of an international reference population are described as *stunted* and those with a weight-for-height index more than two standard deviations below the median for the reference group are referred to as *wasted*.

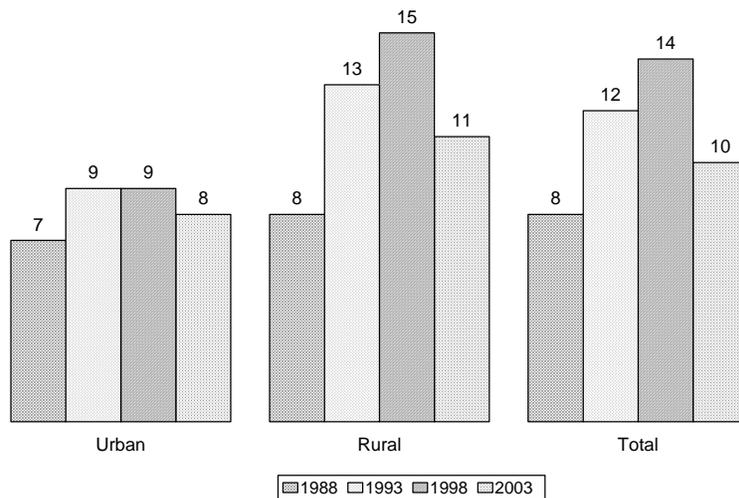
Figure 8.6 shows that in 2003, 28 percent of children age 3 to 35 months were stunted (short for their age). Since 1988, there has been no definite trend in height-for-age. Apparent gains between 1988 and 1998 were reversed in 2003. Urban areas have shown more improvement than rural areas.

**Figure 8.6**  
**Percentage of Children 3 to 35 Months with Height-for-Age Below -2 SD from the Reference Median (Stunted), by Urban-Rural Residence**



In terms of weight-for-height (i.e., wasting), Figure 8.7 indicates that 8 percent of children under age 3 to 35 months were too thin for their height in 1988, compared with 10 percent in 2003. An examination of urban-rural trends in the proportion of children age 3 to 35 months who are moderately to severely wasted indicates a small increase in the proportion who were considered as wasted, from 7 percent in 1988 to 8 percent for urban children. The situation of rural children also worsened slightly, with the proportion reported as wasted rising from 8 percent in 1988 to 11 percent in 1993.

**Figure 8.7**  
**Percentage of Children 3 to 35 Months with Weight-for-Height**  
**Below -2 SD from the Reference Median (Wasted),**  
**by Urban-Rural Residence**



## 9 Maternal Care

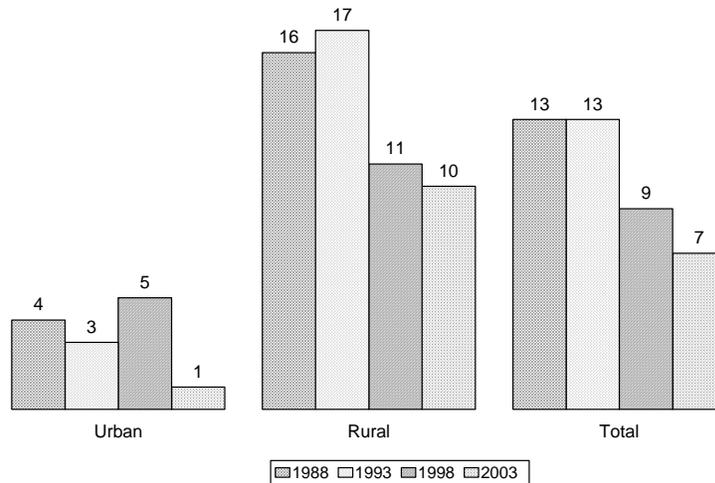
The survival chances of children are improved if mothers use maternity care services, particularly antenatal and delivery care. There is overwhelming evidence to support the benefits of the use of these health services for the mother as well.

### 9.1 Antenatal Care

Antenatal care involves a variety of preventive interventions, including tetanus toxoid immunizations, nutrition education, and postpartum family planning. It also offers the opportunity for health care providers to identify and monitor women who meet known risk criteria and to detect and manage preexisting and new problems.

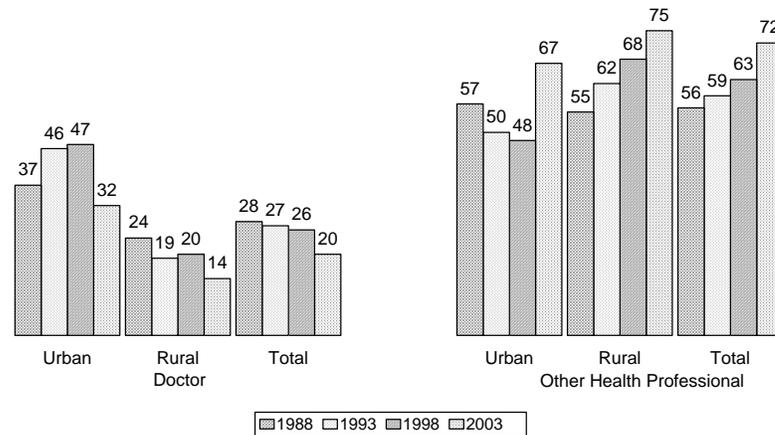
Figure 9.1 indicates that the vast majority of Ghanaian women receive at least some antenatal care. The figure shows recent gains in antenatal care coverage after a period of little change between 1988 and 1993. These gains were realized among both urban and rural women. However, rural women were less likely to receive antenatal care than urban women. For example, in 2003, the proportion of rural births for which the mother received no care during pregnancy was 10 percent, compared with 1 percent for urban births.

**Figure 9.1**  
**Percentage of Women With a Live Birth in the Three Years**  
**Preceding the Survey Who Received No Antenatal Care for the**  
**Most Recent Birth, by Urban-Rural Residence**



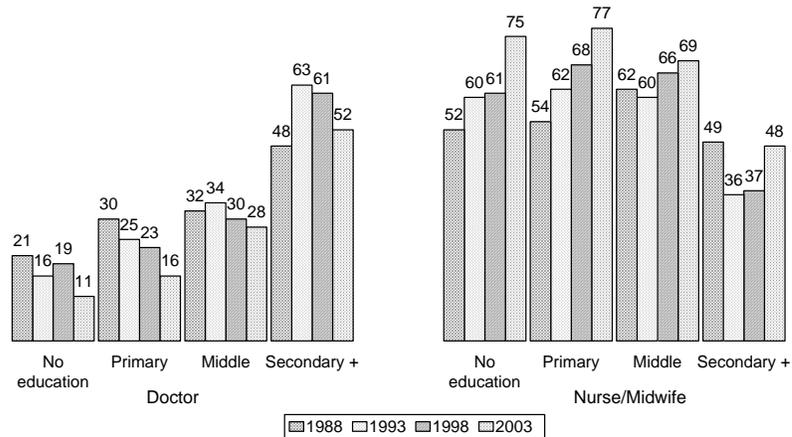
Most women who receive antenatal care see a health professional. Figure 9.2 shows that in both urban and rural areas, the majority of women received antenatal care from health professionals other than doctors. In the 1988, 1993 and 1998 GDHS surveys, “other health professional” consisted of a nurse or midwife. In the 2003 GDHS, auxiliary midwife was added to this group. Throughout the period 1988 to 1998, urban women were increasingly likely to receive antenatal care from a doctor; at the same time, rural women were increasingly likely to receive antenatal care from a health professional other than a doctor. In urban areas, the proportion of women receiving ANC from a trained nurse/midwife (or auxiliary midwife) declined slowly from 1988 to 1998, as reliance on doctors for antenatal care increased. From 1998 to 2003, the proportion of urban women receiving ANC from a nurse/midwife or auxiliary midwife increased from 48 to 67 percent, and use of a doctor declined.

**Figure 9.2**  
**Percentage of Women With a Live Birth in the Three Years**  
**Preceding the Survey Who Received Antenatal Care From**  
**a Doctor and From Another Health Professional,**  
**for the Most Recent Birth, by Urban-Rural Residence**



The more educated a mother is the more likely it is that she will receive at least some antenatal care and the more likely it is that a doctor will provide the care she receives (Figure 9.3). With regard to trends in antenatal care, the proportion of births for which the mother received antenatal care from a professional healthcare provider showed increases for all levels of education. By 2003, 100 percent of women with secondary education or higher had sought ANC from a health professional. Across all education levels, there was a general shift from use of a doctor to use of another type of health professional for ANC services, especially during the period between the 1993 and 2003 GDHS surveys.

**Figure 9.3**  
**Percentage of Women With a Live Birth in the Three Years**  
**Preceding the Survey Who Received Antenatal Care From**  
**a Doctor and From a Nurse/Midwife for the Most Recent Birth,**  
**by Level of Education**



## 9.2 Attendance during Childbirth

When skilled providers with adequate access to medical facilities attend women during labor and childbirth, they are in a better position to manage any complications that may arise. This can substantially reduce the risk of illness and death for both the mother and the child.

Overall, women reported having some assistance at delivery for more than 90 percent of the births reported in the four GDHS surveys. For many of these births, however, the assistance provided is from a traditional birth attendant or relatives or friends.

Figure 9.4 shows that fewer than half of the births during the three-year period before the 1988 GDHS were assisted by a doctor or a trained nurse/midwife. Moreover, the proportion of births with medical assistance increased only slightly from 41 percent in the 1988 GDHS to 47 percent at the time of the 2003 GDHS. Urban births are more likely to be assisted by health professionals than rural births. In both urban and rural areas, births attended by other health professionals increased more than births attended by doctors.

**Figure 9.4**  
**Percentage of Women With a Live Birth in the Three Years**  
**Preceding the Survey Who Were Assisted at Delivery by**  
**a Doctor and by Another Health Professional,**  
**for the Most Recent Birth, by Urban-Rural Residence**

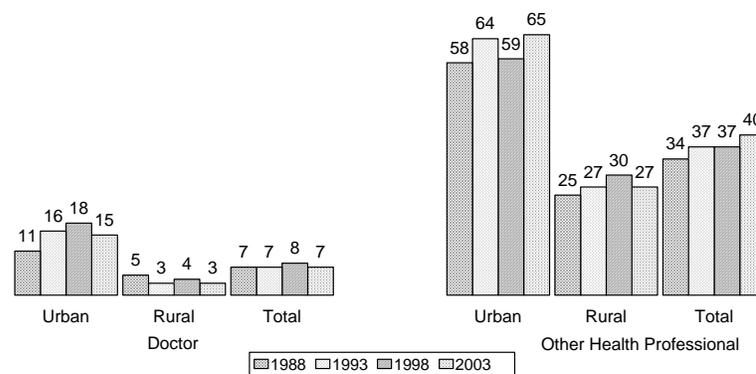
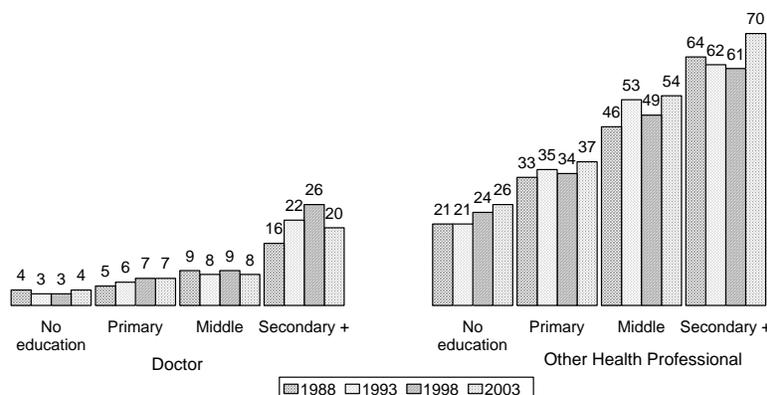


Figure 9.5 shows that education is an important factor in whether a health professional provides assistance at childbirth. The results of all four surveys indicate that the more years of schooling a woman has, the more likely she is to have a health professional present at childbirth. In 2003, only 30 percent of births to women with no education were assisted by a health professional, compared with 89 percent of births to women with secondary or higher education.

**Figure 9.5**  
**Percentage of Women With a Live Birth in the Three Years**  
**Preceding the Survey Who Were Assisted at Delivery by**  
**a Doctor and by Another Health Professional for the Most**  
**Recent Birth, by Level of Education**

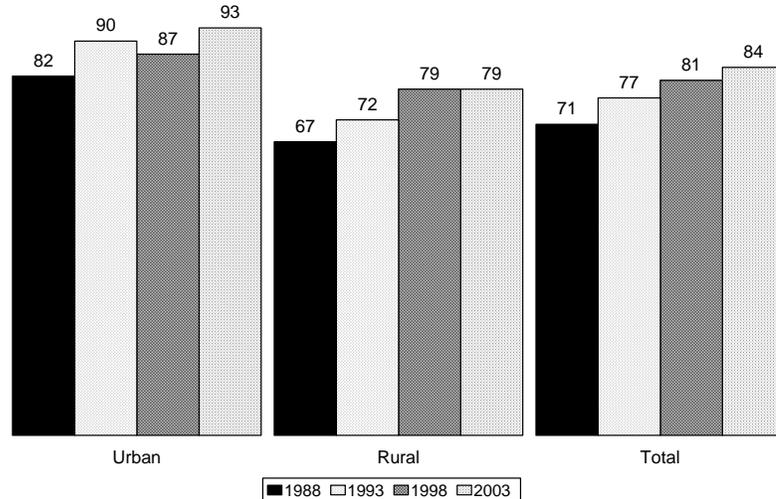


### 9.3 Tetanus Toxoid Injections

Neonatal tetanus is one of the leading causes of death during the first month of life. The World Health Organization recommends that all women receive two tetanus toxoid injections during their first pregnancy, a third dose 6 to 12 months later or during the next pregnancy, a fourth dose at least a year later or during the subsequent pregnancy, and a fifth dose at least one year later or during the subsequent pregnancy. The fifth dose is thought to provide life-long protection. Tetanus toxoid is thus a fundamental component of an effective antenatal care.

Figure 9.6 shows the proportion of births for which the mother received at least one tetanus toxoid injection during pregnancy. Between the 1988 GDHS and the 2003 GDHS, the proportion of births for which the mother received at least one injection increased steadily. In general, urban women were more likely to receive a tetanus toxoid injection than rural women. For example in 2003, mothers received at least one dose of tetanus toxoid for 93 percent of urban births, compared with 79 percent of rural births.

**Figure 9.6**  
**Percentage of Women With a Birth in the Three Years**  
**Preceding the Survey Who Received at Least One Tetanus**  
**Toxoid Injection During Pregnancy for the Most Recent Birth,**  
**by Urban-Rural Residence**



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## **Appendix A Data Sources**

**1979-80 Ghana Fertility Survey (EFS)** – The GFS was conducted by the Central Bureau of Statistics under the auspices of the World Fertility Survey programme. The survey covered a nationally representative, self-weighting sample of households. During the 1979/80 GFS, interviews were completed with 6,001 households and 6,125 eligible respondents. Eligible respondents include women age 15 to 49 years.

**1988 Ghana Demographic and Health Survey (GDHS)** – The 1988 GDHS was the first of four surveys conducted under the auspices of the Ghana Statistical Service (formerly the Central Bureau of Statistics) as part of the international Demographic and Health Surveys programme. The sample for the survey was a nationally representative, self-weighting sample of households in which all women 15-49 were eligible for interview. During the 1988 GDHS, interviews were completed with 4,406 households and 4,488 women.

**1993 Ghana Demographic and Health Survey (GDHS)** – The 1993 GDHS was the second of the surveys conducted under the auspices of the Ghana Statistical Service as part of the international Demographic and Health Surveys (DHS) programme. The sample was a stratified, self-weighting sample of households in which all women 15-49 were interviewed. During the 1993 GDHS, interviews were completed with 5,822 households and 4,562 women.

**1998 Ghana Demographic and Health Survey (GDHS)** – The 1998 GDHS was the third of the surveys conducted under the auspices of the Ghana Statistical Service as part of the DHS programme. The sample was a stratified, nationally representative sample of households. All women 15-49 in selected households were eligible for interview, and men 15-59 from every third selected household were eligible. The three northern regions (Northern, Upper East and Upper West) were over sampled in order to obtain adequate precision in the estimates for each of these regions despite their smaller population size relative to the other regions. Sample weights were used to adjust for the unequal probability of selection of households in different regions. Interviews were completed with 6,003 households, 4,843 women 15-49, and 1,546 men.

**2003 Ghana Demographic and Health Survey (GDHS)** – The 1998 GDHS was the last of the four surveys conducted under the auspices of the Ghana Statistical Service as part of the DHS programme. The sample was a stratified, nationally representative sample of households in which all women 15-49 and all men 15-59 were eligible for interview. Households in Brong Ahafo, Upper East, Upper West, and Northern regions were sampled at higher proportions than households in the other regions in order to provide adequate precision for estimates of indicators in these regions. Sample weights were used to adjust for the over sampling. Interviews were completed with 6,251 households, 5,691 women, and 5,015 men.